Ecological sustainability education in a neoliberal context: Negotiating and managing the paradox

by

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ACRONYMS

ACARA	Australian Curriculum, Assessment and Reporting Authority
AESA	Australian Education for Sustainability Alliance
AGPPA	Australian Government Primary Principals Association
AGTA	Australian Geography Teachers' Association
ALP	Australian Labor Party
APO	Analysis & Policy Observatory
AuSSI	Australian Sustainable Schools Initiative
AuSSI-SA	Australian Sustainable Schools Initiative – South Australia
BER	Building the Education Revolution
CCP	Cross-Curriculum Priority
CLP	Commonwealth Literacy Program
COAG	Council of Australian Governments
DECD	Department for Education and Child Development
DECS	Department of Education and Children's Services
DESD	Decade of Education for Sustainable Development, 2005- 2014
DSP	Disadvantaged Schools Program
EEAP	Energy Efficiency Action Plan
EfS	Education for Sustainability
ESD	Education for Sustainable Development
ESE	Ecological sustainability education
EPA	Environmental Protection Agency
GDP	Gross Domestic Product
GFC	Global Financial Crisis
HASS	Humanities and Social Sciences
ICT	Information and communication technology
IT	Information technology
ITE	Initial teacher education
IUCN	International Union for the Conservation of Nature and Natural Resources
IMF	International Monetary Fund
KESAB	Keep South Australia Beautiful
LBOTE	Language Backgrounds Other Than English
LOTE	Languages Other Than English
MCEECDYA	Ministerial Council for Education, Early Childhood Development and Youth Affairs
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
NAP	National Assessment Program
NAPLAN	National Assessment Program – Literacy and Numeracy

NRM	Natural Resource Management
OECD	Organisation for Economic Co-operation and Development
PBE	Place-based education
PCLs	Principals and Curriculum Leaders
PhD	Doctor of Philosophy
PISA	Programme for International Student Assessment
SA	South Australia
SACSA	South Australian Curriculum Standards and Assessment
SASP	South Australia's Strategic Plan
SCSEEC	Standing Council on School Education and Early Childhood
SOSE	Studies of Society and Environment
STEEM	Science, Technology, Ecology, Engineering and Mathematics
STEM	Science, Technology, Engineering and Mathematics
UK	United Kingdom
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO-UNEP	United Nations Educational, Scientific and Cultural Organization - United Nations Environment Programme
US or USA	United States of America
USSR	Soviet Union - officially the Union of Soviet Socialist Republics
WCED	World Commission on Environment and Development
WTO	World Trade Organisation
WWF	World Wide Fund for Nature

ABSTRACT

Ecological sustainability education in a neoliberal context can be understood as a paradox that, by nature and necessity, requires negotiation and management. This thesis was written within this context, during a concatenation of actual or perceived crises. Common to many of the crises is that they are fuelled or manufactured by neoliberalism. This now-dominant political-economic ideology favours a 'free' market system and supports competition, commodification and unfettered capitalistic growth. Neoliberalism legitimises and privileges consumerism while positioning nature as a commodity. Consequently, there is a major disjunction between neoliberalism and ecological sustainability. The effect of neoliberalism on the purpose of education has resulted in a deviation from collective well-being or the social good. Instead, education's focus is on individual performance and economic productivity and students are positioned as human capital in service to the economy. Education reform, driven by neoliberal ideals of standards, testing, accountability and achievement, focuses narrowly on student attainment, particularly in the areas of literacy and numeracy with other areas of the curriculum being marginalised. This preferencing-marginalising duality poses a significant threat to ecological sustainability education. Using this paradoxical duality and focussing on a public school as a powerfully informing context and a place that matters, my research investigates how an Australian urban primary school might facilitate and sustain a focus on ecological sustainability education under the dominance of neoliberal discourse.

The theory that guides this qualitative research is 'social constructionism'. Central to this theory is the belief that representations of 'reality' are socially constructed and that meaning and knowledge are sustained by social processes. Therefore, this study engages with multiple 'stakeholders' so that a deeper understanding of their 'reality' may be developed. An information-rich 'typical' urban primary school in Australia was chosen purposefully as a means to understand the complexities of how ecological sustainability education may or may not be negotiated into the curriculum. Tracing the school's 'webs of significance' the study includes an analysis of key texts such as state and education department strategic plans, plus transcripts of interviews with school staff members as well as identified community members and

focus groups with students. A social constructionist approach to thematic analysis was adopted to analyse the key 'texts'. An advantage in utilising this method is that it helps to determine the social and structural processes, influences, conditions and assumptions underpinning the data.

Consistent with the neoliberalisation of education and society more broadly, the findings in this study highlight a dominant discourse of individualisation. Furthermore, this study shows that the hegemony of neoliberalism contributes to many of the challenges involved in the inclusion of ecological sustainability education.

The implications of these findings are that while neoliberalism prevails, many schools may struggle to build, retain and progress a commitment to ecological sustainability education. However, this research also offers hope and possibility in the negotiation and navigation of neoliberal framings. In *managing* the constraints of neoliberalism and the dominant discourse of individualisation schools may have to accommodate the regime of standards and testing. However, this accommodation can be a form of resistance. While avoiding hierarchical gaze, schools can strategically exercise agency to create space for, and not undermine, ecological sustainability education. Space for ecological sustainability education may also be created and sustained through an ethos of emergence, by embracing the characteristics of an *intelligent school* and advocating for a collective response to ecological sustainability. Furthermore, a reconceptualisation of STEM to STEEM (science, technology, **ecology**, engineering and mathematics), raises the status and legitimacy of ecological sustainability education and enriches the other curriculum areas. In the face of competing discourses this, therefore, helps to create the space for programs and relationships which preference and nourish ecological sustainability.

DECLARATION

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Debra Roxanne Dickinson (nee Bradley)

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Similar to the inherent complexities involved in supporting ecological sustainability education in a neoliberal context, my PhD journey has often felt like a wicked problem with no end.

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CHAPTER 1:

Why the need for ecological sustainability education?

> Only within the moment of time represented by the present century has one species – man – acquired significant power to alter the nature of the world.   Rachel Carson, *Silent Spring*

We are in the grip of a global ecological crisis in which humanity is causing widespread destruction to the environment. Extreme weather is severely damaging the Great Barrier Reef and melting polar ice (Flannery, 2015). Humans are drawing down stocks of natural capital faster than they can be replenished (WWF, 2016) and the state of the Earth's climate is now a "gargantuan" problem (Flannery, 2015, p. xi). The United Nations Environment Programme (UNEP) states "the world continues to speed down an unsustainable path despite over 500 internationally agreed goals and objectives to support the sustainable management of the environment and improve human wellbeing" (UNEP, 2012, p. 1). Over the years, in a quest to support action towards ecological sustainability[1], various organisations have released reports making similar claims. These include the highly regarded Millennium Ecosystem Assessment reports. These leading appraisals of the condition of the world's ecosystems conclude degradation of the environment is so severe our ability to sustain future generations is under significant threat (Millennium Ecosystem Assessment, 2005).

Along with the ecological crisis around the globe, numerous other forms of crises are taking place. These may be localised or global, for example, health, education or economic. However disparate the current concatenation of crises seems, and whether they are "actual or perceived" (Friedman & Friedman, 1982, p. ix), common to many is that they are affected or shaped by the global phenomenon 'neoliberalism'.

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[1] The terms 'ecological sustainability' and 'ecological sustainability education (ESE)' have been intentionally used throughout this thesis as a means to encompass and move beyond the limited and contested nature of the terms 'sustainability' and 'environmental education' (see Chapters 2, 3 and 6 for more detail). Although ESE can also be understood as 'environmental and sustainability education', in this thesis, 'E' for 'Ecological' denotes the interdependence between humans and the natural, built and social environments which arguably captures social, cultural, political and economic aspects.

Before embarking on this research, I had never heard of neoliberalism. First used by economists and philosophers, the term neoliberalism has permeated society in a piecemeal fashion (Davies & Bansel, 2007). Its anonymity is a significant trait, as Monbiot (2016) explains:

> Its [neoliberalism] anonymity is both a symptom and cause of its power. It has played a major role in a remarkable variety of crises: the financial meltdown of 2007-8, the offshoring of wealth and power … the slow collapse of public health and education, resurgent child poverty, the epidemic of loneliness, the collapse of ecosystems, the rise of Donald Trump. But we respond to these crises as if they emerge in isolation, apparently unaware that they have all been either catalysed or exacerbated by the same coherent philosophy; a philosophy that has – or had – a name. What greater power can there be than to operate namelessly? (Monbiot, 2016)

Although neoliberalism operates subversively, its global effect has been pervasive. Former Australian prime minister, Kevin Rudd, describes neoliberalism as "that particular brand of free-market fundamentalism, extreme capitalism and excessive greed which became the economic orthodoxy of our time" (Rudd, 2009, p. 1). It is crucial to engage with neoliberalism as an overarching context.

Within the current string of crises, those central to this thesis are crises in education, the economy and ecology. With the economy in crisis, the government turns to education to ensure individuals benefit the economy. Consequently, education and schools are deemed to be in crisis, and in need of a revolution to support the economy. At the same time, humanity is a key contributor to the world's ecological crisis and neoliberalism's emphasis on humans as consumers is exacerbating the situation. Subsequently, education is considered to be instrumental in supporting ecological sustainability. However, how education is able to do this under a constrained, neoliberalised curriculum requires investigation. Therefore, against the background of the construction of crisis after crisis, this thesis investigates how, in a neoliberal context, an urban primary school might facilitate and sustain a focus on ecological sustainability education (ESE).

This chapter outlines current ecological crises and primary school-based education as a vehicle for supporting ecological sustainability. I consider place-based philosophies an essential aspect of this research, as education that engages with 'place' intentionally aims to connect humans and ecosystems (Gruenewald, 2004). In

addition, I explain the significance of basing this study on an urban primary school and utilising the voices of both adult and child participants. I then present the research questions that have guided this study. The chapter concludes with an outline of the thesis structure.

1.1 The global ecological crisis and the inclusion of ecological sustainability in education

The impact humans have made on the Earth's ecosystems is so momentous, scientists have proposed a new geological epoch, the 'Anthropocene' (Crutzen & Stoermer, 2000), to identify the period where human-induced ecological stresses have become a major geological force. This manifestation, however, has not come without warning.

It has long been espoused that major changes are needed to address the negative impact humans are having on the environment. A focus on humans' negative impact on the environment has been explored in the literature for many years. In the early 1960s the landmark book *Silent Spring* by Rachel Carson highlighted a continual degradation of the natural environment (Carson, 1962). While an interest in conserving the environment was transpiring long before the 60s, this book is often regarded as the catalyst for the modern environmental movement in the West.

Alongside the rise of environmental awareness in society, increasingly education, particularly education of the young, has come to be seen as a vehicle for addressing humans' catastrophic effect on the environment and supporting progress towards ecological sustainability (Linke, 1980; World Commission on Environment and Development (WCED), 1987). As is often the case, schools have emerged as arenas for tackling societal imperatives or problems. Furthermore, "public education has been repeatedly burdened with the expectation that it can save society" (Hargreaves & Lo, 2000, p. 168). This is evidenced by such foci as values education (see Commonwealth of Australia, 2005; Ministerial Council on Education, 2008), wellbeing, healthy eating, responding to drugs and alcohol, and child protection (see Department for Education and Child Development (DECD), 2017d). Correspondingly, school-based environmental education has also woven its way into the curriculum under many guises in subjects such as environmental education, nature studies, geography, education for sustainability, and studies of society and

environment. Currently, a national curriculum is being implemented across Australia, and within it, sustainability is a cross-curriculum priority (CCP) – sustainability is expected to span the whole curriculum.

The current decimation of the planet and the need for ESE coincides with the pervasive political agenda of neoliberalism. However, with its individualised and economic focus, neoliberalism is arguably incompatible with ecological sustainability (Stilwell, 2000). This discordancy presents itself as a paradox considering the tension between economic growth (driven by the neoliberal emphasis on production and consumption) and ecological sustainability. In addition, in spite of the presence of environmental education and sustainability education within the curriculum to some extent over many years, the state of the environment has not improved and in many cases has worsened dramatically. However, school-based education remains a key site for addressing humans' impact on the environment, particularly considering schools are potential arenas for societal change. Consequently, research examining the connections between ESE and how education might be used to support ecological sustainability is vital. This study contributes to this endeavour.

While the purposes of education are contested, they can be understood broadly to include preparation for work, preparation for life and participation in society, and to develop socially critical thinking and collective action (Kemmis, Cole, & Suggett, 1983). Similarly, Biesta (2015) maintains qualification, socialisation and subjectification are the three functions of education, or domains of educational purpose. Ultimately, a balance of these functions are needed to support the 'real' basics of education; democracy, ecology and care, and foster a grown-up way of being in the world (Biesta, 2015). Correspondingly, Reid, Cranston, Keating and Mulford (2011) offer that the purposes of education are a democratic purpose, an economic purpose and an individual purpose, which respectively constitute a 'public' purpose, a 'constrained public' purpose and a 'private' purpose (these are discussed in more detail in Chapter 5). Considering these purposes and the significant role of education in society, recognising how the curriculum, a significant part of education, is framed and played out is paramount. Ecological sustainability is a global issue of profound importance, therefore it is crucial to shed light on its place in school-based

education, particularly within the critical and contested dimension of the curriculum. Many factors may mediate or interfere with the inclusion of ecological sustainability in education. These factors include funding, the overcrowded curriculum, teachers' knowledge and personal interests, leadership, political influences (Evans, Whitehouse, & Gooch, 2012), globalisation, curriculum reform, the purpose of education, and curriculum as a site of contest. To gain an appreciation of how curriculum is played out and implemented in schools, this study focuses on one school in its broad local, state and national contexts.

This study situates itself in the 'local' while following 'threads' or 'webs of significance' (Geertz, 1973) linking to a more global arena. The webs of significance include those that have an effect on the school's uptake and understandings of ecological sustainability. In addition, this study explores the broader understandings of ecological sustainability that are circulated and negotiated through one school, while drawing in society as a whole. Identifying the ways in which the school connects with the community, both local and global, to become more environmentally sustainable is also a key aim of this study. The intention is to render visible and accessible the negotiations involved in building, constructing and retaining a school's focus, in this case supporting ESE, and engaging with what may contest this focus. I identify the strengths and challenges and/or limitations of negotiating ESE into the school, which could be used to encourage and support other schools to engage.

1.2   Significance of the proposed research

Weintraub (1995) argues the environment must involve "the relationship between a community and the earth" (p. 345). Therefore, research must be conducted into the environment as a broader, more holistic concept, including not only the natural environment but also the built and social environment. This more holistic form of research is associated with ESE.

In the midst of ecological crises, curriculum reform, and in a neoliberal political-economic context, it is crucial to understand how a school might manage to negotiate ecological sustainability into its curriculum and influence a commitment to ecological sustainability. Considering the fundamental importance of schools in

nurturing support for ecological sustainability, this study centres on primary school-based education. The purpose of this study is to document the negotiations involved in progressing and retaining a school's focus on ecological sustainability. The neoliberal context is an integral aspect of this research, particularly considering the paradoxes it creates with respect to ecological sustainability and education. A paradox entails "contradictory yet interrelated elements – elements that seem logical in isolation but absurd and irrational when appearing simultaneously" (Lewis, 2000, p. 760). In this regard, the paradoxical effect of neoliberalism creates a preferencing-marginalising duality. Some of the ways this duality exists is in the preferencing of consumerism at the expense of the ecological environment. Literacy and numeracy are preferred through a narrow focus on student attainment, while other curriculum areas are marginalised. In addition, individualisation is preferred over the common good. Therefore, the preferencing-marginalising duality of neoliberalisation may constrain the endeavour to support ESE. Accordingly, facilitating and sustaining a focus on ESE may be an exercise in futility, hope and/or possibility. Therefore, this study seeks to highlight the space in which ESE may be preferenced and nourished.

A key foundation of this study is that neoliberalisation has intensified globalisation (Kenway, Kraack, & Hickey-Moody, 2006; Kotz, 2002; Massey, 2005; Massey & Jess, 1995; Quiggin, 1999; Scholte, 2005). As a result, "various aspects of the social and the cultural have been, to some extent, detached from place" (Kenway, et al., 2006, p. 45). This detachment from place has implications for ecological sustainability and for the curriculum, particularly considering the propensity of formal education to obscure and distort any connection to place and nature (Greenwood, 2013). Louv (2010) proposes humans' instinctive affiliation with nature and attachment to place has been displaced by the increasing use of electronic media and more time spent indoors rather than outdoors. This loss of connection renders many humans (particularly today's generation of children) with 'nature-deficit disorder' (Louv, 2010), a susceptibility to attention difficulties, and physical and emotional illness. Furthermore, this alienation or estrangement from nature is detrimental to ecological sustainability. People disconnected from nature and place are less likely to value and invest in ecological sustainability (Miller, 2005; Schultz, 2000). To counter this disconnect, it is vital for people to (re)connect with nature and

their place in the environment (Miller, 2005). This is particularly pertinent in childhood (Kahn, 2002) and can be done constructively through place-based or place-conscious education (Gruenewald, 2003a; Sobel, 2004, 2008). Furthermore, Cameron (2008) argues, "by implication, education, environmental sustainability and intercultural dialogue should not just take place into account, but they should be deeply grounded in place" (p. 303). Therefore, it is critical for ESE research to engage with elements of place as well as place-based education (PBE).

Currently more than half of the world's population live in urban areas and this number is rising. Urban populations consume more energy than rural populations and with the increase of urbanisation, energy consumption will escalate (Population Reference Bureau, 2007, p. 10). With the ever-present need to address the issues of ecological sustainability, and with urban places often regarded as "the sources of widespread environmental degradation" (Halliday, 2007, p. 2), this study also takes significance from its urban setting.

The complexity of the neoliberal preferencing-marginalising duality is problematic in education where literacy and numeracy are preferenced over ecological sustainability and other curriculum areas. Furthermore, neoliberalism has also moulded environmental education and, consistent with Monbiot (2016), Hursh, Henderson and Greenwood (2015) argue:

> neoliberal ways of thinking about and acting in the world have become so prevalent, naturalized, and internalized that we are often unaware of how neoliberalism constrains our thinking and practice, such that it is difficult in both thought and deed to imagine a society proceeding on different principles (p. 300).

Subsequently, within this taken for granted space, teachers wishing to support ESE may become involved in an intricate and unchartered dance with compliance and creativity. The dance or negotiation with compliance and creativity is paradoxical. Farson (1996) encapsulates this paradox by arguing, "real creativity, the kind that is responsible for breakthrough changes in our society, always violates the rules. That is why it is so unmanageable" (Farson, 1996, p. 103). This negotiation relates to "the differential degrees of agency people are able to exercise over their lives" (Vincent, Ball, & Braun, 2008, p. 70) in complying and creating space for ESE. Vincent et al.'s (2008) research offers a productive lens for researching how ESE might be

negotiated in a school and the agency involved in this endeavour. In a study on urban working class families, Vincent et al. state that when trying to understand the lives of urban families it is important to examine and deconstruct how they "*'manage or struggle to cope'* [italics in original]" (p. 61). People who *manage* to cope, in general, conform to the dominant political discourse while exercising their agency strategically. However, because their agency is seen as "socially and morally appropriate" (Vincent, et al., 2008, p. 71) they are able to engage with structural constraints. In contrast, those who *struggle* to cope commonly exist on the peripheries, they lack in a number of forms of capital and are "unable to exercise much in the way of purposeful agency" (Vincent, et al., 2008, p. 73).

Charles Handy points out in his book *The Age of Paradox* that "paradox can only be 'managed' in the sense of coping with" (Handy, 1994, pp. 11-12) the tensions (Lewis, 2000). Therefore, exploring degrees of agency is fundamental when considering the paradoxical nature of ESE in a neoliberal context. Similarly, where Vincent et al. (2008) link agency to circumstance, this lens is a useful tool for appreciating how teachers and their students negotiate with the demands of their curriculum, forged under a neoliberal agenda, while also addressing the ever-increasing need to become a sustainable society.

This study is based in an Australian urban primary school, assigned the pseudonym Acacia Primary School. To gain an in-depth understanding of how ecological sustainability is negotiated in a school, this research comprises both internal and external stakeholders. Internal stakeholders are those with a direct connection to the school, whereas external stakeholders have a more indirect connection to the school. The adult participants in this research comprise staff from Acacia Primary and an eclectic mix of external stakeholders, including parents and other community members. These participants are concomitant active agents in society as well as key stakeholders in the policies and practices of the school. In addition, teachers are recognised to be potential change-makers in schools (Ferreira, Ryan, & Tilbury, 2007; Fien & Tilbury, 2002).

The voices of primary school children are also a significant part of this study; while children are dynamic agents and participants in our society, simultaneously they are change agents (Barratt Hacking, Cutter-Mackenzie, & Barratt, 2012) and

consequential stakeholders of their education (Groundwater-Smith, 2007, 2009; Groundwater-Smith & Mockler, 2007). From research in inner-city primary schools Reay and Lucey (2000) found children "from working and middle-class families are knowledgeable agents with a rich source of information, both factual and fictionalised, about urban space and place" (p. 412). Christensen and James (2000) also argue that "significant knowledge gains result when children's active participation in the research process is deliberately solicited and when their perspectives, views and feelings are accepted as genuine, valid evidence" (p. 31). As well, several studies have quantified a connection between experience in natural environments in childhood and environmental preferences and concern later in life (Bixler, Floyd, & Hammitt, 2002; Griffiths, 2014; Measham, 2006; Tanner, 1980). The inclusion of students in this study thus offers a rich and nuanced perspective of their education. This study adopts the understanding that the experiences and education of children can be seen as a significant area for potential societal change (Collins & Coleman, 2008), therefore the primary school years are critical in encouraging a connection with the environment and supporting ecological sustainability as a life-long undertaking (Chawla & Cushing, 2007).

This study fills a gap in the literature by exploring the ways schools in urban/built environments can develop and sustain a focus on ecological sustainability. It is intended that this study will inform an array of schools, policy makers, researchers and others by foregrounding approaches to ESE while identifying strengths and challenges and/or limitations of negotiating ESE into a school.

1.3 Research questions

The main guiding question for this research is: *In a neoliberal context, how might an urban primary school facilitate and sustain a focus on ecological sustainability education?*

I framed and developed the following sub-questions to help structure and focus the research:

- What are the discourses of ecological sustainability that are circulated and negotiated through the school?

- What challenges are involved in the inclusion of ecological sustainability in the curriculum of an urban primary school, in an environment characterised by the demands of neoliberalism?
- In what ways does the school connect with the community, both local and global, to build, retain and progress its commitment to ecological sustainability education?
- Is there evidence of a place-based approach to ecological sustainability education at work in the school and community?

1.4   Overview of the thesis

Chapter 1 introduces the problem and significance of the proposed research and presents the research questions guiding this study.

Chapter 2 locates the research through a historical, social, political and educational review of ecological sustainability, ESE and the increasing effect of neoliberalism.

Chapter 3 presents the current context of Australian education with reference to the dominant neoliberal measures determining its shape. ESE and the position of sustainability in the Australian curriculum are considered. In addition, PBE and the *intelligent school* are proposed as potential vehicles for ESE.

Chapter 4 describes this study's research design and methodology. It includes an overview of the theoretical underpinnings of the research as well as an introduction to the research site, Acacia Primary School, and its participants. The chapter includes the methods used for collection and analysis of the data, and the limitations and delimitations of the study are explained.

Chapter 5 presents an analysis of key publicly available texts to ascertain priorities at a national or federal level, a state level and at the local or school level. Pertinent in this analysis is the identification of the presence or absence of ecological sustainability. The key texts addressed in this chapter are the *Australian Curriculum*; the National Assessment Program – Literacy and Numeracy (NAPLAN) and the affiliated platform for disseminating results, the *My School* website; the State Government's strategic plans; the State Education Department's strategic plans and

annual reports; and the context statements from the school around which this research is framed.

Chapter 6 is an analysis of the data collected through interviews and focus groups involving internal and external stakeholders from Acacia Primary School, including school leaders and teachers, external advisors, parents and other community members, as well as students. This chapter addresses discourses of ecological sustainability directly, including predefined discourses of ecological sustainability, and how they are present within the interviews. This chapter also identifies other dominant and marginalised discourses and how they may affect the negotiation of ESE.

Chapter 7 continues the analysis of the interviews by identifying the effect and presence neoliberalism may have on the research site and the education it imparts. This includes any challenges and aspects requiring negotiation, as well as the limitations involved in facilitating and sustaining ESE.

Chapter 8, through an analysis of the interview and focus group data, explores the connection to place that the research site exhibits, specifically with regard to local and global community connections as well as PBE.

Chapter 9 includes a discussion on the findings of the research. These findings are aligned with the research questions that guided this study. Nine significant tensions are identified that require negotiating and managing to support ESE. In addition, some enabling strategies to support ESE are proposed.

Chapter 10 concludes the thesis by outlining the key implications from this study. Framed by the message systems of curriculum, pedagogy, evaluation and organisation (Ball, 1990; Bates, 1992; Bernstein, 1971), the implications provide a means to support and create space for ESE through collaboration, priority alignment, emergence and bringing ESE from the margins to the centre. A significant contribution is the (re)conceptualisation of STEEM: science, technology, **ecology**, engineering and mathematics. Some directions for future research are also recommended.

CHAPTER 2:

Neoliberalism, ecological sustainability and Australian education: Mapping the context

> The notion that man must dominate nature emerges directly from the domination of man by man … But it was not until organic community relations … dissolved into market relationships that the planet itself was reduced to a resource for exploitation. This centuries-long tendency finds its most exacerbating development in modern capitalism. Owing to its inherently competitive nature, bourgeois society not only pits humans against each other, it also pits the mass of humanity against the natural world. Just as men are converted into commodities, so every aspect of nature is converted into a commodity, a resource to be manufactured and merchandised wantonly … The plundering of the human spirit by the marketplace is paralleled by the plundering of the earth by capital. Murray Bookchin, *Ecology and Revolutionary Thought* (1971, p. 63)

This chapter provides an historical, social and political context against which to consider how an urban Australian primary school might negotiate and manage ESE during neoliberal times. The chapter unfolds the story of education and ecological awareness by way of four overlapping eras: the golden era of the post-war West; the dawning awareness of social and environmental issues of the 1960s and 1970s; neoliberalism taking root during the 1980s and 1990s; and the acceleration of neoliberalism from the mid-1990s onward (see Appendix A for an illustrative timeline). The chapter situates the study in a global context given the way in which world events influence the more specific sites of Australia and Australian education, which are the main focus of this study. The chapter argues that while ecological sustainability was, by necessity, a way of life for many in the West during war and pre-war times, post-war conditions set the stage for a culture of environmental irresponsibility to emerge, which has flourished under neoliberalism.

2.1 The golden era

The Great Depression of the 1930s brought an end to the prosperity and lavish lifestyles of the Roaring Twenties. Wide-scale poverty during the Great Depression enforced a form of sustainability by necessity. Many people's cultural and social

practices were frugal, people were mindful of finite resources and there was a focus on sustainable domestic food security. The onslaught of World War II reinforced the falling standards of living of the Depression with extensive rationing of consumer goods and services.

In a response to economic instability, Keynesian economic policies were largely adopted in the West, which orchestrated an active role for the government to stabilise the economy through monetary and fiscal policies. In addition, transnational agreements were made at Bretton Woods, US in 1944, ushering in the World Bank, the International Monetary Fund (IMF), general agreement on tariffs and trade, and a new gold standard. Then, in 1945, the United Nations, an intergovernmental organisation, was established to promote global cooperation and maintain peace and security. Subsequently, a post-war boom depicted as the Golden Age of Capitalism superseded the war and pre-war times. This boom in prosperity was characterised by economic and social stability, the insurgence of industrially produced modern conveniences (mod-cons), fast food chains, a baby boom and a sense that life was affluent.

During this prosperous era, the US and the Soviet Union (USSR) became embroiled in a Cold War over economic and political philosophies. This conflict between East and West over ideologies and struggle for world dominance spawned an 'arms race' and a 'space race'. The launch of the USSR spacecraft Sputnik in 1957 came as a threat to the capabilities of the US. Therefore, as a matter of national interest, the US Government poured funding into science and mathematics education in the name of 'defence'. The Australian Government followed, also funding science in schools. However, this began a discord between the Australian Government's desire to influence and therefore build a nation through its schools by linking funding with the 'national interest' and the states' and territories' constitutional responsibility for their jurisdiction's education (Reid, 2005). Alongside the prosperity of the West, the advance of consumerism and the competitiveness between the two superpowers of capitalist US and communist USSR there was also a significant increase in ecological destruction and destabilisation (Tulloch & Neilson, 2014).

2.2   Environmentalism's dawning emergence

In the wake of post-war prosperity and global agreements, the Organisation for Economic Co-operation and Development (OECD), an international intergovernmental forum, was established in 1961 to stimulate economic progress and world trade. While a focus on the global economy was increasing, the early 1960s also marked a major turning point in social and ecological issues and awareness. Although the realisation of humans' negative effect on the environment and an interest in environmental conservation was emerging long before the 1960s, Rachel Carson's *Silent spring* (Carson, 1962) brought environmentalism to a wider audience. Reacting against toxic pesticide use, fuelled by the hegemonic discourse of capitalism, Carson highlighted a continual degradation of the natural environment by industries in the pursuit of financial profit (Tulloch & Neilson, 2014). The 1962 Cuban missile crisis, which brought the world to the brink of nuclear war, also increased people's awareness and heightened the public's fear of nuclear weapons and radioactive fallout. In addition, the Vietnam War sparked anti-war protests. As the world human population reached three billion, Paul Ehrlich's book, *The Population Bomb* (Ehrlich, 1968), alerted the public to the concomitant issue of population growth and limited resources on human survival. Furthermore, the photograph known as 'Earthrise', taken on the 1968 mission of Apollo 8, exposed the vulnerability of the planet (Hajer, 1995). The photo changed people's thoughts about the Earth and the finiteness of our home; one global community. The culmination of these significant junctures raised the profile of otherwise marginalised discourses such as environmentalism and social justice. At this time a survivalist discourse (Dryzek, 2013) began to emerge as people realised the interconnectedness of the ecology and human life against the dominant discourse associated with population and economic growth and rampant consumption.

Environmental problems came to the fore in the early 1970s (Council on Environmental Quality (U.S.), 1970). The first Earth Day was held in the US, which also established the world's first Environmental Protection Agency (EPA), closely followed by Victoria's EPA, the first in Australia. Publications criticised the consumer mentality and way of life, proclaiming its negative impact on the ecosystem and predicting impending doom (Ames, 1970; Bates, 1970; Severino, 1970; Teater, 1970). Increasingly, education came to be seen as a vehicle for social

change. The term and practice of environmental education emerged strongly in the 1970s, particularly after the United Nations Educational, Scientific and Cultural Organization (UNESCO) formulated a definition of environmental education at the 1970 'International Working Meeting on Environmental Education in the School Curriculum' (IUCN, 1970). During this time the concept of 'sustainability' was also introduced in the literature on environmentalism with the publication of *The limits to growth* (Meadows, Meadows, Randers, & Behrens III, 1972). This publication proposed attaining global ecological and economic balance rather than growth. However, it conceded this as an enormous task, and without sustainability as a goal and commitment the Earth and world systems will ultimately collapse.

With an increasingly 'survivalist' understanding, the 1970s produced a surge in the number of governmental and non-governmental initiatives and reports, specifically addressing the environment and the effect humans have on it, with education as a key focus of many. UNESCO's definition of environmental education gained wider international status when it was endorsed in 1972 at the first global environmental summit, the United Nations Conference on the Human Environment (Palmer, 1998). This summit produced the *Declaration of the United Nations conference on the human environment* (commonly known as the *Stockholm Declaration*) (United Nations, 1972). Later, the *Belgrade Charter* (UNESCO, 1975) and the *Tbilisi Declaration* (UNESCO-UNEP, 1978) were also widely influential, each endorsing the need for environmental education and progressively garnering more global attention. The goals for environmental education in the *Tbilisi Declaration* were,

> to foster clear awareness of, and concern about, economic, social, political, and ecological inter-dependence … to provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment; to create new patterns of behaviour towards the environment (UNESCO-UNEP, 1978, p. 26).

These goals connect with a liberal-progressive orientation, emphasising the individual and their potential to indirectly improve society.

2.2.1   1960s and 1970s Australian education

In Australia, education, and specifically environmental education, were largely influenced by the United Nations reports as well as the Environmental Education Act (US) (Heck, 2003). Much like other counties in the 1970s, environmental education

embraced urban issues and ethical dimensions. In the curriculum this transitioned from nature studies and fieldwork to outdoor education, conservation education, and urban studies, conducted in external centres or restricted to individual subjects such as geography (Palmer, 1998; Read, 2008). The concepts within environmental education had increased since the 1960s and the key goals promoted stemmed from a progressive, critical and action orientation (Stevenson, 2007c).

However, what was occurring within schools could be interpreted as an 'accommodation' approach to environmental education (Sterling, 2001, 2005). This conservative approach adopts environmental or sustainability ideas with little effect on the institution and minimal change in the values and behaviour of those involved. While these were valuable practices, students were taught *in* or *about* the environment in a transmissive way, with environmental education occurring in isolation from other parts of the school curriculum (Heck, 2003; Read, 2008). In Australia, however, this transmissive approach to teaching began to be replaced by a child-centred environment which would continue, particularly in South Australia, through to the 1990s (Collins & Yates, 2009; Watkins, 2007).

Prior to the 1970s, education streamed students by using the competitive academic curriculum into academic and non-academic streams (Connell, 1985; Connell, Ashenden, Kessler, & Dowsett, 1982). Collins and Yates (2009) argue these practices favoured middle-class students and in South Australia, and subsequently nationally, the Karmel Reports (1971; 1973) advised governments that of most importance in schools was the fact social justice was not being addressed adequately. Therefore, a whole-of-government strategy, the Disadvantaged Schools Program (DSP), was initiated to address social justice and, in particular, poverty. Social justice then focused on the children's economic circumstances. The DSP can be identified as socially critical as it focused away from the individual as the problem and solution, and instead paid attention to the institution and how disadvantage was produced (Thomson, 2002). Thus the notion of social justice in schools became more highly recognised and teachers, with a new degree of autonomy, had the task of making the curriculum work for all students whilst addressing social division and disadvantage (Collins & Yates, 2009; Gill, 2008). With increasing use in South Australia of social justice to guide curriculum policy, education took on more of a

progressive purpose with the 1971 Karmel Report advocating for education for the preparation for life and participation in society (Collins & Yates, 2009).

In 1973, during the rise of the radical ecological and social movements, the post-war prosperity came to an end. The Organisation of the Petroleum Exporting Countries (OPEC) proclaimed an oil embargo on many nations, which subsequently affected the global economy. While the oil crisis sparked increased interest in alternative forms of energy, it also rocked an already increasingly unstable economy and led to a global recession.

2.3   Neoliberalism takes root

In the early 1970s neoliberalism had steadily been gaining traction globally as an alternative economic and social orthodoxy (Harvey, 2005). The collapse of the Bretton Woods system of international trade and exchange, and failure of Keynesianism to stabilise the 1970s economic recession opened the doors for a neoliberal revolution, largely orchestrated by economists Milton Friedman and Friedrich Hayek. This politically and economic driven doctrine "proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade" (Harvey, 2005, p. 2). Furthermore, Levin and Greenwood (2011) propose neoliberal beliefs are utopian, that a free market system, without government intervention, will result in an efficient economy. However, this ideal is problematic because, as Foucault and Miskowiec (1986) claim, utopias are paradoxical spaces that dislocate place and are therefore placeless.

Emanating from right-of-centre ideologies that regard education as preparation for work or social reproduction, the infiltration of neoliberalism transforms the focus in schools, and more broadly, on collective wellbeing and social good. Instead, schools become part of the market, resulting in a 'commodification of education' (Davies & Bansel, 2007; Watkins, 2007). This educational discourse argues for individual responsibility, parents' rights, freedom, choice, standards, and excellence (Doherty, 2007).

Inspired by neoliberal ideals both the Thatcher and Reagan, in the UK and US, administrations respectively supported and initiated neoliberal economic policies.

Through economic agreements and organisations such as the IMF, World Bank and the World Trade Organisation (WTO), neoliberal policies were imposed on developing countries (Hursh & Henderson, 2011). As advocated by Thatcher's rhetoric, there is no alternative, neoliberalism co-opts the language of the market and leads us to believe that preferencing capitalistic, market principles is the only way to run society. In Australia, the political agenda of neoliberalism stemmed from what is known as economic rationalism. Economic rationalism is a doctrine that privileges economic over social goals by favouring market forces over government intervention, and is ultimately focused on short-term profit (Stilwell, 2000). Economic rationalism lies at the core of neoliberalism; however, the effect of neoliberalism moves beyond the economic, pervading the lives of each individual through the commodification of social life (Stilwell, 2000). That is, converting "social processes into commodities which can be produced and sold in the pursuit of profit" (Stilwell, 2000, p. 97).

The global ideological shift involving the adoption of neoliberal policies resulted in widespread reforms in the early 1980s, initially in the UK and the US, followed by many other nations, including Australia (Connell, 2002). These reforms were fuelled by discourses of neoliberalism, reducing a collective awareness to the ostensible rights, choices and responsibilities of individuals while bracketing from view the social costs of rampant marketisation. Concurrently, technological and industrial restructuring alongside changes in market economics accelerated the globalisation process (Kotz, 2002, p. 76). This rendered globalisation the "international manifestation" of the neoliberal effect (Quiggin, 1999, p. 240).

2.3.1   The ramifications of globalisation

Globalisation can be understood as "the spread of transplanetary – [or] supraterritorial – connections between people" (Scholte, 2005, p. 49). It is a process in which economic, political, social and cultural relations are steadily developed internationally producing market changes in production, consumption and investment. This global process consequently results in social connections transcending social, geographical and cultural borders and boundaries (Scholte, 2005). An intensification in global technologies and trade has quickened this process, and the internet is an example of how boundaries and borders are transcended. The

influence of neoliberalism on globalisation resulted in a reconfiguration of geometries and geographies of power (Kenway, et al., 2006; Massey, 2005). The balance of power was, and is, rearranged so that economic and political powers are directed to the corporate elites and away from the citizens (Jickling & Wals, 2008), especially those marginalised. Advantaging the dominant classes and countries results in increased inequality and democratic deficits and a widening gap between rich and poor (Scholte, 2005). Consequently, globalisation changed how people live in and feel about their local places and local places can be seen as both victims and agents of globalisation (Massey, 2005; Massey & Jess, 1995).

In addition to social ramifications, globalisation and the application of neoliberal principles have given rise to environmental losses and increased degradation (Harvey, 2005; Scholte, 2005). Harvey (2005) suggests rapid industrialisation and the encouragement of a global consumer culture has resulted in the destruction of rainforests, the exploitation of natural resources, and an increase in carbon dioxide emissions. Furthermore, Bookchin (1971) argues that consumer needs were "tailored by the mass media to create a public demand for utterly useless commodities, each carefully engineered to deteriorate after a predetermined period of time" (p. 63). Therefore, with a focus on the short-term, marginalisation of collective concerns and promotion of individual consumption, neoliberalism is arguably incompatible with ecological sustainability (Stilwell, 2000).

2.3.2   Neoliberalisation of ecological sustainability

The concern for the environment and the dire need to prevent its demise that was discussed throughout the seventies and into the eighties gradually began to evolve into a more accepted concept of sustainability. While the idea of sustainability was introduced in 1972 (see Meadows, et al., 1972), it gained international recognition in 1980 when it was included in the *World conservation strategy* (IUCN, UNEP, & WWF, 1980). As well as this, environmental education acquired a more global and political dimension in its support of sustainability, subsequent to its own chapter featuring in the strategy. Globally, the survivalist and anti-growth discourses that emerged in the 1960 and 1970s were increasing. Scientists' discovery in 1985 that chemicals, such as chlorofluorocarbons (CFCs) from aerosols, contributed to a 'hole' in the Earth's ozone layer further heightened people's environmental awareness and

concern. However, the widespread influence of neoliberalism on society had a great effect on the growing sustainability discourses.

A landmark publication, *Our common future* (World Commission on Environment and Development (WCED), 1987) was released in 1987. Also known as the *Brundtland Report*, this document transformed the earlier marginalised, counter-hegemonic radical understanding of sustainability. Instead, sustainability became subsumed by the market orientation of neoliberalism and became articulated as *sustainable development*: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development (WCED), 1987, p. 43). Whilst the *Brundtland* definition is now commonly used, it is highly contested (Bernardino, 2003; Huckle, 1991; Jickling & Wals, 2008; Redclift, 1992; Turner, 1988). Aguirre (2002) suggests when the term sustainability first emerged it was always related to the environment. However, Aguirre (2002) proposes, increasingly the term is politically loaded. The *Brundtland* definition takes the emphasis away from ecological concerns and instead preferences economic development (Redclift, 1992; Tulloch & Neilson, 2014). Jickling and Wals (2008) argue that neoliberal forces have shaped globalisation and played a part in enabling "powerful world bodies, such as the World Bank, the World Trade Organization, and UNESCO, to influence educational policy agendas on a global scale with lightning speed" (Jickling & Wals, 2008, p. 4), including policy related to ecological sustainability.

Subsequently, environmental education in support of sustainability translated into schools in the form of global education, development education, values education and action research (Palmer, 1998). While there was a shift away from the transmissive approach to education that was more pupil-led, environmental education still tended to be taught in isolation (Palmer, 1998; Read, 2008). Although education in the 1980s embraced a wider scope of environmental issues, what was practised within schools could still be perceived as an *accommodation* approach, education *about* the environment (Sterling, 2001, 2005).

Responding to a need to address the heightening issues of the environment, in 1992 the Rio Earth Summit was convened. The main outcome of the summit was *Agenda 21* (UNCED, 1992), the now internationally recognised report of the United Nations

Conference on Environment and Development (UNCED). This report was adopted by more than 178 governments present at the summit (United Nations Division for Sustainable Development, 2004). Among other things, the report declared there was "a considerable lack of awareness of the interrelated nature of all human activities and the environment" (UNCED, 1992, p. 324). It also put forward there was a need to 'reorient' education towards sustainable development, that is, transform environmental education to education *for* sustainability (Heck, 2003). The document could be seen as an action plan for achieving sustainability. However, the appropriation of neoliberalism into sustainability discourse is clearly evident in the privileging and pertinence of economic and industrial growth for a prosperous society (Tulloch & Neilson, 2014). Consequently, education *for* sustainability has the potential to become "education for consumerism and unbridled economic growth" (Le Grange, 2011, p. 744).

In spite of the steady neoliberalisation of sustainability in the 1980 and 1990s, environmental education and the notion of sustainability became inextricably linked and there was a rapid increase in education material, activities and programs addressing education *for* the environment. This was both formal and non-formal via the curriculum and non-governmental organisations' environmental activities such as Waterwatch (Read, 2008). While this approach supported a strong argument *for* the environment and sustainability, it can be positioned within a 'reformation' response (Sterling, 2001, 2005). Although demonstrating an understanding of the ideas needed to promote ecological sustainability, this was a transmissive, conservative approach and the environmental education programs were generally add-on, discrete programs, existing predominantly within the curriculum areas of science and studies of society and environment (Heck, 2003). This left the remainder of the curriculum untroubled in its relationship to sustainability and environmental issues. It also seemed that rather than education *for* the environment, or education *for* a sustainable future (Jickling & Wals, 2008; Palmer, 1998), many schools in Australia were still practicing education *in* or *about* the environment. Coinciding with the struggle for the integrity of education *for* ecological sustainability in a neoliberal context, ecological sustainability became subsumed by market logic.

2.3.3 Green consumerism

The co-opting of ecological sustainability into economy driven neoliberal market ideologies was arguably detrimental for the sustainability and environmental movement. Concurrently, this was also a reconfiguring of the individual as citizen and community member into a consumer above all else. In addition, our identities as consumers as well as our conception of the good life became inextricably formed through our purchases (Bryman, 1995; Giroux, 2008). The 'consumer society' boomed under the effect of globalised capitalism's emphasis on rampant consumption for profit. Buoyed by increased consumerism, corporations in the 1980s realised the potential in targeting the rise in public fear, anxiety and concern about the state of the environment. As a result, 'green marketing' ensued, where agency for environmental action was accessible to consumers through the purchase of seemingly eco-friendly products. However, as stated by Budinsky and Bryant (2013),

> the problem with green consumerism is that, although buying a 'green' product may be the 'lesser of two evils,' it still operates within a neoliberal, capitalist context that is more concerned with making a profit than with saving the environment. A neoliberal reliance on the free market as the source of solutions for all problems, along with the complementary focus on the individual and on individual choice within the market mean that individuals are encouraged to believe that they can be environmentalists simply by making ostensibly thoughtful choices from within the range of consumer choices available on the market. Attention is deflected away from the forms of collective action often needed to bring about meaningful social/environmental change. (p. 208)

Although globally consumers were willing to pay more for eco-friendly products, the discourses supported by green consumerism actually undermine environmentalism. Instead of focusing on anti-growth and the social and ecological ramifications of a neoliberal capitalist market, green marketing commodifies the biophysical environment and encourages individualism and consumption (Budinsky & Bryant, 2013).

The paradox between capitalist market interests and environmental agency was further problematised through the emergence of 'greenwashing'. Operating within a "competitiveness-at-all costs economy" (Manteaw, 2008, p. 120) and seeing environmentally-based rhetoric offered a competitive advantage, many corporations exploited consumers' sensibilities by naturalising consumption and marketing the eco-friendliness of products without substantiation. In spite of a growing awareness

of corporations' misleading claims, the practice of greenwashing, fuelled by the economic bottom line, continues (TerraChoice, 2010). Along with the prevalence of greenwashing and the neoliberalisation of sustainability, the broader education sector has been significantly altered by the adoption of neoliberal principles and reforms.

2.3.4　Marketing, managing and monitoring schools

In the West, the 1973 oil crisis and the collapse of Keynesianism "brought an end to optimistic educational assumptions … education suddenly became the problem, not the solution" (Hargreaves & Lo, 2000, p. 169) and teachers were the main perpetrators (Hargreaves & Lo, 2000). To 'solve' the education 'problem' schools came under intense pressure to perform, and educational reforms and restructures abounded. Structured around competition, the market-orientation of neoliberalism stimulated increased government and business interest in schools globally. This attention positioned schools in a global context reinforcing schooling as a national interest. As government control over education increased, so too did the appearance of governmental agendas in education policy (Shuayb & O'Donnell, 2008), and in the 1980s social and cultural aspects became subordinated to political and socio-economic goals. Consequently standards and performance were targeted in an effort to improve the economy which in turn significantly narrowed the purposes of education (Gillies, 2010). Rather than being for social wellbeing, the purpose of education became much more for human capital and social efficiency, producing skilled and efficient workers to support a competitive national economy (Cranston, Kimber, Mulford, Reid, & Keating, 2010; Gillies, 2010; Rizvi & Lingard, 2006). This international trend is evidenced in Australia by governmental reports such as *Preparation for the workforce* (Australia. Parliament. Senate. Standing Committee on Education and the Arts, 1981). With a shift towards neoliberal ideas, the emphasis on social efficiency also began to dominate the work of the OECD as indicated:

> in support for a human capital account of education, new forms of
> educational governance and a global space of comparative educational
> performance. Equity remains on the agenda, but has been rearticulated away
> from a strong definition of social justice towards social capital and social
> inclusion concerns. (Rizvi & Lingard, 2006, p. 250)

The influence of neoliberalism and support of social efficiency is also evident in a government inquiry in South Australia, the *Keeves Report* (Keeves, 1982). The report recommended monitoring schools' performances and streaming students, and

it gave technology a profile. For economic reasons the 1970s notion of social justice and equality of opportunity in education began to give way to a discourse of measurable inputs and outputs. This took the focus away from the institution and placed it back onto the individual. Streaming with the use of the 'competitive academic curriculum' (Connell, 1985; Connell, et al., 1982) continued to differentiate students, and what emerged was a league table approach to the merit and worth of education, school by school and sector by sector. In addition, Garrick (2011) highlights a significant characteristic of neoliberalism is that in order to introduce education and curriculum reform to support a country's economic prosperity a crisis must be created where it may not have actually existed. This idea can be linked back to Milton Friedman who stated:

> Only a crisis – actual or perceived – produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. … our basic function [is] to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes politically inevitable. (Friedman & Friedman, 1982, p. ix)

Following this quest for change, nationally, during the 1980s, politicians were arguing that education was in crisis and in need of reformation that would ultimately serve the economy (Marsh, 1994; Reid & Thomson, 2003). Fuelled by a neoliberal profit-making logic as well as accountability through performance management (Connell, Fawcett, & Meagher, 2009) the 1980s saw a rise in managerialism with an emphasis on efficiency, effectiveness, quality, excellence and standards. Subsequently, schools were reconstructed as businesses and enterprises, and principals as entrepreneurial managers (Connell, 2002).

The influence of neoliberalism began to escalate, and its effects could increasingly be seen in governmental documents and reports with a focus on performance, effectiveness, quality and education for the global economy in the 21st century (see Commonwealth Schools Commission, 1985; Karmel & Australia. Quality of Education Review Committee, 1985; Power, Baumgart, & Australia. Education Research Development Committee, 1982). The Australian Educational Council endorsed the *Hobart Declaration on national goals for schooling in Australia* (Australian Education Council, 1989) in an effort to "enhance the capacity of all Australian schools to meet the challenges of the 21st century" (Australian Education Council, 1989). The 1990 charter *Educating for the 21st century* (South Australia.

Education Department., 1990) also highlighted that alongside developing human intellect, education was about preparation for work to sustain the economy. Increasingly skills were deemed more important than content knowledge, and education was reduced and used by governments for the training of 'human capital' (Collins & Yates, 2009; Smith, 2014). Students were perceived in global economic terms, as productive resources and investments (Brennan, 2009; Davies & Bansel, 2007; Smith, 2014), emerging as functional rather than knowledgeable citizens (Collins & Yates, 2009) with little regard for public interest (Connell, 2002).

Focusing on skills and processes the Australian Government pushed education towards standards, competition and marketisation (Marginson, 1997a) while pursuing the establishment of a core curriculum (see Curriculum Development Centre (Australia), 1980). Guided by the *Hobart Declaration*, and the introduction of key competencies (see Finn & Australian Education Council. Review Committee, 1991; Mayer & Australian Education Council. Mayer Committee, 1992), which were deemed fundamental to Australia's global economic competitiveness (Mayer & Australian Education Council. Mayer Committee, 1992), a national curriculum (national statements and profiles) was eventually supported. While environmental education featured as part of a key area, there were criticisms it was not adequately represented (Marsh, 1994), and although all states had originally agreed to a national curriculum, by 1993, after governmental changes, most states pulled away from the national agenda (Collins & Yates, 2009; Reid, 1999). South Australia did, however, adopt the national statements and profiles as its curriculum framework. The framework accommodated the neoliberal political agenda of reporting student achievement levels (Collins & Yates, 2009). Although a national curriculum did not come to fruition at this time, the government was able to monitor schools' performances through the successful commencement, in 1990, of annual national reporting on Australian schooling.

Throughout the 1980s and 1990s neoliberalism continued to be "inserted in a piecemeal, functionalist fashion, which works to make the discourse itself invisible" (Davies & Bansel, 2007, p. 257). Consequently, neoliberal ideals have largely been unreservedly accepted. Furthermore, globalisation has provided a vehicle for neoliberal beliefs to take root ubiquitously. The effects of neoliberalism in education

and the curriculum steadily continued and broadened in the promotion of competition, accountability and marketisation (for example, standardised testing, a national curriculum, and seeing schools as enterprises and principals as entrepreneurs) (Connell, 2002; Small, 2011). This trend has accelerated with the government maintaining a position of steering or controlling from a distance (Ball, 1993; Buchanan & Chapman, 2011; Kickert, 1995; Lingard, 2011b; Marginson, 1997b; Robinson, 2011). In addition, by preferencing the economy, neoliberalism significantly altered the notion of ecological sustainability. By the mid-1990s, sustainability was reconceptualised with the slogan of a 'triple bottom line' encompassing the economy, society and the environment (DECS, 2007b; Elkington, 1997; UNESCO, 2005b; World Commission on Environment and Development (WCED), 1987). This is also known as the three P's or the 'Triple-P' bottom line of 'people, planet, profit' (Elkington, 1994; Elkington, 1997). Jickling and Wals (2008) suggest the influence of neoliberalism and its market mentality has meant, "the 'P' for profit silently has become an undisputed component of the triple bottom-line" (p. 3). Furthermore, the neoliberal influence on the interconnection of the economy, society and the environment paved the way for businesses legitimising their (un)sustainable practices by preferencing profit and marginalising all else, as seen particularly with greenwashing. With its wide acceptance and political backing, neoliberalism proceeded to accelerate and pervade into the 1990s and beyond.

2.4   Neoliberalism proliferates

From the mid-1990s onward, neoliberal discourses have progressively become dominant across the West. The permeation of neoliberal ideals proceeds to silence and renders illogical all other ways of conceiving the world and how we should operate as societies. This domination can be understood as cultural hegemony, where the dominant or ruling class is able to manipulate the culture or worldview of a society through politics, education, entertainment, news and 'common sense' so the worldview of the dominant becomes the accepted norm; the universally acceptable orthodoxy that justifies the status quo (Gramsci, 1971). While being portrayed as beneficial to every social class, the dominant neoliberal worldview maintains power in the hands of the ruling class.

Progressively, marginalised discourses that exist in opposition have been subsumed by neoliberalism to satisfy neoliberal capitalist and market-oriented ends. Greenwashing exemplifies this trend. Neoliberalism has also shaped education. Prior to the 1980s, education enjoyed a progressive

> period when a concern about social justice and a view of students as developing individuals were dominant and unquestioned. By contrast, politicians of the 1990s and 2000s take the issue of a changing economy, and the primacy of economic drivers, as dominant and unquestioned (Yates & Collins, 2010, p. 98).

Therefore, discourses of social justice, environmental awareness and minority rights are sidelined in favour of more profitable ventures. Furthermore, the notion of cultural hegemonic power play is echoed within education (Gramsci, 1971). As Apple (1995) argues, "the educational and cultural system is an exceptionally important element in the maintenance of existing relations of domination and exploitation" (p. 9). Neoliberalism and a concomitant individualised discourse have marginalised progressive pedagogies and become firmly entrenched within education, to the detriment of collective wellbeing. As a result, global inequality and environmental destruction have increased.

2.4.1 The human cost of neoliberalism: Individualisation for the economy

Neoliberal ideals focus on individualism and marginalise the collective or common good (Lingard, 2011b) while preferencing free market ideologies and unapologetic economic opportunism. However, rather than the promise that market logic will lead to global prosperity, the result of economic competitiveness has instead increased global inequality (Harvey, 2005; Hursh & Henderson, 2011). The rich gave rise to the super-rich and "a Fourth World began to emerge … a world of absolute destitution" (Hargreaves & Lo, 2000, p. 170). Furthermore, in favour of this scenario, Small (2011) suggests neoliberals question the value of equality and whether inequality should be minimised at all. Instead, the human cost of neoliberalisation is that "the greater the levels of inequality, the greater the incentives for everybody – rich and poor – to lead more productive lives" (Small, 2011, p. 260). Consequently, under a neoliberal agenda the values of freedom and choice are promoted to take the focus away from equality (Small, 2011, p. 260).

Consistent with the ideal of individual responsibility and individualisation for the economy, from the mid-1990s governments regarded education to be for social efficiency and social mobility (Cranston, et al., 2010). This included the Howard Government in Australia, which reconceptualised diversity and disadvantage to be about 'choice' in an education market. However, choice centred on the notion that *all* people have the capacity to choose. As a result, the government succeeded in pushing equity and social justice concerns further to the margins. Literacy and literate individuals became the issue and focus rather than poverty (Cranston, et al., 2010). Subsequently, in 1996, the Howard Government abolished the DSP and replaced it with the Commonwealth Literacy Program (CLP) (Thomson, 2002). Unlike the DSP's whole-school rationale to change social inequities as a national interest, the logic behind the individualised CLP was for a literate workforce (Thomson, 2002). Therefore, in Australia, and more widely, particularly the US and UK, social justice, environmental awareness and minority rights were superseded by an individualised, standardised, competitive focus on literacy and numeracy. This focus on a narrow version of both literacy and numeracy could be assessed against global benchmarks, with little regard for environmental or racial literacy. An increase in global standardised testing culminated with the establishment of a number of cyclical tests. This global comparison of educational attainment included the 1995 Trends in International Mathematics and Science Study (TIMSS), in 1997, OECD's Programme for International Student Assessment (PISA) and in 2001 the Progress in International Reading Literacy Study (PIRLS). These assessments focused on areas of political importance such as literacy, numeracy and science.

2.4.2   Global standardisation

Internationally, the education reforms in many countries have been provoked by publications from the OECD. Although the OECD was established as a governmental forum, "to promote policies that will improve the economic and social well-being of people around the world" (OECD, 2013) it has also been referred to as "the rich countries' neoliberal economic think-tank" (Connell, 2013, p. 109). Also, as stated previously, the OECD has rearticulated the 'social wellbeing of people' in neoliberal terms, favouring the economy and social efficiency (Rizvi & Lingard, 2006).

Education and knowledge have been inextricably linked to wealth and the economy with the notion of what is often referred to as the 'knowledge economy', meaning an educated population will boost the economy (Kenway, 2008; Spring, 2008). In response to this premise, PISA was specifically designed to test the skills and knowledge that were most valued and deemed necessary for a prosperous knowledge economy (Kenway, 2008; Spring, 2008). Consequently, "by becoming an international standard, PISA has the direct potential for determining the curriculum content in the areas tested, which are mathematics, reading, and science." (Spring, 2008, p. 346). Hursh and Henderson (2011) propose that although standardised testing narrows the curriculum, does not improve student achievement nor affect achievement gaps, high-stakes standardised testing has proliferated.

PISA is one of the OECD's major sources for publications, and the OECD's role in the global standardisation of education reflects a new form of governance in education (Rizvi & Lingard, 2006). The results from PISA enable international comparisons of educational attainment and continue to be used by governments to drive and justify reform agendas, and 'steer from a distance' (Ball, 1993; Kickert, 1995; Lingard, 2011b; Marginson, 1997b; Robinson, 2011). International assessment programs such as PISA support increased competition between countries, which therefore drives national control, a narrowing of the curriculum and global homogenisation of education (Zhao, 2011). In 2008 the emphasis on international comparative outcomes from PISA triggered the Australian Government's reaction to reduce their "under-performing 'tail'" (Commonwealth of Australia, 2008b, p. 35). Due to an *apparent* underperforming education system, an 'education revolution' was initiated. This revolution involved, among other things, *significant* curriculum reform. Globalisation is a key rationale for the measures the government initiated as its aims were to create a 'world class education system' and develop a competitive workforce able to respond to global competition (Commonwealth of Australia, 2008b). These measures, and this example of national control over curriculum, are indicative of an emerging global trend in education policy (Savage & O'Connor, 2014) so unprecedented it could be referred to as an 'epidemic' of education reform (Ball, 2003; Levin, 1998).

Similar responses to Australia have been occurring internationally. Wales has launched large-scale education reform measures (see OECD, 2014) in response to extremely low levels of performance on PISA. In Germany poor results "hurt the German mentality and credo of belonging to the best" (Böttcher, 2014) and ignited a barrage of publications with reference to PISA results. In addition, a number of measures were introduced to reform the German education system. Germany's BMBF (Federal Ministry of Education and Research) put forward that their country's disappointing results were due to a lack of national standard, however, as Böttcher (2014) suggests, standards transmute into tests which in turn narrows the curriculum.

These reform measures are indicative of the current widespread movement in education where many countries, have "fallen into step with what is perceived as a global market demand for a unified curriculum that is homogenous" (Salvio, 2014, p. 270) nationally and globally. (For recent accounts in a number of countries worldwide see (Pinar, 2014) *International handbook of curriculum research*). Neoliberal measures have contributed to international education reform, with core curriculum mandates and a narrow focus on literacy and numeracy attainment, to support competitive national economies. Similarly, neoliberal ideologies also continue to reconstitute ecological sustainability in market terms. Moving beyond the neoliberalisation of ecological sustainability, the steady proliferation of neoliberalism and the privileging of the market has resulted in a retreat from envisaging greener futures.

2.4.3   Adaptation: Crisis management rather than green futures

At the end of the nineties, Australian federal and state governments reflected a seemingly strong commitment to education in support of ecological sustainability when all education ministers endorsed the *National goals for schooling in the twenty-first century*, otherwise known as *The Adelaide Declaration* (Ministerial Council on Education, 1999). The declaration was produced by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) with a vision for environmental education in Australian schools. One of the national goals pronounced that when students leave school, they should "have an understanding of, and concern for, stewardship of the natural environment, and the knowledge and skills to contribute to ecologically sustainable development" (MCEETYA, 1999). Social

justice also featured prominently among the goals; however, the growing domination of neoliberal discourses and the conceptualisation of education for social efficiency and social mobility marginalised education for ecological sustainability. Following overseas trends the Australian Government released a national action plan, *Environmental education for a sustainable future* (Environment Australia, 2000). This plan encompassed the notion of 'education *for* sustainability' within environmental education, and demonstrated a strategic shift towards mainstreaming sustainability (Tilbury & Cooke, 2005).

However, underpinned by the neoliberalisation and marketisation of ecological sustainability and ESE, the focus from the mid-1990s began to change. While the ecological movement had envisaged and promoted greener, more hopeful futures this ideal was marginalised by an emphasis on climate change. In an endeavour to limit global warming greenhouse gas emissions a key global initiative, the *Kyoto Protocol*, was adopted by most countries in 1997. However, in spite of wide scientific evidence of humans' detrimental effect on the global climate, many people, including those with political power in both the US and Australia, denied the evidence. The economy also continued to dominate debates, and consequently the US did not ratify the protocol as it was argued the country could not afford to reduce their carbon dioxide emissions.

In 2002, the World Summit on Sustainable Development put forward three new pillars: trade, poverty reduction and environmental protection. These pillars further reinforced neoliberal market logic, and in 2005 the European Union Emission Trading Scheme was introduced. The trading scheme marked a vast divergence from the survivalist discourse of the 1960 and 1970s. Rather than enforcing restrictions on polluters, the trading scheme uses market mechanisms to address climate change (Cahill, 2009) and the capitalist mode of production is safeguarded by the commodification and trading of the environment.

Globally in response to previous shortcomings in the field of environmental and sustainability education, and the deteriorating state of the environment, the United Nations proclaimed the UN decade of education for sustainable development, 2005–2014, (DESD), with an emphasis on education as a key tool in support of sustainability (United Nations Educational, 2005b). The Australian Government

responded with a key strategy, *Caring for our future – The Australian Government strategy for the United Nations decade of education for sustainable development*, 2005–2014 (Australian Government, 2007) as well as a range of governmental initiatives, such as *Educating for a sustainable future: A national environmental education statement for Australian schools* (Australian Department of Environment and Heritage, 2005) and *Living sustainably: The Australian Government's national action plan for education for sustainability* (Department of the Environment, 2009b), which superseded the first national action plan released in 2000 (Environment Australia, 2000) and was to "equip all Australians with the knowledge and skills required to live sustainably" (Department of Sustainability, 2010). Other publications included *Education for sustainability: The role of education in engaging and equipping people for change* (ARIES, 2009) and a *National action plan for education for sustainability* (Department of Sustainability, 2010). This highlights education for ecological sustainability as a major item on Australia's and the world's agenda.

Increasingly environmental education seemed to be directed away from a teacher-directed, transmissive approach to a transformative approach, what was being promoted as a more empowering education that is life-long, holistic, practical and inclusive (see ARIES, 2009; Department of the Environment, 2009a). However, many of the initiatives were championing 'life-long', integrated, and 'inclusive' proposals (ICEE, 2007), reminiscent of recommendations made 30 years earlier in the 1977 *Tbilisi Declaration*. Furthermore, Jickling and Wals (2008) argue the underlying ideological agenda of neoliberalism in many of the policy statements at the time renders these initiatives as questionable. In addition, as the neoliberal hegemony was widely accepted and not challenged in these initiatives the outcomes have been "business as usual in the end" (Huckle & Wals, 2015, p. 502), with little movement towards ecological sustainability.

Consecutive Australian *State of the Environment* reports show that in spite of the impetus on mainstreaming sustainability and a growing global awareness of increasing environmental problems there has been little ecological improvement in Australia. Indeed, some of the pressures have intensified, such as those associated with traffic, litter and the coal and coal-seam gas industries, and in some regards, the

state of the environment has continued to deteriorate (Australian State of the Environment Committee, 2001, 2006, 2011, 2016). This is also true of the state of the global environment (Howes, et al., 2017).

Increasingly, from the mid-2000s the idea of sustainability dropped off the agenda significantly and the concept of climate change began to dominate. Former US vice president Al Gore's documentary, *An inconvenient truth* (Guggenheim, 2006), was released in 2006, raising public awareness about global warming and climate change. However, regardless of growing evidence and increased public pressure regarding the 'climate crisis', deniers and sceptics remain. Furthermore, with an overwhelming focus on the economy, many policy responses to the climate debate, in education and society more broadly, have largely been in the form of crisis management and adapting to the effects of climate rather than a hopeful, sustainable future. Adding urgency to the need for ESE is that currently the global population has surpassed 7.6 billion and it is projected to reach 9.8 billion by the year 2050 (United Nations, 2017). This grossly expanding population puts further stress on an already compromised environment, therefore any hope for ecological sustainability requires serious action.

2.4.4 There is no alternative

Consistent with the adaptation and management responses to climate change and ecological sustainability, economic crises have engendered a crisis management response and a return to 'business as usual' (Huckle & Wals, 2015). In 2008, the world became affected by the global financial crisis (GFC), also referred to as the global economic crisis. The GFC began in the US and involved market crashes in which companies went bankrupt. Housing markets also suffered, and banks and financial institutions collapsed under the weight of debt, with governments called on to bail them out. The cause of the GFC has been attributed to neoliberal policies and ideologies (Kotz, 2009; Small, 2011, p. 258). Political elites all over the world began denouncing neoliberalism (Peck, 2010). In Australia, the Labor prime minister at the time, Mr Kevin Rudd, not only blamed neoliberalism for the GFC but also rejected it, proclaiming, "the great neo-liberal experiment of the past 30 years has failed" (Rudd, 2009, p. 24). As well as this, Rudd draws from Sir Nicholas Stern to exemplify climate change as "the greatest market failure in human history" (Rudd, 2009, p. 23)

and a prime example of neoliberal governments' inaction to market failure. However, in spite of the GFC, the apparent death of neoliberalism (Rudd, 2009), and similar failed neoliberal policies internationally (Lingard, 2011b; Small, 2011), the federal Labor government proceeded to introduce a number of neoliberal schemes "including national testing and league tables in education, continued labour market deregulation, meanwhile propping up Australian banks" (Connell, et al., 2009, p. 333).

One of the key strategies in the Australian Government's response to the GFC was to inject funds into the building and construction industry by funding schools to upgrade their facilities. This strategy, branded Building the Education Revolution (BER) was much needed in the neglected school system; however, this economic stimulus plan was rolled out with such haste, many schools had little say in how they would like the funds spent. Ultimately the BER had little to do with education and more to do with addressing the GFC and boosting the economy (Reid, 2009). The GFC also led to a strengthening of neoliberal ideals in education (Rudd & Goodson, 2017), which has proceeded to shape curricula globally.

In addition to neoliberalism's role in the GFC, Peck and Tickell (1994) suggest neoliberalism was also at the heart of the global recession in the early 1990s. However, they argue, "neoliberalism is socially, economically and geographically unsustainable" (p. 324) and "the ascendancy of neoliberalism represents a regulatory vacuum, the *absence* [italics in original] of a new institutional fix. Here, neoliberalism is seen as a symptom of, and contributor to, the crisis" (Peck & Tickell, 1994, p. 320). With little regard to its failures, neoliberalism largely continues to be seen as the solution to economic, ecological and education crises (Hursh & Henderson, 2011; Lingard, 2011b). The neoliberal hegemony also remains, as argued by Hursh and Henderson (2011), "the power elite who benefit from the policies have gained control over both public debate and policy-making. By dominating the discourse and logic regarding economic, environmental, and education decision-making, neoliberal proponents have largely succeeded in marginalizing alternative conceptions" (p. 171). Therefore, with the support of political and corporate elites and because there are no credible alternatives to replace it, neoliberal frameworks have intensified and continue to dominate the political

realm and permeate much of society in Australia and around the globe (Hursh & Henderson, 2011; Lingard, 2011b). This impasse is reminiscent of Thatcher's political slogan, 'TINA' – there is no alternative – and reinforces the claimed inevitability of neoliberalism and global inequality. Similar to many ecological initiatives, the acceptance and disregard of the role of neoliberalism in the GFC (and many other crises) has resulted in a version of 'business as usual' (Huckle & Wals, 2015) that is more intense and widespread (Peck, 2013). However, this research offers hope and possibility in the negotiation and navigation of neoliberal framings. In the face of competing discourses, viewing the neoliberal context as paradoxical and something to be negotiated and managed helps to create the space needed to support ESE.

2.5 The paradox of ecological sustainability education in a neoliberal context

Negotiating ESE may be understood as an exercise in futility, hope and/or possibility. Sustainability is contested, and neoliberalism creates a paradoxical preferencing-marginalising duality in a number of ways. However, rather than resigning to business as usual and regarding ESE as a futile endeavour, embracing the inherent paradoxes may be productive. Palmer (2007) suggests teaching and learning necessitates a higher degree of awareness than usual and it is this creative tension that can be understood as a paradox. "Paradox is another name for that tension, a way of holding opposites together that creates an electric charge that keeps us awake" (Palmer, 2007, p. 76). Therefore, it is important to "problematize continued and uncritical use of sustainability as an organizing concept and as an aim for education" (Jickling, 2010, p. 177). In the same way, neoliberal ideals must be critiqued and problematised. Holding these two contradictory concepts together means creativity is indispensable in finding a new way forward, other than the status quo.

2.6 Summary

This chapter presented an historical and contextual consideration of neoliberalism and the consequences its ideals have had on equality, the environment and education, with particular reference to Australian education. Since the 1960s, fuelled by neoliberal market logic, global inequality has increased threefold and the rich–poor

gap continues to widen (Hickel, 2017). The conceptualisation of ecological sustainability has varied, as has its prominence. However, in a world dominated by rampant neoliberal capitalism, environmental degradation continues and humanity's economic, consumer and individualised focus is arguably unsustainable. The omnipresence of neoliberalism has also steadily generated a marginalised education environment that is dominated by neoliberal measures of transparency, accountability, choice, competition, efficiency and performativity, culminating in high stakes testing and national curricula. As a result, the effect of neoliberalism takes value away from social justice and collective wellbeing. Instead, education's focus is firmly placed on individual performance and economic productivity (Cranston, et al., 2010; Davies & Bansel, 2007; Jickling & Wals, 2008).

If business as usual continues, neoliberalism will prevail as the only option and environmental devastation and global inequality will continue to escalate (Alvaredo, Chancel, Piketty, Saez, & Zucman, 2017). Creating, abetting and sustaining space for ecological sustainability in education is therefore a significant challenge. The following chapter explores this further by considering in depth how neoliberalism has affected education and therefore the challenge and opportunity in creating space for ecological sustainability education.

CHAPTER 3:

Ecological sustainability in Australian education: Negotiating the context

> The curriculum is never simply a neutral assemblage of knowledge, somehow appearing in the texts and classrooms of a nation … it is produced out of the cultural, political, and economic conflicts, tensions and compromises that organize and disorganize a people. Michael Apple, *Knowledge, power, and education* (2013, p. 195)

Humanity's unrelenting widespread environmental destruction, fuelled by rampant capitalism, poses a significant global threat to the state of the environment. This decimation is exacerbated by a neoliberal hegemony which, with its individualised and economic focus, is arguably incompatible with ecological sustainability (Hargreaves & Lo, 2000; Harvey, 2005; Hursh & Henderson, 2011; Scholte, 2005; Stilwell, 2000). Increasingly education, particularly of the young, has come to be seen as a vehicle for supporting progress towards ecological sustainability. However, negotiating the paradoxes involved in ESE in a neoliberal context is a significant challenge.

Building on the global, historical review of neoliberalism, ecological sustainability and education from Chapter 2, this chapter situates the study more specifically in Australian education. As identified in Chapter 2, the current priority for education is largely on student attainment, particularly in literacy and numeracy. Furthermore, as a result of an influx of high-stakes tests and the public dissemination of their results, the already contested curriculum is narrowed in favour of teaching to the test. This strengthens the place of literacy and numeracy in the curriculum hierarchy, while marginalising other areas of the curriculum such as ESE (Kennelly, Taylor, & Serow, 2011). Moreover, as schools are being reconstituted as consumer items for individual's needs rather than for the common good, the whole purpose of education is being destabilised (Gillies, 2010; Reid, 2010; Robinson, 2011).

Situated within this destabilised context, the inclusion of ecological sustainability in an urban primary school curriculum warrants investigation. To ascertain where ecological sustainability may fit in a neoliberalised curriculum, this chapter outlines the current context of Australian education and the dominant neoliberal measures determining its shape. Including what is preferred and what is marginalised, these measures are part of a global trend in education reform. The longevity and endurance of the traditional curriculum hierarchy are then expounded, including Australia's ongoing alignment. The chapter also considers the position of the Australian Curriculum's Sustainability CCP as a potential enabler for ESE. The arguably inadequate support of sustainability in the Australian Curriculum is highlighted, as well as existing spaces for ESE. Furthermore, the findings of previous research on ESE are utilised to highlight the need for research into how an urban primary school might facilitate and sustain such a focus. Finally, *place-based education* and the *intelligent school* are proposed as promising vehicles for creating space for ESE.

This study fills a gap in the literature because there is little current research on the implementation of ecological sustainability in Australian schools, particularly with reference to the dominant neoliberal hegemony. Furthermore, considerations of place in a neoliberal, globalised, urban context are largely absent from the current literature (Long, 2013). Therefore, with respect to the extensive effects of neoliberalism, this study has far reaching implications. The following section sets out the current context of Australian education and recent governmental policies that have directed it towards the education it is today. Understanding the context illuminates many of the negotiations involved in engaging in ESE.

3.1   The current context of Australian education

As highlighted previously, the dominant political ideology globally is neoliberalism (Harvey, 2005; Lingard, 2011b; Peck & Tickell, 2002) and Australian education is operating under this agenda (see Brennan, 2011; Clarke, 2012a, 2012b; Connell, 2013, 2015; Ditchburn, 2012a, 2012b; Lingard, 2010; Lingard, Mills, & Hayes, 2000; Reid, 2009). The focus of this study is within the government sector of schooling as the main provider of school education in Australia with over 65% of Australian students (Australian Bureau of Statistics, 2018). The political context is especially important because of the influence it has on education. Due to the

considerable stake the Australian Government has in public education, the government often intervenes, or steers from a distance (Ball, 1993; Kickert, 1995; Lingard, 2011b; Marginson, 1997b; Robinson, 2011).

As foregrounded in Chapter 2, an example of governmental intervention was proposed in 2007 by the then opposition party, the Australian Labor Party (ALP) in response to the rhetoric of a "mounting crisis … [demanding] … an urgent policy response" (ALP, 2007, p. 3). The ALP released a document stating the Australian economy needed an education revolution and central to this was an investment in human capital (ALP, 2007). The ALP subsequently won the 2007 election, and in 2008 the Australian Government officially announced the need for an education revolution (Commonwealth of Australia, 2008b). The education revolution involved initiatives such as major education reform, the BER and the Digital Education Revolution, to initiate technology-rich learning environments. This *revolution* was announced in line with the nation's proposed goals of building a stronger future, building a fairer Australia, and preparing for future challenges (Commonwealth of Australia, 2008b, p. 5). Predominantly these goals refer to increasing the skills of the workforce to address the needs of the economy. In terms of education, the purpose can be understood as education for work.

With reference to PISA data, the Labor government concluded the Australian education system was underperforming in comparison to many other countries and therefore needed a revolution to raise the quality of teaching; improve engagement, attainment and transitions, particularly in disadvantaged areas; and increase transparency and accountability. Education and schooling were seen as being central to driving productivity, enabling economic potential, helping people reach their full potential, and overcoming disadvantage (Commonwealth of Australia, 2008b). Of interest, however, is that the government's rationale for overcoming disadvantage and delivering equity and excellence in Australian schools was to boost Australia's GDP. Emphasising Australia's competitive position globally not only places the education revolution within a global context, but also reveals an underlying neoliberal agenda reinforced by its prevailing focus on the economy, an emphasis on the individual, competition, and commitment to transparency and accountability.

The key document espousing the need for the education revolution, *Quality Education: The case for an education revolution in our schools* (Commonwealth of Australia, 2008b), characterises the Quality discourse currently pervading policy across Europe. Gillies (2010) argues within education the Quality discourse has emerged due to the rise of both managerialism and neoliberalism and the concomitant quest to reshape and improve the public sector, with a "focus on consistency, standards and consumer perception" (Gillies, 2010, p. 104). Gillies (2010) proposes "Quality (capitalised) … refer[s] to the management theory and practices of that name, whereas 'quality' (lower case) signifies the everyday usage" (p. 115). As a result, much education policy, such as the education revolution, is tending to reveal, "economic goals are seen as the new priority. Education is viewed as inextricably linked to, and instrumental towards, the economy" (Gillies, 2010, p. 103). It is also evident the *Quality education* (Commonwealth of Australia, 2008b) document was written within a context of globalisation, declaring an increase in global competition in its main goals. Throughout the document a global emphasis can also be seen in the government's commitment to "a world class" education system, curriculum, and remuneration and performance management systems. In addition, global competitiveness was key in preparing students "to live and work in a digital world" (p. 28), "making Australia's school system one of the very best in the world" (p. 29) and in the government's use of illustrative data from PISA to substantiate their case.

The Council of Australian Governments (COAG) (Commonwealth of Australia, 2008b), consisting of the prime minister, deputy prime minister, state and territory premiers and chief ministers, and the president of the Australian Local Government Association, was charged with directing the education revolution. Underpinned by neoliberal ideals, "raising productivity is a key focus of COAG's agenda, and education and training are critical to increasing the productivity of individual workers and the economy" (COAG, 2013). The individual and the economy are key features within both the education revolution and COAG's schools and education reform agenda. In addition, although both initiatives promote social inclusion and closing the gap in Indigenous disadvantage, the neoliberal measures pursued as part of Australia's education revolution are problematic. Many authors argue that measures aiming to build human capital such as national testing and league tables

and a national curriculum often reproduce or even worsen inequalities by maintaining privileges for white middle-class students and excluding students from marginalised groups (Apple, 2006; Collin & Apple, 2010; Reid, 2009).

Apple (1993) observes:

> In a time of a loss of government legitimacy and a crisis in educational authority relations, the government must be seen to be doing something about raising educational standards. After all, this is exactly what it promises to offer to consumers of education. A national curriculum is crucial here … its major role is in *providing the framework within which national testing can function*. It enables the establishment of a procedure that can supposedly give consumers 'quality tags' on schools so that 'free-market forces' can operate to the fullest extent possible. If we are to have a free market in education with the consumer presented with an attractive range of 'choice,' a national curriculum and especially national testing in essence then act as a 'state watchdog committee' to control the 'worst excesses' of the market [italics in original]. (pp. 230-231)

These measures are indicative of a Global Education Reform Movement (Sahlberg, 2016) occurring within many countries across the globe. Evident in many education policies and reforms is the neoliberal emphasis on choice, competition and performance (Buchanan & Chapman, 2011) as well as a Quality discourse where national economic growth is linked to international competition (Gillies, 2010). In 2008, the same year of the education revolution, MCEETYA met to decide the direction of Australian education. Subsequently MCEETYA's *Melbourne Declaration on the educational goals for Young Australians* (MCEETYA, 2008) was released. Corresponding with the goals of the education revolution, the *Melbourne Declaration* also targets equity and excellence and its goals are closely intertwined with those of the education revolution, as seen below.

3.1.1   The Melbourne Declaration

The *Melbourne Declaration*, which superseded the 1999 *Adelaide Declaration*, is a significant document in Australian education. The *Melbourne Declaration*, developed collaboratively by education ministers and the schooling sector, sets the agenda for Australian schooling for the decade following 2008. The declaration is an ambitious document proclaiming two broad goals:

> Goal 1: Australian schooling promotes equity and excellence
> Goal 2: All young Australians become:

> – successful learners
> – confident and creative individuals
> – active and informed citizens (MCEETYA, 2008, p. 7)

While social justice featured prominently within the *Adelaide Declaration*, the coupling of equity and excellence in the *Melbourne Declaration* is problematic and indicative of changing discourses within education policy. Goal 1, the promotion of equity and excellence illustrates the influence of the Quality discourse. "Excellence" is understood as a Quality "buzzword" (Gillies, 2010, p. 104) and as indicated earlier, addressing equity, in the government's view, is to raise performance to improve the economy. The economic purposes of education seem to dominate the *Melbourne Declaration* as, consistent with the education revolution, students are perceived in economic terms, as human capital (Buchanan & Chapman, 2011; Reid, 2009). Buchanan and Chapman (2011) suggest, much like neoliberalism, the *Melbourne Declaration* is ripe with "possibilities and inconsistencies" (p. 11). They suggest the concomitant goals of equity, excellence and accountability are questionable. Accountability is inextricably linked to competition and when linked to standardised testing, "equity and excellence represent self defeating strategies" (Buchanan & Chapman, 2011, p. 9).

Much like the education revolution, the *Melbourne Declaration* situates itself within a competitive globalised context with its reference to globalisation and "competing in the global economy; being globally connected; coping with technological change; developing skills in response to changing job markets in Australia and helping the nation achieve an international competitive edge" (Lingard & McGregor, 2014, pp. 106-107). This global emphasis on neoliberal ideals of choice, competition and performance has driven many of the policies connected both with the education revolution and the *Melbourne Declaration* (Buchanan & Chapman, 2011).

When the Coalition came into power in 2013, a key policy agenda highlighted the economy as most important. The Liberal Party's plan, devised to build a five pillar economy to "unleash Australia's real economic potential" (Liberal Party of Australia, 2013, p. 28), included education:

> Building a world-class Education … sector
>
> We will unleash the real economic potential in our Education … sector by removing the shackles and burdens holding the industry back and by making the industry more productive and globally competitive. (Liberal Party of Australia, 2013, p. 30)

Under the new government the education sector continued to be portrayed as a deficit model, underperforming, underproductive and in need of reform. Promising to unleash Australia's economic potential through education reform highlights the new government was also influenced by a neoliberal emphasis on the economy and international competition. The Liberal Government accepted the legacy of the previous government's education revolution and, adhering to the *Melbourne Declaration*, they instigated further neoliberal reforms. The prioritising of the economic purpose of education establishes that fundamentally the dominant purpose of education in Australia is education for work in support of the economy. Furthermore, abetted by a climate change sceptical prime minister, education for sustainability initiatives became more destabilised.

In 2018, the Coalition still holds power, although under a different prime minister. The neoliberal measures initiated through the education revolution to boost performance and reform Australian schools and education, and purportedly the economy, are still currently in place. The most significant of these measures are a national assessment program, online reporting of individual school performance to promote accountability and transparency, and a national curriculum. These accountability measures all come under one umbrella – the Australian Curriculum, Assessment and Reporting Authority (ACARA).

3.2 The dominance of neoliberal measures: performance, choice, competition and transparency

This section draws on the literature to highlight ways neoliberal measures are currently dominating Australian education. Teachers' and students' performance is monitored through high-stakes standardised tests. The veneer of choice and transparency is orchestrated by the online dissemination of test results, which consequently heightens competition. Furthermore, education is homogenised through the adoption of a national traditional curriculum. These measures are all largely directed by ACARA, as exemplified below.

3.2.1 The Australian Curriculum, Assessment and Reporting Authority

As part of the Australian Government's education revolution ACARA, an independent statutory authority (see Commonwealth of Australia, 2008a), was established in 2008. ACARA's function is to develop and administer a national school curriculum and a national assessment program, and collect and report data about educational performance and outcomes at a national level (ACARA, 2011a). ACARA commenced with direct links to the OECD, an alliance set in a global context, and a predilection for high-stakes testing at an international level.

Since its inception, ACARA is responsible for developing a national curriculum, publishing national data on schooling and the alignment of national assessment to the national curriculum. ACARA is guided by charters, set by ministerial councils now operating under COAG. ACARA is also guided by the *Melbourne Declaration on the educational goals for young Australians* (MCEETYA, 2008), thus demonstrating the influence the government has on ACARA's functions. The role of ACARA as the sole controlling authority over the curriculum and assessment in Australian schools ultimately grants national control to the Australian Government (Zhao, 2011, p. 269). This national control can be understood in the way the government "manages through measurement, controls through counting and then motivates through money" (Kenway, 2008, p. 3). Lingard (2011b) suggests this is a "neo-liberal form of national control" (p. 372) with the role of numbers involved in national assessments being central in the Australian Government's education agenda.

Addressing a commitment to so-called transparency and accountability, the Australian Government implemented NAPLAN; and the *MySchool* website, which was established to report individual school performance across Australia. However, this combined mechanism for assessing and reporting literacy and numeracy results is indicative of the Australian Government steering or controlling from a distance (Ball, 1993; Buchanan & Chapman, 2011; Kickert, 1995; Lingard, 2011b; Marginson, 1997b; Robinson, 2011). Enabling anyone online to compare statistically similar schools has resulted in a drive for schools to improve results and increased competition between schools. The following sections describe NAPLAN and *MySchool* and their consequences in more detail.

3.2.2 Performativity: National Assessment Program – Literacy and Numeracy

Currently in the Australian education system the performance audit culture of neoliberal governance dominates (Comber & Nixon, 2011, p. 168; Lingard, 2011b, p. 357). Lingard (2011b) argues policy as numbers and statistics is dominating and "has become the reductive norm for contemporary education policy" (p. 357). A National School Improvement Tool (NSIT) (Australian Council for Educational Research and Masters, 2012) was released in 2012, featuring performance levels. However, while the NSIT is driving the education agenda in Queensland it is an example of just one framework across Australia (Gonski et al., 2018) and it is not a key driver in South Australia. In terms of assessment, under Australia's National Assessment Program (NAP), the most notable (and controversial) program being implemented across Australia is NAPLAN. NAPLAN was introduced across Australian schools in 2008. NAPLAN assesses students nationally in Years 3, 5, 7 and 9 in areas most valued by the knowledge economy (Kenway, 2008; Spring, 2008), that is, reading, writing, language conventions (spelling, grammar and punctuation) and numeracy (ACARA, 2010). ACARA's reason for testing these learning areas is that they are deemed vital to the lives of children (ACARA, 2010). These tests, which replaced previous state and territory-based Basic Skills Tests, measure standards in schools against national benchmarks to determine if educational outcomes are being met.

It has been suggested the aims of the NAPLAN "are to 'close the gap' in terms of unequal literacy outcomes and to enhance 'transparency' to assist parents to make school choices by publishing, via the *MySchool* web-site, each school's results" (Comber & Nixon, 2011, p. 168). However, Comber and Nixon (2011) offer the Australian Government's policy of supporting NAPLAN and the publication of results on *MySchool* puts pressure on teachers to prepare students for the tests because of the high stakes involved in underperforming. As a result, it is possible that practise for NAPLAN may encroach on other learning areas, leaving teachers to debate which curriculum areas necessitate more attention.

Unbridled advocacy for NAPLAN stems from the Australian Government's belief "that high stakes standardised measures of literacy achievement should be the centrepiece investment for improving the performance of the population" (Comber &

Nixon, 2011, p. 168). This conviction exists in many other countries, including the UK and USA. However, Comber and Nixon (2011) observe:

> while neo-liberal educational discourses suggest that delivering the *same literacy outcomes* is unproblematic – essentially a matter of will and effective teaching – it is clear that school populations are becoming increasingly culturally and linguistically *diverse* and that community, workplace and cultural literacy practices are *changing* at an unprecedented rate [italics in original]. (p. 168)

Therefore it could be argued the NAPLAN test is culturally unfair (Klenowski, 2009). As well, Lingard (2011b) argues the NAPLAN results are linked with the government's social justice agenda involving redistributive funding. The government's indicator of increased equity is through the improvement in NAPLAN scores. However, this is "linked to narrow educational targets, framed by narrow accountabilities and salary rewards for school principals committing to the agenda and achieving improved NAPLAN target scores. Equity here is rearticulated through a neo-liberal lens and policy as numbers" (Lingard, 2011b, p. 371). Furthermore, Marsh (2010a) argues the NAPLAN tests are "seriously flawed" (p. 33), presenting an equity issue, due to their subjectiveness, disregard for context, perpetuation of stereotypes and unsubstantiated effectiveness (Marsh, 2010a).

In addition to the cultural and equity issues regarding NAPLAN, insurmountable controversy surround concern about the pressure on teachers to teach to the test and the inevitable narrowing of curriculum that follows (Comber & Nixon, 2011; Marsh, 2010a). Marsh (2010a) also blames high-stakes tests for negatively affecting the professionalism of teachers and decreasing student engagement. Furthermore, prioritising the curriculum in response to high-stakes tests such as NAPLAN and narrowing the curriculum may ultimately result in marginalising ESE (Kennelly, et al., 2011).

As a result of increasing unrest about the NAPLAN, a Senate inquiry was convened (see Commonwealth of Australia, 2013). In spite of overwhelming evidence discrediting NAPLAN, the Australian Government's response was to narrowly focus on improving the turnaround of results and take into consideration the needs of students with a disability and from non-English speaking backgrounds (see Australian Government, 2014). Gillies (2010) proposes that focusing on comparative performance measures, such as NAPLAN and its associated website, *MySchool*,

"narrows the concept of education markedly" (Gillies, 2010, p. 115). In addition, Robinson (2011) suggests that through these measures of performativity "the fundamental elements of education: the effective pedagogies, the complexities of learning, and the understanding of the development of the child, are subordinated or lost" (p. 806). The significant concerns associated with NAPLAN and the effects of its engagement at a school level warrant further investigation. This is pertinent to this study, particularly considering the implications on the support for ESE.

Another factor that may affect a commitment to ESE is the website that publishes NAPLAN results, *MySchool* (see http://www.myschool.edu.au/). The following section continues the discussion on performance technologies by focusing on the *MySchool* website which became publicly available online in 2010 against national opposition from educators and teacher unions (Lingard, 2011a).

3.2.3   Competition and choice: The *MySchool* website

Alongside NAPLAN, the *MySchool* website has provoked much controversy. The basis behind the publication of NAPLAN results on *MySchool* is related to transparency, accountability, consumer choice and competitive testing (Commonwealth of Australia, 2008b). Comparing results between 'like schools' and across all Australian schools nationally (ACARA, 2013e; Australian Government, 2014) supposedly enables schools to learn from each other and "help[s] ensure that every child in every classroom receives a high quality education" (ACARA, 2013c, p. 1). As a result, schools become more accountable and standards improve due to parental pressure and competition between schools (Connell, 2013; Lingard, 2011a). Through *MySchool*, the public is drawn into what is prioritised by the Australian Government for the global economy, that is, literacy and numeracy results (Gorur, 2013).

Connell (2013) argues the *MySchool* website is a firm indication of the effect of neoliberalism on the marketisation of schooling. In the mantra of school choice, *MySchool* reconceptualises education from a public good to a commodity (Reid, 2010), with schools being "systematically tagged, valued, sorted and placed in appropriate aisles and shelves in a kind of virtual supermarket" (Gorur, 2013, p. 221). In turn, rather than simply placing their faith and support in government education, as Australian parents had done for most of the 20th century (Campbell,

Proctor, & Sherington, 2009; Lingard, 2011b), parents are positioned as consumers (Reid, 2010) and "informed chooser[s] of schools" (Campbell, et al., 2009, p. 4; Lingard, 2011b, p. 370).

The political rhetoric surrounding *MySchool* is problematic. ACARA states that *MySchool* gives insight into what goes on in schools (ACARA, 2010b). This proposed insight was generated by the then minister for education, Gillard, blogging on the eve of the *MySchool* website launch, stating "the worst thing for a student would be if they were in an underperforming school and no one knew" (Gillard, 2010). Fuelled by the neoliberal emphases on transparency, accountability, choice, competition and performativity, the combination of the current market model of schooling and the heightened focus on results "creates a highly competitive environment" (Gillies, 2010, p. 115). Not only schools but also students and parents are "sucked into this ever more feverish chase for attainment evidence" (Gillies, 2010, p. 115). Therefore, the neoliberal market policy supporting *MySchool* encourages parents to engage in school choice by comparing schools and seeking out the best school to choose while avoiding underperforming schools (Mills, 2015; Rowe & Lubienski, 2017). Gillies (2010) offers that because results are inherently linked to socio-economic status, rather than assessing the quality of the education offered by each school, the results may simply replicate each school's social composition.

The deleterious effect of the market logic of *MySchool* is that not every parent is able to choose where they would prefer to send their child. Parents lacking cultural or economic capital, particularly those in disadvantaged communities, may have limited choice when faced with the fees and relocation or transportation costs involved in choosing a school other than their local government school (Mills, 2015; Reid, 2010). Subsequently, families with more capital and more agency may choose to move to independent or public selective schools with a greater number of socially and academically advantaged students. Concurrently, the schools with low socio-economic status are left with a higher concentration of disadvantaged students. This scenario is problematic for educational equity and access, and furthermore, "limited access for the marginalised to the knowledges, values and attitudes of the dominant further reduces their chances of success on this unfair playing field" (Mills, 2015, p.

150). Therefore, rather than *MySchool* helping to close the gap on educational disadvantage, the gap may in fact be widening.

The publication of NAPLAN results on the *MySchool* website has instigated a narrowing of the curriculum and a focus on teaching to the test to improve test results. Consequently ESE may be severely impeded by a narrow focus on literacy and numeracy attainment, especially for schools in low socio-economic, rural or Indigenous settings, and particularly for students who need to "be brought 'up to standard'" (Brennan, 2011, p. 275).

As foregrounded above, the dominance of neoliberal concepts of transparency, accountability, choice, competition and performance can clearly be seen in the initiatives being developed and implemented by ACARA as part of the Australian Government's education revolution. The initiatives outlined above have been plagued by ongoing controversy and, as evidenced, improving the transparency and accountability of schools may have in fact come to the detriment rather than improvement to the quality of education in Australia. In addition to undermining and working against equity in education (Mills, 2015; Reid, 2010), high-stakes tests are negatively affecting the curriculum, the professionalism of teachers and the engagement of students (Marsh, 2010a).

Another major initiative in the education revolution was a national curriculum. However, as Apple (2013) acknowledges, curriculums are never neutral. As evidenced below, the controversial Australian Curriculum has been produced with a number of tensions and compromises. In spite of it being part of a revolution, the resulting curriculum exemplifies the enduring traditional curriculum with negligible, contested space for ESE.

3.2.4   Homogenising education: The Australian National Curriculum

When the Australian Government announced the education revolution in 2008, it proposed a national curriculum, covering all school years from Foundation to Year 12, would be delivered within three years (Gillard, 2008, April 15). The time frame was condemned for being too short to allow adequate development and consultation (Bezzina, Starratt, & Burford, 2009; Brennan, 2011; Ewing, 2012; Reid, 2009),

resulting in a national curriculum being launched amidst much speculation and contestation.

As a main priority of the Australian Curriculum, educating for global and national efficiency and economic needs (Ditchburn, 2012b) results in the marginalisation of social and educational need and collective wellbeing (Brennan, 2011; Cranston, et al., 2010; Davies & Bansel, 2007; Jickling & Wals, 2008). Ditchburn (2012b) reports a neoliberal rationale has followed through the production of the national curriculum, with a focus on human capital (Brennan, 2011; Reid, 2009) and its incumbent agenda for national testing (Apple, 1993).

Under this neoliberal global hegemony, curriculum areas like ESE must compete against areas more valued for their contribution to the knowledge economy, such as literacy and numeracy (Kenway, 2008; Spring, 2008). Therefore, as Ditchburn (2012b) argues, fundamental curriculum questions need to be asked: "Whose knowledge is valued? Who decides? And, who benefits?" (p. 268). These questions are pertinent to this study considering the effect of the preferencing–marginalising duality of neoliberalism on education. This is paramount considering the inherent paradox of ESE in a neoliberalised curriculum. However, the Australian Curriculum was an opportunity for the Government to "provide an exciting and futuristic rationale for having a national curriculum in the 21st century" (Reid, 2009, p. 7). Therefore, the following section further explores the priorities of the Australian Curriculum and identifies that rather than an exciting and futuristic curriculum, what has been produced is an archetype of the enduring traditional curriculum.

The enduring traditional curriculum

As Goodson (1994) argues, the curriculum is "a slippery concept because it is defined, redefined and negotiated at a number of levels and in a number of arenas" (p. 17). As a social construction, the curriculum is not a fixed entity, but in a constant state of flux, meaning different things to different people depending on their values. In addition, varying parties with different orientations and purposes compete for what knowledges should be included, excluded and given priority in the curriculum.

The traditional curriculum can be seen hierarchically; at the top are subjects like maths, English, sciences, history and geography. "These high-status subjects have an

academic orientation in common; they are concerned with theoretical knowledge. They are subjects for the brighter, the academic … pupil" (Ball, 1981, p. 140). Below these in status are the more practical subjects. In addition, Apple (1979) claims an academic based subject curriculum, rather than an integrated curriculum, is intrinsically linked to society and economical utility as "high status knowledge is seen as *macro-economically* beneficial in terms of long run benefits to the most powerful classes in society [italics in original]" (p. 38). Consequently, this competitive academic curriculum (Connell, 1985; Connell, et al., 1982) results not only in a stratification of the curriculum, but also a stratification of knowledge, which in turn contributes to a stratification of society and the economy (Apple, 1979).

Like Apple (1979), Hargreaves (1989) proposes "school subjects are more than just groupings of intellectual thought. They are social systems also. They compete for power, prestige, recognition and reward" (Hargreaves, 1989, p. 56). The way the curriculum is organised can therefore be understood as "an active shaping to particular social ends" (Williams, 1961, p. 145). However, Goodson (1994) declares that problematically, while the curriculum is the "most manifest of social constructions" (p. 16) it is often treated as a neutral given. Goodson (1993) also states the traditional competitive academic curriculum "educate[s] a meritocratic minority although meanwhile disenchanting the majority. The social class status quo is thereby preserved along with the requisite ratio of managers and workers" (p. 197). The traditional curriculum sits strongly within the deep structures of this prevailing model. Goodson (1994) provides a valuable comparison of how, in spite of numerous curriculum reforms in the UK, the traditional curriculum hierarchy changed very little between 1904 and 1988. As shown in Table 1, this comparison is even more interesting when we juxtapose the Foundation to Year 10 Australian Curriculum.

Table 1.
Traditional curriculum hierarchy 1904–2015

1904	1988	2012-2018
UK Curriculum	UK Curriculum	Australian Curriculum (Foundation to Year 10)
English	English	English
Maths	Maths	Maths
Science	Science	Science
History	History	History
Geography	Geography	Geography
Physical exercise	Physical education	Health and physical education
Drawing	Art	The arts
Foreign language	Modern foreign language	Languages
Manual work	Technology	Technologies
Domestic subjects	Music	Economics and business
(Music added soon afterwards)		Civics and citizenship

Note. Adapted from Studying curriculum: Cases and methods (p. 103), by I. F. Goodson, 1994, Philadelphia; London: Open University Press.

In spite of controversies and critiques surrounding curriculum and curriculum reforms worldwide, the above comparison, with curriculums from 1904, 1988 and 2018, is indicative of the traditional curriculum's enduring character in upholding the status quo (Reid, 2009). Ditchburn (2012a) explores the hegemonic, taken-for-granted aspect by emphasising two competing narratives of the Australian Curriculum: the "overt narrative provides an unproblematic view of curriculum where the rhetoric and discourse … promotes a 'world class curriculum'" (p. 347). This narrative on "superficially commonsensical arguments about twenty-first century skills" (p. 347) camouflages the second narrative "where the triumvirates of the curriculum – knowledge, pedagogy and power – are essentially deemed unproblematic" (p. 347). These competing narratives exemplify the paradoxical nature of the influence of neoliberalism that preferences the need for 21st century skills for economic productivity, while marginalising all other considerations. Furthermore, the government's 21st century rhetoric about the curriculum is interesting when you consider more than 50 years ago:

> an educational curriculum, as we have seen again and again in past periods, expresses a compromise between an inherited selection of interests and the emphasis of new interests … the fact about our present curriculum [as identified in Table 1] is that it was essentially created by the nineteenth

century, following some eighteenth-century models, and retaining elements
of the medieval curriculum near its centre. (Williams, 1961, p. 172)

It is laughable that the 21st century curriculum is essentially a rehash of the medieval curriculum. Although a case can be made for each subject in the curriculum, what is left out or granted little status is concerning (Williams, 1961). The following section explains Australia's alignment with the traditional curriculum in more detail, including the lobbying involved to increase the status of particular subjects.

Australia's alignment with the traditional curriculum hierarchy

Demonstrating an alignment with the traditional competitive academic curriculum (Connell, 1985; Connell, et al., 1982), the government stated this world class, national curriculum would prioritise English, mathematics, the sciences and history (Gillard, 2008; Rudd & Smith, 2007). While reading, writing and arithmetic have long been valued, these four learning areas reflect a considerable reduction from the eight learning areas put forward in the previous national curriculum attempt of the early 1990s. These four subjects signify the types of knowledge that are valued. Mathematical, scientific and functional literacy are the types of knowledge which are integral in the PISA tests and are highly valued in knowledge economy policies (Kenway, 2008). The inclusion of history as one of the four key learning areas is also noteworthy due to its potential for political interference. In 2011, Gilbert identified, "for politicians … history is a tool of policy aimed at establishing national ethos and order" (Gilbert, 2011), therefore its place in the curriculum remained a political priority.

The first four priority learning areas were intended as the start of the national curriculum. Lobbying by various parties resulted in additional curriculum areas and it was decided the four original subjects be released in Phase 1, and geography, languages and the arts in Phase 2. Lobbying for subject status, particularly in the case of geography, has historical significance dating back to the late 1800s to early 1900s, and, over 40 years later a similar form of lobbying took place with the Australian Geography Teachers' Association (AGTA) vying for academic status of geography in the new Australian Curriculum. This lobbying exemplifies the power struggle highlighted by Ditchburn (2012b) whereby the Australian Government is dictating and choreographing the Australian Curriculum and other parties must undertake unprecedented lobbying to ensure sufficient status of those subjects lower in the

hierarchy. While AGTA was successful in securing geography's place in the hierarchy, it was nevertheless released in Phase 2, highlighting that the subjects released in Phase 1 are of a higher status.

The *Melbourne Declaration* and its focus on Australian education's role in the current globalised economic context (Buchanan & Chapman, 2011; Ditchburn, 2012b) has been fundamental in generating additions and further development to the proposed Australian Curriculum. One of the changes generated by the *Melbourne Declaration* was the further addition of a number of learning areas comprising Phase 3, focusing on health and physical education, information and communications technology, design and technology, economics and business, and civics and citizenship. It could be argued the addition of values through civics and citizenship is the government's way of addressing "possible flow-on effects of … a lack [of social cohesion] for its economic agenda … [and a way to ensure] that its citizens, especially its most economically productive citizens remain loyal to the Homeland" (Kenway, 2008, p. 6).

The proposal of general capabilities in the *Melbourne Declaration* has also been taken up by ACARA as a key aspect of the curriculum. Directly related to the key competencies introduced in the early 1990s (see Finn & Australian Education Council. Review Committee, 1991; Mayer & Australian Education Council. Mayer Committee, 1992), the purpose of these capabilities is to "support young people to develop a range of generic and employability skills that have particular application to the world of work and further education and training" (MCEETYA, 2008, p. 13). Again, the objective of education for work is obvious. Guided by the *Melbourne Declaration*, ACARA developed seven general capabilities, promoted as vital 21st century skills: literacy, numeracy, information and communication technology capability, critical and creative thinking, personal and social capability, ethical understanding, and intercultural understanding (ACARA, 2011b).

Within South Australia, the Australian Curriculum gradually replaced the previous state-based curricula, the South Australian Curriculum Standards and Assessment (SACSA) framework. The SACSA framework included learning areas similar to the new national curriculum: English, mathematics, science, languages, arts, health and physical education, and design and technology. One learning area from the

framework that does not feature in the Australian Curriculum is studies of society and environment (SOSE). Often thought of as a dumping ground or grab bag (Marsh, 2010b; Taylor, 2007) for disparate subjects that do not fit elsewhere in the curriculum, society and environment was informed by learning areas that became more explicit in the new Australian Curriculum, such as history, geography, economics and citizenship. Also, previously embedded in society and environment were environmental education, Aboriginal studies and Asian studies (see Department of Education and Children's Services (DECS), 2001). Taking guidance from the *Melbourne Declaration*, with the intent they traverse the curriculum, the following have become the CCPs: Aboriginal and Torres Strait Islander histories and cultures, Asia and Australia's engagement with Asia, and Sustainability (ACARA, 2010c). Although these areas seem to have been granted a place of significance, relegating the environment part of SOSE to a CCP is problematic. The broad conceptualisation of the environment learning area has been narrowed to sustainability. In addition, the CCPs have emerged as one of the most confusing parts of the curriculum (Donnelly & Wiltshire, 2014).

The confusion over the CCPs, as well as the curriculum as a whole, was highlighted in a curriculum review in 2014. On the back of extensive public apprehension, and in response to governmental concern about Australia's global performance in tests such as PISA, the Australian Government initiated the review to assess the development, content and implementation of the Australian Curriculum. The reviewers concluded as it stood it was a "monolithic, inflexible and unwieldy curriculum" (Donnelly & Wiltshire, 2014, p. 3). Furthermore, Donnelly and Wiltshire (2014) reported the purpose of education portrayed in the Australian Curriculum was primarily preparation for work for an efficient and productive economy (p. 28).

Donnelly and Wiltshire's (2014) final report made 30 recommendations. The Australian Government responded by addressing 10 of the recommendations with five themes: (i) resolving the overcrowded curriculum (ii) improving parental engagement around the curriculum (iii) improving accessibility for all students (iv) rebalancing the curriculum and (v) reviewing the governance of ACARA (Australian Government Department of Education, 2014, p. 6). In response to these themes ACARA released a revised version of the curriculum in an attempt to *uncrowd* the

primary curriculum and rebalance the whole curriculum (ACARA, 2015b). To alleviate overcrowding, ACARA combined history, geography, civics and citizenship, and economics and business into one learning area – humanities and social sciences (HASS). The technology learning areas also amalgamated, resulting in the Australian Curriculum consisting of eight learning areas: English, mathematics, science, HASS, health and physical education, the arts, technologies and languages. The Australian Curriculum can be understood as a three-dimensional curriculum, comprising the eight learning areas, the general capabilities and the CCPs (see Figure 1).

Figure 1. The three dimensions of the Australian Curriculum. Sourced from "Australian curriculum: Structure," by ACARA, 2017, Retrieved 16 August, 2017, from https://www.australiancurriculum.edu.au/f-10-curriculum/structure/

This revised curriculum was endorsed in 2015 and notably represents the learning areas originally proposed in the *Melbourne Declaration*. Therefore, rather than being world class, the 21st century Australian Curriculum continues to represent the enduring traditional curriculum hierarchy. Evidently, in response to Ditchburn's (2012b) questions posed above, the knowledge that is valued is predominantly that of the knowledge economy in the status assigned to learning areas valued by the OECD. Who decides is primarily the government. As the initial instigators of the curriculum and the main architects behind ACARA, the Australian Government was also central

in deciding the recommendations to be addressed in light of the curriculum review. Who benefits remains to be seen; however, the monolithic character of the curriculum is still unwieldy and contested, and therefore remains a significant challenge for many educators. In addition, the curriculum hierarchy, particularly under the influence of neoliberal ideals, operates in a preferencing–marginalising duality which has the potential to ultimately foster a stratification of society (Apple, 1979). Furthermore, it is critical to investigate where and how ecological sustainability is positioned, particularly considering neoliberalism's incompatibility with ecological sustainability (Stilwell, 2000). The following sections explore the conceptualisation and presence of sustainability in the Australian Curriculum, including its manifestation as a CCP. Along with *MySchool* and NAPLAN, the Australian Curriculum is analysed in more detail in Chapter 5, with particular regard to sustainability, thus further highlighting the position of sustainability in the curriculum hierarchy.

3.3 Sustainability in the Australian Curriculum

As identified above, the enduring character of the traditional curriculum seems unchangeable and impenetrable. Guided by the *Melbourne Declaration*, sustainability has been granted a place as a CCP in the Australian Curriculum. It is therefore important to explore how it is positioned and conceptualised. The United Nations has been a key instigator in a global response to ecological sustainability, and the UNESCO definition of sustainability is a significant and useful point of reference for how the concept is represented in the Australian Curriculum. UNESCO favours the goal of, "creating a better world for this generation and future generations of *all* [italics added] living things on planet Earth" (UNESCO, 2011). In spite of an underlying ideological agenda of neoliberalism, this definition reflects a commitment that transcends the economic bias inherent in the popular *Brundtland* definition (Redclift, 1992; Tulloch & Neilson, 2014) (as shown in Chapter 2).

A similar reference to *all* living things is articulated by ACARA and directly correlates with the *Melbourne Declaration's* suggestion that sustainability is about "sustaining and improving both natural and social environments" (ACARA, 2011b; MCEETYA, 2008). However, while this prioritises nature *and* society, this view is not consistent across the curriculum. There is evidence of a more egocentric

understanding of sustainability within the Australian Curriculum in geography. Geography is of great importance to sustainability as, along with sustainability as a CCP, it is also one of geography's seven organising concepts, which include place, space, environment, interconnection, sustainability, scale and change (ACARA, 2013d). Therefore, how sustainability is defined in the geography curriculum needs closer investigation.

In the process of developing the national curriculum, ACARA produced foundational shaping documents for each curriculum area (see ACARA, 2018) (significantly, no shape documents were produced for the CCPs). In the guiding document for geography, the *Shape of the Australian Curriculum: Geography*, sustainability is a key concept. Here, "environmental sustainability is defined … as the maintenance into the future of the environmental functions that support *human* [italics added] life and *human* [italics added] activities." (ACARA, 2011c, p. 12). This emphasis on supporting *human* life and activities is egocentric and not conducive to supporting ecological sustainability. In fact, this view of sustainability can be seen as one of humans manipulating their environment for their own uses and to the prospective detriment of non-human life.

In further development of the geography curriculum, the definition of sustainability has been amended. The glossary of the *Australian Curriculum: Geography* (ACARA, 2013b) states:

> the concept of sustainability is about the capacity of the environment to continue to support *our* [italics added] lives and the lives of *other living creatures* [italics added] into the future. As a concept in the curriculum it is used to frame questions, evaluate the findings of investigations, guide decisions and plan actions about environments, places and communities.
> (p. 11)

While not as egocentric as previously defined, the interconnectedness of all living creatures and the environment is not explicit. However, there is evidence of a more holistic understanding of the connection between living creatures and the environment where *interconnection* is a key organising concept used in the teaching of geography, and human actions and attitudes are highlighted in respect to understanding the causes of unsustainability.

Sustainability as a key concept within the geography area of the Australian Curriculum is significant, and, arguably of additional significance as a CCP with the potential to traverse the whole curriculum. Having sustainability potentially crossing all learning areas has, however, been plagued by much controversy and contestation. For example, in submissions to ACARA on the draft curriculum documents of Phase 1, including English, mathematics, science and history, the Australian Association for Environmental Education criticised the limited and inadequate representations of sustainability (Gough, 2011). Similarly, Atweh, Miller and Thornton (2012) suggest the CCPs are presented in a general way that come across as tokenistic or mere "lip service" (p. 1). With this ongoing controversy, the following section explores in more detail the Sustainability CCP.

3.3.1   Sustainability as a cross-curriculum priority

The *Melbourne Declaration* not only sets out educational goals for young Australians, but also proposes a number of areas within Australian education that need improvement. The declaration states "Australians need to become 'Asia literate'" (p. 4) and, "a focus on environmental sustainability will be integrated across the curriculum and all students will have the opportunity to access Indigenous content where relevant" (MCEETYA, 2008, p. 14). While many other aspects of education are highlighted, ACARA focussed on three areas: Asia literacy, environmental sustainability and Indigenous content. Originally termed *cross-curriculum perspectives* (see Commonwealth of Australia, 2009), these areas have become the cross-curriculum priorities (CCPs) – Aboriginal and Torres Strait Islander histories and cultures, Asia and Australia's engagement with Asia and Sustainability (ACARA, 2010c). In this study, I focus on the Sustainability CCP and its presence in the Australian Curriculum.

ACARA states the CCPs have been included in the Australian Curriculum in an attempt to address relevance and contemporary issues in the lives of students (ACARA, 2013a). It was intended these priorities be "embedded in all learning areas" (ACARA, 2013a). However, the extent of this inclusion is not well-defined considering, "[t]hey will have a strong but varying presence depending on their relevance to the learning areas" (ACARA, 2013a).

As evidenced above with the geography curriculum, throughout the development process of the Australian Curriculum, content is subject to change. This is apparent in the Sustainability CCP where some changes have occurred to its description. In an information sheet on the three priorities, produced in 2010, it was described thus:

> **Sustainability** will allow all young Australians to develop an appreciation of the need for more sustainable patterns of living, and to build the capacities for thinking and acting that are necessary to create a more sustainable future. (ACARA, 2010a)

The ACARA website then put forward a more extensive description, this time including the global significance of sustainability:

> Sustainability will allow all young Australians to develop the knowledge, skills, values and world views necessary for them to act in ways that contribute to more sustainable patterns of living. It will enable individuals and communities to reflect on ways of interpreting and engaging with the world. The Sustainability priority is futures-oriented, focusing on protecting environments and creating a more ecologically and socially just world through informed action. Actions that support more sustainable patterns of living require consideration of environmental, social, cultural and economic systems and their interdependence. (ACARA, 2011a)

As well as the addition of the global context, the description includes a futures-orientation involving social justice and action.

Dyment and Hill (2015) recently undertook research into the Sustainability CCP with respect to teacher education programs in Australia. These authors regard sustainability to be a meta-issue while acknowledging its integration into the curriculum is problematic. This is partly due to an emphasis on NAPLAN and students' numeracy and literacy achievement (Dyment & Hill, 2015, p. 21). Dyment and Hill (2015) add that the competing priorities of teacher education programs bring additional complexities where "time, course structures, accreditation compliance and pedagogical approaches" (p. 21) all encroach on educators' capacity to embrace sustainability in their teaching.

Dyment et al. (2014) argue having a heavy environmental focus in sustainability is problematic as its results are merely environmentalism. However, in undertaking research into the Sustainability CCP, Dyment and Hill, and in addition, Emery (Dyment & Hill, 2015; Dyment, et al., 2014) believe the Sustainability CCP, with its nine organising ideas (see Table 2) is an asset in the Australian Curriculum as its

interpretation moves "beyond the 'environmental' domain, extending richly into the domains of systems thinking, world views, futures and ethic of care" (Dyment, et al., 2014, pp. 3-4).

Table 2.
Cross-curriculum priorities: Sustainability – organising ideas

Code	Organising ideas
Systems	
OI.1	The biosphere is a dynamic system providing conditions that sustain life on Earth.
OI.2	All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.
OI.3	Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems.
World Views	
OI.4	World views that recognise the dependence of living things on healthy ecosystems, and value diversity and social justice are essential for achieving sustainability.
OI.5	World views are formed by experiences at personal, local, national and global levels, and are linked to individual and community actions for sustainability.
Futures	
OI.6	The sustainability of ecological, social and economic systems is achieved through informed individual and community action that values local and global equity and fairness across generations into the future.
OI.7	Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.
OI.8	Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgments based on projected future economic, social and environmental impacts.
OI.9	Sustainable futures result from actions designed to preserve and/or restore the quality and uniqueness of environments.

Note. Reproduced from Australian Curriculum: Cross-curriculum priorities – Sustainability, by ACARA, (2015a). Retrieved 5 June 2015, from http://www.australiancurriculum.edu.au/CrossCurriculumPriorities/Sustainability © Australian Curriculum, Assessment and Reporting Authority (ACARA) 2010 to present, unless otherwise indicated. The material is licensed under CC BY 4.0 (https://creativecommons.org/licenses/by/4.0).

This attention to different domains, and moving beyond a discourse of mere environmentalism, allows recognition of various discourses involved in the conceptualisation of sustainability. Dryzek (2013) maintains four central environmental discourses are: environmental problem solving, limits and survival, sustainability, and green radicalism (Dryzek, 2013). Each discourse is underpinned by different beliefs and a number of additional discourses can be identified within the main four. Dryzek's (2013) discourses are examined in more detail in Chapter 6 as they are a generative foundation for understanding dominant discourses. However,

although there may be merit in the organising principles of sustainability (Dyment &
Hill, 2015; Dyment, et al., 2014) there remains much uncertainty.

After public confusion over the CCPs an article was released in 2014 by the then
chair of ACARA, Barry McGaw, titled *Cross-curriculum priorities are options, not
orders* (McGaw, 2014), which clearly identifies sustainability's subordinated place in
the hierarchy of the traditional curriculum. While McGaw offered that sustainability,
as well as the other two priorities, were "important" he admitted ACARA did not
want sustainability to have the same "status" as other subjects and there was "no
requirement in the Australian Curriculum that subjects be taught through the three
cross-curriculum priorities" (p. 18). Thus, any foothold Sustainability may have had
within the curriculum was reduced to an "option", not an essential part of the
Australian Curriculum.

Dyment et al. (2014) highlight there is very little research into sustainability as a
CCP and how it is being integrated in Australian schools. A systematic review of the
literature surrounding sustainability as a CCP reveals various findings. In addition to
Dyment and Hill (2015), Odgaard (2014) also investigated pre-service teachers'
perceptions of sustainability, Simoncini, Lasen and Rocco (2014) engaged pre-
service teachers in interviewing their supervising teachers about *their* integration of
sustainability as a CCP and Dyment et al. (2014) examined principals' and
curriculum leaders' perceptions of sustainability and its implementation in their
schools. All of these authors emphasised the need for the inclusion of sustainability
in teacher-education programs and ongoing professional learning. However, under a
neoliberal hegemony this may continue to be a challenge considering the
preferencing of literacy and numeracy and the potential marginalisation of
sustainability. The following section expands on the support of sustainability in the
Australian Curriculum, highlighting instances of weak support, no support and
evident confusion.

3.3.2   A weak support of sustainability in the Australian Curriculum

As pointed out, the *Melbourne Declaration* recommends environmental
sustainability be integrated across the curriculum. Shortly after, the Australian
Government was advocating for sustainability with a *National action plan for
education for sustainability* (Department of Sustainability, 2010). There was a

consistency in proclaimed government intentions with respect to the inclusion of sustainability in the Australian Curriculum (Kennelly, et al., 2011). However, there appears to be a rhetoric–reality gap between these governmental initiatives and what has translated to weak support of sustainability within the curriculum. Additionally, Kennelly, Taylor and Serow (2011) found, within the accreditation standards for teachers and teacher education providers, no mention of sustainability in spite of the claim that these standards support the goals of the *Melbourne Declaration*.

A document released by the South Australian Education Department (DECD, 2013b) to guide principals and leaders in the implementation of the Australian Curriculum, the *Guidelines for the implementation of the Australian Curriculum in DECD schools: Reception–Year 10*, is particularly concerning with regard to the CCPs (see Chapter 5 for a more detailed analysis). The document includes pedagogical approaches and explicit time allocations for each learning area, however, there is no mention of the sustainability CCP nor Asia and Australia's engagement with Asia priority. The Aboriginal and Torres Strait Islander histories and cultures priority is briefly referenced to it being supported by the Aboriginal cultural studies resource. Indeed, the only other mention of the three CCPs is that "the general capabilities and cross-curriculum priorities which underpin [21st century] learning include a strong focus on literacy and numeracy skills as a cornerstone for learning" (DECD, 2013b, p. 6). Therefore, the value of sustainability and the other CCPs are again marginalised to literacy and numeracy.

Dyment et al. (2014) propose the challenge of sustainability should be seen holistically, engaging the social, political, and economic dimensions in conjunction with the environmental. Consequently, they were troubled by their research findings with initial teacher education (ITE) students. Their research found the students' understandings of sustainability were narrowly focussed on the natural environment and they had very limited understandings of the Sustainability CCP and its organising ideas. Although the students in Dyment and Hill's (2015) study were willing to implement sustainability in their teaching, overall their confidence and competence was low (Dyment & Hill, 2015). Similar results were found with principals and curriculum leaders (PCLs), who reported having good understandings of sustainability; however, these understandings were environmentally biased and the

science learning area was found to have the highest integration of sustainability. As with the ITE students, the PCLs also had limited understandings of the Sustainability CCP and its organising ideas (Dyment, et al., 2014). Dyment et al's research presented another rhetoric–reality gap. However, due to the participants' limited or narrow understandings, this gap is between the stated curriculum objectives and how or if sustainability is taught (Thomas, 2005).

Hoffman (Hoffman, 2014) found many schools found it difficult to offer more than a tokenistic effort when integrating sustainability across the Australian Curriculum due to competing priorities. While Dyment et al. (2014) were concerned by the findings from their research, they did note some examples of successful integration of the Sustainability CCP and highlighted the need for more research in this area as "the extent to which this integration is occurring in Australia generally … is still largely unknown" (Dyment, et al., 2014, p. 2). While the directive for the integration across the whole curriculum of Sustainability as a CCP originated from the *Melbourne Declaration*, its level of inclusion in the curriculum is unclear. There is some belief it is mandated; however, it has been found that many education leaders and students have very little understanding of how it is organised in the curriculum (Dyment & Hill, 2015; Dyment, et al., 2014). Considering this rhetoric–reality gap and that the integration of sustainability is not well-defined in any documentation pertaining to the curriculum, this issue is widespread.

In conjunction with weak, or no, support of sustainability in the curriculum the prioritisation of national testing of literacy and numeracy, through NAPLAN, further marginalises any interest in sustainability (Kennelly, et al., 2011). Additionally, under the pressures of dominant neoliberal discourses currently fuelling education reforms for the economy, teachers may have to accommodate neoliberalised concepts of standards, testing, accountability and achievement to support ESE (Gruenewald & Manteaw, 2007). Unfortunately, playing the achievement game risks undermining the goals of ESE (Gruenewald & Manteaw, 2007). Although sustainability has found a place in the Australian Curriculum as a CCP, the Australian Curriculum is only one area within education. Although often marginalised, there are other avenues through which ESE may be supported. One of these avenues is through the Australian Sustainable Schools Initiative (AuSSI). The following section explores AuSSI as a

space within which there may be some hope for ESE, focusing specifically on the fostering of ESE in South Australia

3.3.3 Australian Sustainable Schools Initiative

In the early 2000s, as a contribution to a growing global environmental awareness and governmental commitment, a partnership was formed between the Australian Government, states and territories including environmental agencies, and public and private schools: the AuSSI. The main aim of this partnership was to support and guide schools and their communities in becoming sustainable by embracing a whole-school approach to sustainability. The partnership advocated for sustainability to be integrated across the curriculum with measurable outcomes. Its main objective was to integrate existing environmental education into a program to achieve not only positive (economic) curriculum outcomes, but also environmental and social outcomes (Department of Education and Children's Services (DECS), 2007b; Department of the Environment, 2008). AuSSI pilot programs were run in 2003 in New South Wales and Victorian schools resulting in AuSSI being implemented across Australia. In 2004, AuSSI-SA was established in South Australia.

In South Australia the AuSSI curriculum document promoted and used by schools registered with the initiative was *Education for sustainability – A guide to becoming a sustainable school* (DECS, 2007b). One of the main challenges identified was "to transform current ways of thinking, valuing and behaving to create a sustainable society" (DECS, 2007b, p. 9). The guide proposed various pathways through which schools could engage with sustainability, emphasising whole-school approaches to environmental education. The document put forward interpretations of sustainable development and Education for Sustainability (EfS), and situated schools where they could model sustainability practices to inform and influence the broader community (DECS, 2007b, p. 4). Among other publications, the document drew from the UN Decade of Education for Sustainable Development, 2005–2014, (DESD), Draft implementation scheme, a strategic document developed by UNESCO to be used internationally to address education for sustainable development (see UNESCO, 2005a). The South Australian EfS document models four elements of EfS; understanding, learning, community and managing. These elements, separated into descriptive rubrics, combine to form a culture of sustainability and are seen as entry

points for schools to embark on EfS. Of importance is the emphasis on community and making connections with local through to global communities and priorities, as it is argued "local communities and their schools remain key sites for actions tackling issues of sustainability and climate change" (Flowers & Chodkiewicz, 2009, p. 71).

The introduction of the national Australian Curriculum changed AuSSI and the shape of sustainability in the curriculum. While the Sustainability CCP priority connected well with the aim of AuSSI-SA and indeed AuSSI, in 2012 the Australian Government withdrew any effective support from sustainable schools, leaving the responsibility around supporting Australian environmental and sustainability education mainly with ACARA (Gough, 2011). However, the environmental education agency that previously partnered with the education department to support AuSSI-SA is still able to sustain and deliver the program to over 200 South Australian schools. Therefore, offering schools an effective ally in the support and engagement of ESE.

There is little research relating to AuSSI, particularly sustainable schools in South Australia, however, what is available suggests this initiative has the potential to transform schools' practices and outcomes (Gough, 2005) and enhance the connections between schools and their communities (Flowers & Chodkiewicz, 2009). The following section briefly outlines some research in the area of ESE.

3.3.4 Ecological sustainability in action?

There have been many studies into ecological sustainability in education, particularly higher education and, more recently, early childhood. There is an emerging expectation for higher education institutions to promote and contribute towards ecological sustainability (Dunkley, 2013; Yarime & Tanaka, 2012). Studies in higher education have varied from highlighting strengths and weaknesses of assessment tools for measuring ecological sustainability (see Shriberg, 2002; Yarime & Tanaka, 2012); exploring definitions and frameworks, and proposing common themes of ecological sustainability (Lidstone, Wright, & Sherren, 2014; Wright, 2002), investigating people's perceptions, understandings and attitudes towards ecological sustainability (Spiropoulou, Antonakaki, Kontaxaki, & Bouras, 2007); and drawing out barriers and pathways for sustainable education programs (Moore, 2005).

In addition, interest in early childhood ESE is increasing rapidly. This is evidenced in recent publications like Early Childhood Australia's *Best of Sustainability: Research, practice and theory* (Elliot, Edwards, Davis, & Cutter-Mackenzie, 2013) and *Research in early childhood education for sustainability: International perspectives and provocations* (Davis & Elliot, 2014). These publications seek to fill a research gap in the early childhood literature while also encouraging a commitment to ecological sustainability by demonstrating how early childhood education can contribute to a sustainable future. However, while higher education and early childhood education research is rising, research in ESE in the primary school sector is lacking (Tilbury, 2011).

A crucial aspect that necessitates attention is how primary schools are able to facilitate and sustain a focus on ecological sustainability in a neoliberal context. At a university level, Moore's (2005) study found the barriers to ESE were "the disciplinary environment, the competitive environment, misdirected criteria for evaluation, and unclear decision-making structures for priority-setting and implementation" (p. 542). While there are many differences between a university and a primary school, they are both educational institutions within similar broad social/economical contexts, therefore primary schools may face similar barriers.

Recently Evans, Whitehouse and Gooch (2012) undertook research that also looked at barriers and successes of ESE. Their research, on two exemplar schools in ESE, involved interviews with principals and key ecological sustainability educators to ascertain the barriers principals and staff faced and how these barriers were overcome. The findings showed six key barriers – time and money, staff resilience, limits to conceptual understanding, social unacceptability of being perceived as a greenie, and the importance of leadership and trust (Evans, et al., 2012). While Evans et al.'s (2012) research is valuable and involves similar stakeholders, *this* study seeks to understand a school in its totality (see Kovel, 1981) therefore interviews are undertaken with the addition of other staff members, students, parents and community members who have a connection to the school in relation to ecological sustainability. Another aspect of importance in considering research in ESE is people's perceptions, understandings and attitudes.

In a research study with Greek pre-service teachers, Spiropoulou, Antonakaki, Kontaxaki, and Bouras (2007) found their participants held misunderstandings or misconceptions of the term sustainability. This was significant as it also correlated with a low uptake of environmental programs in spite of a shown interest in ecological sustainability. Furthermore, because the field of ecological sustainability and people's attitudes towards it is relatively new, there are very few studies researching primary school students' attitudes (Lewis, 2012). These findings suggest these factors are significant, therefore they have been addressed in this study.

Also, a recent report, commissioned by the federal department of education, highlights barriers and enablers for ESE (see Australian Education for Sustainability Alliance (AESA), 2014). The recommendations are warranted. They include the provision of more resources, professional development and support networks. However, although the report mentions the effect of NAPLAN, overall their results put the onus back on teachers, ignoring the overarching contextual restrictions. In addition to the recommendations of the EfS report, a factor of great significance is the idea of PBE in support of ESE. The following section explores this area in more detail.

3.4   Place-based education as a vehicle for ecological sustainability education?

In line with what many education theorists advocate, environmental, and arguably ecological sustainability, education's, *aim* is socially critical (Gough & Robottom, 1993). However, Grunewald (2004) claimed a significant issue "is the widespread lack of connection between social analysis (analysis of human systems) and ecological analysis (analysis of ecosystems)" (p. 88). It is therefore crucial, when (re)negotiating environmental education in support of ecological sustainability, to focus on both the social and environmental realms, and engage with the socially critical aim of education.

3.4.1   A transformative educational approach?

There has been extensive research into how environmental education, and its counterparts, education for sustainability or ESE, could be improved. In recent times, there has been much advocacy for a more transformative educational approach to

support sustainability. Sterling (2001, 2005) proposed sustainable education should involve a whole system shift where education moves beyond the status quo and is re-thought and re-designed. Similarly, UNESCO declared "transformative education is needed: education that brings about the fundamental changes demanded by the challenges of sustainability" (UNESCO, 2005a, pp. 16-17). However, what is often not clear is how these demands and principles translate into practice (Aguirre, 2002).

Kopnina (2014) argued the need to return to the guiding principles stated in the *Belgrade Charter* (UNESCO, 1975) and its goal of environmental education where the world population:

> is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones. (p. 3)

Kopnina (2014) highlighted that environmental education had broadened to integrate "environmental concerns (now often referred to as 'environmental management') with the socio-economic factors that shape the concept of development and its association with human rights, peace, poverty, and gender inequality" (Kopnina, 2014, p. 76). This reflects a transformation to become Education for Sustainable Development (ESD); however, in this evolution there has been a move away from a previous ecocentric perspective, that is, "protecting the environment for its own sake" (p. 74). The effects of the neoliberal agenda and its individualised and economic focus, has seen environmental education evolve to an ESD with an anthropocentric perspective dominated by economic concerns, altruistically humanistic and driven by self-interest, thus the "ecocentric perspective is subordinated to the interests of the political and corporate elites" (Kopnina, 2014, p. 78).

A similar embodiment to ESD is EfS. While comparable to ESD in incorporating "environmental, socio-cultural and economic-political dimensions" (Wilson, 2012, p. 43), Kopnina (2014) suggests EfS is often, but not always, favoured over ESD because of the negative connotations of sustainable development. In addition, while Kopnina (2014) identified the literature on ESD is growing, Tilbury (2011) argued "ESD remains poorly researched and weakly evidenced" (p. 9), signalling a need for well-grounded research in the field.

While environmental education has shifted its focus and methodologies over time to move beyond the narrowness and inadequacy of its dominant representation, and move towards a more transformative educational approach, I favour the term *ecological sustainability education* (ESE). By not limiting itself to simply an education *of* the environment, but by signifying an education of, with and between humans and their relationship with and connection to the natural, built and social environment, "viewing human beings as one part of the natural world and human cultures as an outgrowth of interactions between species and particular places" (Smith & Williams, 1999/2000, p. 139), ESE has the potential to engage students in actively participating in the support of ecological sustainability.

In an attempt to define a fulfilling and relevant environmental education, Weintraub (1995) suggested:

> an education that seeks to refine and promote the environmental relationship should emphasize the importance of the local community, because issues associated with immediate surroundings ... are not only essential to how individuals perceive themselves but also provide both useful teaching tools and engender connections between theory and practice. (p.361)

Therefore, to employ ESE and "reconstruct environmental education in dynamic ways" (Cole, 2007, p. 43) by connecting with the local community, a place-based approach to education offers great potential (Cole, 2007).

3.4.2   A place-based approach

PBE is an educational approach that potentially addresses the need to affect individual behaviour (Blumstein & Saylan, 2007), and connect humans and ecosystems (Gruenewald, 2004). This sentiment is reflected by other authors who suggest that consideration of sustainability and environmental issues are usefully and necessarily place-based (Blumstein & Saylan, 2007; Cole, 2007; Comber, Nixon, & Reid, 2007; Eflin & Sheaffer, 2006; Gruenewald, 2003a; Meichtry & Smith, 2007; Smith, 2002; Smith & Sobel, 2010; Sobel, 2004; Wilbanks, 2003). Not only does a place-based approach allow a connection to the community in support of ecological sustainability, it enables an exposure of how places are socially constructed and "how environmental issues involve social dimensions of power and authority across a geographical landscape" (Eflin & Sheaffer, 2006, p. 35). This may traverse the

current constructs of environmental or ecological sustainability education to become the dynamic and fulfilling education proposed.

While the ideas underpinning PBE are not new, the term is relatively new to educational literature (Gruenewald, 2005; Kemp, 2006). Originally stemming from topophilia, that is, "the affective bond between people and place or [environmental] setting" (Tuan, 1974, p. 4), PBE's "aim is to ground learning in local phenomena and students' lived experiences" (Smith, 2002, p. 586) and "to strengthen children's connections to others and to the regions in which they live" (Smith, 2002, p. 594). PBE develops students' imagination and an interconnectedness with their surroundings, which supports the goal towards achieving a sustainable future (Comber, et al., 2007; Meichtry & Smith, 2007). In addition, place and identity are intricately linked (Comber, Thomson, & Wells, 2001; Reay & Lucey, 2000).

Within the literature *place* is often used interchangeably with *space*; however, using a definition put forward by Gieryn (2000):

> place is not space – which is more properly conceived as abstract geometries (distance, direction, size, shape, volume) detached from material form and cultural interpretation (Hillier & Hanson 1984). Space is what place becomes when the unique gathering of things, meanings, and values are sucked out (de Certeau 1984, Harvey 1996; for contrasting definitions: Lefebvre 1991). (p.465)

In other words, "place is space filled up by people, practices, objects, and representations" (Gieryn, 2000, p. 465). Because of this, I use the term *place* and *PBE*, rather than space, which is devoid of the intricacies of life.

PBE begins with the local and the known, and extends to the global, enabling students to first engage in what is meaningful for them, such as their own places and people (Comber, et al., 2007). Students are also encouraged to know and care for "one place in a hands-on way increas[ing] the likelihood that [they] will learn to care for the environment in their everyday practices and at the same time develop[ing] more abstract and ethical understandings" (Comber, et al., 2007, p. 22). It is "an education that is fundamentally and explicitly concerned with the past, present and future of these local environments and communities (as well as the interrelationship with other communities, human and non-human)" (Gruenewald, 2005, p. 263).

Integral to this is valuing diversity and otherness, and the facilitation of advocacy and political action (Comber, et al., 2007; Gruenewald, 2003a).

Across Australia the AuSSI may exemplify the following place-based components put forward by Powers (2004):

> enhanced community and school connections, increased understanding of and connection to the local place, increased understanding of ecological concepts, enhanced stewardship behaviour, increased academic performance in students, improvement of the local environment, improvement of schoolyard habitat and its use as a teaching space, and increased civic participation. (Powers, 2004, p. 19)

In support of PBE and its influence on ESE, AuSSI emphasises all of these aspects, including a strong focus on schools connecting with their communities and their local places (Australian Government Department of the Environment, Water, Heritage and the Arts, 2007). Stevenson (2011) acknowledges the importance of place but found it was near absent from Australian environmental education research between the 1990s and 2000s. Research involving place has increased significantly in recent years and it is an area of considerable relevance to ESE.

Rafferty and Laird's (2013) research is "rooted in a sense of place" (p. 2) and discusses the observations and perceptions of primary school children's involvement with place-based environmental programs. These authors found outdoor environmental education programs are useful and important in promoting and creating a sustainable future, particularly those linked to positive change. In addition, they claim developing a sense of place is an important aspect in promoting ecological sustainability.

Within the early childhood arena the importance of attachment to the local place was researched by Lewis, Mansfield and Baudains (2010). Lewis et al. (2010) investigated ecological sustainability in the Australian context, focussing on pre and lower primary school students at one school. In comparison to Lewis et al. (2010), this current study expands on their notion of the local place and extends to include the global. While drawing on a school and its broader webs of significance, this study is important as it focuses on students in upper primary, Years 5–7, as these students are not only consequential stakeholders, they also bring to the study a valuable depth of knowledge from their schooling experience. Additionally, while

Lewis et al. (2010) focus on a school's EfS program, with three projects in particular, this study takes a more general look at the schooling and seeks where, if at all, ecological sustainability fits within the curriculum.

With these aspects in mind, this study engaged with a school that is a registered AuSSI school. This study acknowledges the contested nature of education, paying particular attention to ESE, whilst recognising PBE as a conduit for ESE. Place is conceived as local, as well as global, and people's perceptions, understandings and attitudes are taken into consideration.

A concept that aligns well with the philosophy of PBE is the *intelligent school* (MacGilchrist, Myers, & Reed, 2004). Therefore, the attributes of an intelligent school may be fruitful in creating and enhancing space for ESE.

3.4.3 Hope in the intelligent school?

The intelligent school is conceptualised by MacGilchrist, Myers and Reed (2004) as an organisation that takes an holistic approach to school improvement. The characteristics of the intelligent school are identified as nine interdependent intelligences. When used concurrently, the intelligences can empower a school to successfully achieve its goals, particularly with regard to learning, teaching, effectiveness and improvement.

As shown in Table 3, the first two intelligences are ethical and spiritual. These intelligences represent the vision that drives the actions of the school. A combination of the following six intelligences represents the actions of the school. These are contextual, operational, emotional, collegial, reflective and pedagogical. Finally, systemic intelligence connects the attributes within the vision and the action so they can work together. I argue that many of these intelligences and their attributes (also provided in Table 3) fundamentally support PBE.

Table 3.

The intelligent school: The concepts, principles and attributes of the nine intelligences

Vision		
1	Ethical intelligence	- justice - respect for persons - inclusion - rights and responsibilities
2	Spiritual intelligence	- search for meaning - transcendency - sense of community - interconnectedness
Action		
3	Contextual intelligence	- internal - local - national - global
4	Operational intelligence	- strategic thinking - development planning - management arrangements - distributed leadership
5	Emotional intelligence	- self-awareness - awareness of others - managing emotions - developing emotional literacy
6	Collegial intelligence	- commitment to a shared purpose - knowledge creation - multi-level learning - trust and curiosity
7	Reflective intelligence	- creating time for reflection - self-evaluation - deep learning - feedback for learning
8	Pedagogical intelligence	- new visions and goals for learning - teaching for learning - open classrooms - going against the grain
Vision + Action		
9	Systemic intelligence	- mental models - systems thinking - self-organisation - networking

Note. Adapted from The intelligent school (2nd ed.) (p. 113), by B. MacGilchrist, K. Myers, & J. Reed, 2004, London; Thousand Oaks; New Dehli: SAGE Publications. © 2004 by B. MacGilchrist, K. Myers, & J. Reed.

As indicated, collectively the ethical and spiritual intelligences are underpinned by place-based features including inclusivity, interconnectedness and a sense of community. In addition, the respect for persons attribute could easily be extended to

include animals and other non-human elements. Furthermore, the six action intelligences contain characteristics that contribute to PBE. Some attributes are particularly significant to PBE are those in contextual intelligence: internal, local, national and global. The attributes of the emotional, collegial, reflective and pedagogical intelligences are also, in many ways, place-based. In addition, the operational and the systemic intelligences would also be central in supporting and facilitating PBE. Therefore, rather than seeing PBE as an addition to the curriculum, it may be realised implicitly through an engagement with the characteristics of the intelligent school.

Another potential advantage the intelligent school offers is that many of its characteristics contest the dominant neoliberal discourse currently shaping schools. For example, the educational aim for both the intelligent school and neoliberalism is for school improvement. However, the neoliberal focus is narrowly on student attainment, "consistency, standards and consumer perception" (Gillies, 2010, p. 104), with an emphasis on *performance*. Whereas the focus of the intelligent school is more on *learning* and building capacity and social capital as a means for improvement. The methods for improvement are also disparate. Influenced by neoliberalism, education is seen to be in crisis and requires top-down reform. Conversely, the intelligent school's means for improvement is bottom up, through supportive and collaborative professional initiative. Furthermore, Hargreaves (2003) argues that under the neoliberal regime of "competitive and corrosive individualism" (p. 170), social exclusion is increased and community declines. In contrast, fundamental aspects of the intelligent school are interconnection, community and working together. These aspects undermine the neoliberal emphasis on individualisation and competition.

Therefore, in many ways the intelligent school seems to support PBE. In addition, it appears to be an appropriate vehicle for supporting a socially critical form of education. Furthermore, as a counter-discourse to neoliberalism embracing the characteristics of the intelligent school may provide fertile ground in which to create space for ESE.

3.5 Summary

The current context of Australian education is operating under a neoliberal hegemony. As demonstrated, the traditional curriculum hierarchy is unwavering despite numerous education reforms over 100 years. The current hegemonic influence of neoliberalism has instilled a global focus on the individual and the economy that has further strengthened the status of high-ranking learning areas like literacy and numeracy, and further marginalised other areas like ESE.

A pertinent issue for this study is a rhetoric–reality gap that exists twofold. The initial gap is between the level of governmental policy rhetoric and the actual curriculum produced. There is also a gap between the stated curriculums, particularly that of sustainability, and its teaching (Thomas, 2005). Research highlights the importance of ESE, however considering the preferencing–marginalising duality of neoliberalism, as well as the issues involved in the rhetoric–reality gaps, this is a significant challenge. Therefore, it is pertinent to garner insight into how a school might negotiate ecological sustainability into the curriculum.

While the studies acknowledged above have their merit, none of them embraces a holistic approach to the research. This study fills a gap in the literature not only because there is little research done on the implementation of ecological sustainability in Australian schools with regard to Sustainability as a CCP, but the methods adopted have far-reaching implications. This research engages with an array of stakeholders including school leaders, teachers, policy actors, external advisers, parents and children as active, albeit consequential, stakeholders. In addition, the main foci of many studies are the barriers to ESE. In comparison, this study acknowledges and identifies barriers, but concentrates on the absence or presence of agency and the space in which ESE might be facilitated and sustained. The following chapter outlines the research design and methodology utilised in this study.

CHAPTER 4:

Investigating the paradox through social constructionism

> Schools are not self-contained places ... they also reflect, and contribute to, the communities of which they are part. Accordingly, schools – especially public schools – are places that *matter* ... they are sites of common concern that transcend, to various degrees, the social distance associated with class, age, ethnicity and political disposition. Accordingly, ... [researchers] have the potential to engage with issues of *broad* social and political concern, and to contribute to enduring policy debates about the kind of place the school should be. [italics in original]
> (Collins & Coleman, 2008, p. 296)

As the forces of neoliberalism gain ascendency and destruction to the environment proliferates, this study looks to a public school as a place that *matters* (Collins & Coleman, 2008) and is a powerfully informing context. Correspondingly, the paradoxical contradiction and complex interconnection between neoliberalism and ESE warrants a research design and methodology that is capable of reflecting the intricacies involved in negotiating and managing this paradox. Social constructionism guides this research as I believe this theory is the most appropriate for eliciting power hierarchies and disrupting the taken for grantedness of global capitalism and neoliberalism. In addition, social constructionism has powerful analytical and explanatory power and is therefore an effective theory to highlight the complexities involved in facilitating and sustaining a focus on ESE.

This chapter, therefore, focuses on the theoretical and methodological framework for this research. I outline the appropriateness of using social constructionism as a guiding theory, and follow with an explication of the epistemology and ontology that underpins both social constructionism and this study. I then describe social constructionism in more detail and discuss the methodological approach of ethnography. I pay particular reference to tracing the "webs of significance" (Geertz, 1973, p. 5) as a means of engendering a richer, broader and more informing context. I present an overview of the research site and the people who participated in this study, including ethical considerations. I describe the methodology and design, that

is, *how* the research was undertaken, and illustrate the choice and process of thematic analysis as the selected tool for analysing the data. Last, I explain the study's limitations and delimitations. To begin, I explain the theoretical and methodological framework in detail.

4.1   Theoretical and methodological framework

I chose qualitative research methods for this thesis. In contrast to quantitative research that generally involves numerical data and statistical methods, qualitative research involves words or texts as data (which can include images) and a focus on meaning (Braun & Clarke, 2013). The path of the research was also driven by my own world view, which can be understood as a research paradigm. As a white, Western, middle-class, daughter, wife, mother, student, teacher and researcher (plus numerous other identities) I have come to view the world through several lenses and have learned to appreciate multiple perspectives. I recognise the views of 'others' in the creation of my own representation of 'reality' and I believe that knowledge is subjective, therefore I also believe that representations of 'reality' are socially constructed. This has led me to subscribe to a social constructionist world view. Qualitative research and research methods align well with my world view as they provide the space in which to explore and value multiple voices so that a deeper understanding of constructions of reality may be developed. In this thesis, I utilised interviews, focus groups and documents to explore the various voices within the research context. In addition, in line with social constructionism is the recognition that I am unable to separate myself from my research, instead, the research process has been a co-construction involving input from participants and various texts and my interpretation of these various realities.

The research theory that aligns with a social constructionist world view and has helped to guide this research is social constructionism. The reason for applying this research theory comes from the context of this research. Two foundational factors that influenced the adoption of social constructionism in this research are primary schooling and ESE. A major part of primary schooling is the curriculum and, as previously discussed, the curriculum, and indeed the idea of schooling, is hotly contested by many scholars. The curriculum can be understood in various dimensions, but is based around the planned (Marsh, 2009; Marsh & Willis, 2007) or

intended curriculum (Jorgensen & Perso, 2012) or what can be conceived as the official curriculum (Reid, 2011b). Reid (2011b) argues that subjects, such as history and mathematics, that constitute the intended or official curriculum, are socially constructed. That is, "their creation and maintenance is a political process that reflects values, beliefs and ideologies" (p. 81). Likewise, Redclift and Woodgate (1997) and Woodgate and Redclift (1998) propose that "all discussion of sustainability ... is socially constructed" (p. 61;6). Therefore, social constructionism is an ideal theory to utilise, as both the curriculum and ecological sustainability are essentially social constructs. In addition, various authors within the environmental sociology literature support the use of social constructionism as a guiding theory, such as Hannigan (1995, 2006, 2014) and Jones (2002). Hannigan (1995) proposes that social constructionism has many advantages over other theories, particularly in research involving ecological sustainability. This is because social constructionism critically appraises social, political and cultural influences behind environmental crises. Social constructionism also "recognises the extent to which environmental problems and solutions are end-products of a dynamic and social process of definition, negotiation and legitimation both in public and private settings" (Hannigan, 1995, p. 31). For these reasons, coupled with my own world view, social constructionism has guided the direction of this research. Furthermore, to gain an appreciation of the underpinnings of social constructionism the epistemology and ontology that drive this research theory require attention.

4.1.1   Epistemology and ontology

To develop an understanding of social constructionism it is crucial to delve into what ideas and theories underpin it. Ontology is the study of being or the study of the nature of reality (Burr, 2003; Creswell, 2005; Fien, 2002; Robottom & Hart, 1993) and "epistemology is the study of the nature of knowledge and how we come to know the world of things" (Burr, 2003, p. 92). Throughout the literature there are numerous opinions on the theories behind social constructionism. Crotty (1998), for example, views constructionism as an epistemology and interpretivism as its correlating theoretical perspective. As an epistemology, constructionism holds that there is no objective 'truth' or knowledge, rather it is constructed in different ways by different people (Crotty, 1998). In reference to ecological sustainability, Dolan (2002) argues that while ecological issues are socially constructed there still needs to

be an acceptance of the 'fact' of nature and its finite resources. This therefore requires a position that is "epistemologically interpretive and ontologically realist" (Dolan, 2002, p. 174). Crotty (1998) also proposes a realist ontology but suggests that social constructionism is both realist and relativist.

Within the literature there is prominent debate amongst social constructionists between realism and relativism (see Parker, 1998b). This debate, or a "locking of horns" as Burr (2003) describes it, is characterised by claims that generally relate to the more extreme realist and relativist views. Critics claim that a realist position ignores context and is too similar to positivism (Hibberd, 2005). Realism holds that there is an independent reality outside of our discursive and textual representations of it and that this reality is ultimately what our representations are based on (Burr, 2003). In comparison, an extreme relativist view holds that if there is a reality we cannot access it, we can only obtain multiple representations of reality that could each be argued as equally valid. This idea of "value-neutrality" (Parker, 1998a, p. 8) or 'anything goes' is, Hibberd (2005) claims, "absurd" (p. 38) and can lead to a state of "social and personal paralysis" (Burr, 1998, p. 14) and deprive us of any moral ground and political action (Burr, 2003). However, there is much merit in the concurrent use of both realism and relativism and, as Schwandt (2006, p. 804) proposes:

> We can never appeal to some decisive body of evidence or fixed criteria that would unquestionably determine the correct interpretation. Nonetheless, although there can never be a definitive interpretation, it is important to our ability to go on with one another to hammer out the grounds on which we decide whether one interpretation is better than another. (p. 804)

Considering social constructionism can be understood in both realist and relativist terms, Bhaskar (2008), Jones (2002) and Parker (1998a) argue for an epistemological relativism. Epistemological relativism is grounded in the belief that the nature of knowledge is socially constructed through discourse (Burr, 2003). Drawing from Foucault, Burr (2003) describes a discourse as:

> a set of meanings, metaphors, representations, images, stories, statements and so on that in some way produce a particular version of events. It refers to a particular picture that is painted of an event, person or class of persons, a particular way of representing it in a certain light. If we accept the view ... that a multitude of alternative versions of events are potentially available through language, this means that, surrounding any one object, event, person etc. there may be a variety of discourses, each with a different story to tell

about the object in question, a different way of representing it to the world.
(p. 64)

Therefore, acknowledging an abundance of discourses supports the rejection of theories of truth (Bhaskar, 2008) because "we can never know reality exactly as it is" (Jones, 2002, p. 248). Furthermore, Bhaskar (2008) proposes that "epistemological relativism … is the handmaiden of ontological realism" (p. 241). This means that our descriptions of the world are always "theoretically determined … not neutral reflections of a given world" (Bhaskar, 2008, p. 241). Jones (2002) and Parker (1998a) support this sentiment, arguing that ontological realism sees the nature of reality as a shared "common, concrete, physical world" (Jones, 2002, p. 248) that our social constructions are based on. As discussed in more detail below, the terms social constructionism and constructivism are often used interchangeably (Gergen, 1985; Young & Collin, 2004). However, the belief that beyond text and discourse a reality does exist, (Burr, 2003) diverges from the interpretive/constructivist paradigm where the ontological belief is that "reality is *not* 'out there'" [italics added] (Fien, 2002, p. 248). Embracing social constructionism that is underpinned by a realist ontology and a relativist epistemology helps to avoid the issues fuelling the realist versus relativist debate as "the naivety of 'pure' realism is avoided and the impracticality and absurdity of 'pure' relativism averted" (Jones, 2002, p. 250).

Following on from the epistemological and ontological underpinnings of social constructionism, the next section highlights key characteristics of social constructionist theory. In addition, I identify instances of social constructionism's applicability to this study.

4.1.2   Social constructionism

Social constructionism has roots in both psychology and sociology. Berger and Luckmann's (1966) book *The Social Construction of Reality* was a major contribution to the sociology field and in psychology, Gergen (1973) is often acknowledged for his contribution to the theory in his paper "Social Psychology as History" (Burr, 2003).

Both the terms 'social constructionism' and 'constructivism' are used interchangeably however constructivism:

is also used in reference to Piagetian theory, to a form of perceptual theory, and to a significant movement in 20th century art. The term *constructionism* avoids these various confusions and enables a linkage to be retained to Berger and Luckmann's (1966) seminal volume, *The Social Construction of Reality.* [italics in original] (Gergen, 1985, p. 266)

In addition, Young and Collin (2004) state that "constructivism is distinguished by its focus on how the individual cognitively engages in the construction of knowledge from social construction that claims that knowledge and meaning are historically and culturally constructed through social processes and action" (p. 373). The theory of constructivism largely comes from an individualistic psychological perspective where knowledge is constructed from within through the mental processes of the individual. Social constructionism, however, is aligned to a more sociological perspective that begins with language, and where knowledge and ways of understanding the world are constructed through social interactions, or a "collective generation of meaning as shaped by conventions of language and other social processes" (Schwandt, 1994, p. 127). Therefore, the social, rather than the individual aspect of knowledge construction, is central (Crotty, 1998).

Burr suggests that although examples of social constructionism are many and varied, drawing from Gergen (1985), four key assumptions that are characteristic of social constructionism can be identified:

- a critical stance toward taken-for-granted knowledge

- historical and cultural specificity

- knowledge is sustained by social processes

- knowledge and social action go together (Burr, 2003, pp. 2-5).

One or more of these features forms the foundation of any social constructionist approach. These features build on Berger and Luckmann's (1966) assertion that reality is socially constructed and "the reality of everyday life is taken for granted *as* reality" [italics in original] (Berger & Luckmann, 1966, p. 37). However, there exist multiple realities, as one:

cannot exist in everyday life without continually interacting and communicating with others ... the others have a perspective on this common world that is not identical with mine. My 'here' is their 'there'. My 'now' does not fully overlap with theirs. ... there is an ongoing correspondence between *my* meanings and *their* meanings in this world, that we share a

common sense about its reality. [italics in original] (Berger & Luckmann, 1966, p. 37)

This common-sense knowledge is generally taken for granted as it refers to knowledge that is common, though not identical, to many (Berger & Luckmann, 1966). As demonstrated earlier, much of this research revolves around aspects that are taken for granted, such as the traditional curriculum and aspects of neoliberalism (Ditchburn, 2012a; Harpaz, 2005, 2014). Utilising social constructionism invites us to view the norm critically and challenge traditional ideals. Also, paying attention to historical and cultural specificity alerts us to the idea that knowledge is an artefact of culture, history and geography. Therefore, the knowledge that we hold now may not have any more validity than others' knowledge. This is pertinent with respect to both curriculum and ecological sustainability; both are social constructs with great historical, cultural and geographical influences. Furthermore, social constructionism complements the place-based philosophy inherent in ESE that is grounded in the past, present and future of local environments and communities (Gruenewald, 2005), as social constructionism is greatly concerned with histories and local contextualisations, and humans' place therein.

The assumption that meaning and knowledge are sustained by social processes and daily interactions is highlighted by Hannigan (1995). In relation to ecological sustainability, Hannigan argues for a social constructionist approach because it positions environmental problems and solutions as the result of social processes. In addition, the characteristic of social constructionism that proposes that knowledge and social action go together is inherently key in research involving schools and ecological sustainability. This is because schools and the curriculum are potential sites for empowering social action, and, as Hannigan (2006) proposes, "social constructionism makes a notable contribution ... by highlighting the ability of a particular discourse (for example, sustainable development) to become hegemonic and, hence, stifle debate" (p. 33). Therefore, revealing the discourses that stifle debate opens up the arena for alternative views that may encourage social action.

Social constructionism is also a valuable tool when dealing with perceived crises. This includes the actual or perceived crisis in education, as illustrated in Chapter 3, and can also include actual or perceived environmental crises. Adopting a social constructionist approach facilitates an interrogation of the social, political and

cultural processes that contribute to these crises (Hannigan, 2006, p. 29). Hannigan suggests that out of all other theoretical approaches, social constructionism is the most suitable for research involving ecological sustainability as it embraces "questions of perception and power" (2006, p. 32).

While the questions involved in social constructionism are beneficial to policy-making, they are also pertinent to ecological sustainability, school and curriculum issues. In addition, questions involving who makes claims, who opposes them, whose voices are heard and whose are not are particularly relevant in a context influenced by a neoliberal agenda. Neoliberalism pervades the lives of each individual, so too does the power entrenched within (Foucault & Gordon, 1980); therefore, when undertaking research within the context of a neoliberal agenda it is important to utilise a theoretical perspective that enables the critique of power relations.

Additionally, it has been argued that the traditional attitudes towards ecological sustainability "share too many features with the power structure they wish to oppose" (Quigley, 1995, p. 173). Traditional attitudes tend to be entrenched in the dominant capitalist hegemony that can be seen as anthropocentric, inherently exploiting and degrading the environment in its drive for growth and capital accumulation (Clark & York, 2005). Furthermore, these traditional attitudes, from a social constructionist approach, are critiqued and deconstructed to highlight not only the power structures but also the human desires embedded within these structures (Quigley, 1995).

Social constructionism involves the relationship between meaning, or knowledge, and power, "that is, how power structures shape knowledge; and how certain knowledge structures support certain power hierarchies" (Scholte, 2005, p. 132). This perspective encourages the deconstruction of this relationship while disrupting the norms and highlighting the ambiguity of social constructs and the language embedded within. Accordingly, adopting social constructionism as a lens and guiding theory is invaluable and has guided the direction of this study towards qualitative methodologies.

Qualitative methodologies have been used in this study as they adhere well to social constructionism and provide a means with which to garner a more nuanced understanding of the research. Ethnography is a fertile qualitative methodological

approach utilised in this study. The following section describes ethnography and how it has been further conceptualised in this study as a "strategically situated ethnography" (Marcus, 1998, p. 95) that follows its "webs of significance" (Geertz, 1973, p. 5).

4.1.3 Ethnography

Educational research utilising a social constructionist perspective involves in-depth questioning and examining aspects of social and school life, much of which is often taken for granted, with the intent to understand the meanings and power behind not only what is occurring, but also what is not (Stone, 2008). Ethnography is a methodological approach useful in determining people's meanings, perceptions and understandings in relation to their views and/or culture. Ethnography commonly involves listening, observing and attempting to describe what has been seen and heard (Hammersley & Atkinson, 1995). Before offering explanations, findings are interpreted as part of a lengthy process that involves a considerable amount of discussion with participants (Geertz, 1973). These discussions include negotiations around interpretations and explanations (Geertz, 1973; Marcus, 1998). Traditional ethnography tends to seek 'truths' and show what is argued as the 'real story'; however, a social constructionist perspective enables moving beyond the supposed real story by forming particular versions of the truth (Britzman, 2000). Ethnography that combines social constructionist theorising can be understood as a narrative that tells a story of how power is circulated and how knowledges are produced from certain regimes of truth (Britzman, 2000). It is not only the obvious that is highlighted, but also what is absent, silent, or silenced, so that the voices of the unheard are heard (Crotty, 1998; Peters & Burbules, 2004).

While a traditional ethnography may tell the more obvious story, using ethnography within a social constructionist framework emphasises unmasking the interplay of power-knowledge relations beneath the apparent (Peters & Burbules, 2004). This form of ethnography is fitting for this study as determining people's meanings, perceptions and understandings of such things, as ecological sustainability requires substantially more than describing the apparent. An appreciation of the source and construction of particular knowledges will only emerge through a deconstruction of the power-knowledge relations inherent within. To deconstruct the power relations

behind particular knowledges in a study that focuses on place and the pedagogies therein, especially the place of 'others' (that is, a place where the researcher has no previous connection) the methodological approach of a social constructionist ethnography is appropriate. Social constructionist ethnography involves the researcher in the crucial task of spending time with the others in their place(s) and "attend[ing] to them as experiencing subjects" (Geertz, 1996, p. 260). The researcher attends to the others, or participants in the research, in an endeavour to gain an understanding of their perspectives (Crotty, 1998). By adopting a social constructionist lens, I acknowledge that the findings and discussion produced from this study are not accounts of the truth, they are a construction of reality to invite and invoke "new and ever-evolving dialogues and practices" (Gergen & Gergen, 2003, p. 228). Social constructionist ethnography promotes a deep engagement with the research as it aids the researcher to move beyond and deconstruct common-sense assumptions, which are often linked to power, to enable an awareness of power-knowledge relations (Fairclough, 2001, p. 2).

Tracing the webs of significance

This research is positioned as a strategically situated case study as it "involves the study of ... a phenomenon in order to explore in-depth nuances of the phenomenon and the contextual influences on and explanations of that phenomenon" (Baxter, 2016, p. 130). A key factor of this particular case study is that it entails following and detailing "webs of significance" (Geertz, 1973, p. 5). Within educational sites, these 'webs' are important to follow as they may influence and inform much of the site's context and the participants' understandings. These webs may include connections to community groups, extracurricular activities, television shows, video games and other links that constitute small social systems (Eisenhart, 2001). Following these webs is crucial in understanding complex social conditions such as educational sites. Therefore, this will advertently involve "the level of the social situation, or the immediate social environment in which the discourse occurs; the level of the social institution that constitutes a wider matrix for the discourse; and the level of society as a whole" (Fairclough, 2001, pp. 20-21). This can be understood as linking the research from the local to the global. This is particularly important in research that relates to globalisation, as "globalization is characterised … by a continuing tension between, and process of mutual construction of, 'the global and the local'" (Massey

& Jess, 1995, p. 4). In addition, as advocated by Fairclough (2001), when analysing at a local level it is crucial to attend to the global as both are mutually informing and shaping.

This study focuses on one school as a specific site in which to identify, examine, analyse, evaluate and explain educational practices that focus on ecological sustainability. Tracing the webs of significance is likened to a multi-sited ethnography, or a "strategically situated ethnography [that] attempts to understand something broadly about the system … as much as it does its local subjects" (Marcus, 1998, p. 95). The webs of significance within this study are those that have an effect on the school's uptake and understandings of ecological sustainability. A key aspect within social constructionist theory is "that there are multiple representations or knowledges each with their own power. Within the one community or group there may be multiple and conflicting local knowledges that need to be adjudicated" (Cameron & Gibson, 2005, p. 318). Therefore, within this study, it is important to remember that the understandings of ecological sustainability and representations of reality may vary greatly from teacher to teacher, to student, to community member and so forth. While one school is the case study or core of the research, the multiple knowledges and understandings that circulate through the school and its community are important aspects needing attention.

4.2   Research site and participants

4.2.1   Research site: Acacia Primary School

The research site for this study is an urban primary school located in close proximity to a capital city (Adelaide), in South Australia with a focus on ecological sustainability. It was chosen purposefully as an "information-rich" case (Patton, 2015, p. 264) through which to illuminate and understand the complexities of the research phenomena (Merriam, 2009; Stake, 2006; Yin, 2014). That is, how an urban school, its staff, students and community connections negotiate the inclusion of ESE.

The criteria for selection involved cross-referencing a list of schools participating in AuSSI with information from the census for South Australia (Australian Bureau of Statistics, 2008). In addition, a school with an average level of disadvantage was sought purposefully to ensure the occurrence of some challenges and increase

relevance across other school contexts. These challenges may be due to limited access to economic and educational resources in the students' homes and communities, a high percentage of Aboriginal students, and student mobility; as included in the DECS Index of Educational Disadvantage (Department of Education and Children's Services (DECS), 2010b).

An environmental education expert with involvement in many schools across the state identified a school fulfilling the above considerations. I approached the school, and, on behalf of the school, the principal verbally agreed to participate in the study. Thereafter, Flinders University and DECS granted ethics approval. Agreement from all participants was also formally ratified. Although the research for this study commenced in 2007, the fieldwork component was undertaken between August 2013 and December 2014.

The research site was assigned the pseudonym, Acacia Primary School. With regards to its size, demographics and attainment levels Acacia Primary School can be identified as a "typical case sampling [because it] illustrates or highlights what is typical, normal, average" (Patton, 1990, p. 182). Primary school population sizes can vary greatly from small schools of under 10 students to larger schools housing around 1000 students or more. The size of Acacia Primary School is average, growing from approximately 200 students in 2004 to over 400 in 2017. This size is typical of the primary schools in the same region as Acacia Primary. Also, in common with many urban schools, the student profile consists of many different cultural backgrounds and a significant level of disadvantage. In addition, although the *My School* website does not portray holistic representations of schools, it publicly shows that Acacia Primary School has an overall level of achievement in line with the Australian school average. Furthermore, the national authority of ACARA necessitates a certain level of consistency across public schooling Australia-wide. Predominantly this homogenisation is through the introduction of a common curriculum, representing the enduring traditional curriculum hierarchy, as well as the influence of the National Assessment Program (NAP). Subsequently, given its normality and that Acacia Primary is a school under the directive of ACARA, generalisation of information to other schools is likely.

Of significance to this study, however, Acacia Primary School has a stated focus and commitment to ecological sustainability, therefore it can be understood as manifesting (or attempting to manifest) education towards ecological sustainability. This aspect of the research site was a key determinant in purposefully and strategically selecting Acacia Primary for this study (Merriam, 2009; Stake, 2006; Yin, 2014). Acacia Primary has had an ongoing commitment to ecological sustainability since 2004/2005. This period encompasses the introduction of the new national curriculum as well as many variations in departmental, state and national priorities. Therefore, the experience of Acacia Primary School in negotiating and managing ecological sustainability in an increasingly neoliberal context makes an information-rich contribution to this study.

The connections among the participants in this study are the school, the curriculum and ESE. The methodology involved in ethnography that traces the webs of significance is useful when researching ESE and its association with place. Much like PBE, which begins with the local and extends to the global, strategically situated ethnography requires situating oneself in the local and empirically following the threads or paths that lead to a more global arena (Marcus, 1998). In addition, Massey (1994) argues that places are not static or bounded, nor do they have single identities, but they are however unique, and any contemporary conceptualisation of place should link "to places beyond" (p. 156).

Situating the research in one school, and viewing that school and its classrooms as arenas of social practice (Eisenhart, 2001; Honan, Knobel, Baker, & Davies, 2000) enables depth in the research with the collection of rich data. By following the threads that constitute the webs of significance the research moves beyond the immediate social situation or geographically bounded internal arena of the school, and draws in the wider community connections that influence the school, thus embracing multiple networks that form both the internal and external arena, community or place of the school.

4.2.2 Participants

To optimise a rich and nuanced understanding of how ecological sustainability is facilitated and sustained in a school, this research involves both adult and child participants. Adult participants are seen as key stakeholders in the policies and

practices of the school as within their various roles they have influence on the uptake of ecological sustainability. In addition, child participants (students at the school) are key stakeholders in their own education and the knowledges they receive from, and feed into, their homes and communities. The intention was to document and render visible and accessible the negotiations involved in retaining a school's focus, in this case supporting ESE, and engaging with what may contest this focus.

School staff members

The participation of staff helps to reveal how teachers negotiate and facilitate ESE within the demands of their curriculum, forged under a neoliberal agenda. Staff members, or internal stakeholders, are key players in various parts of the curriculum, including the enacted curriculum (what is presented), the emergent curriculum (what emerges through the interaction between staff and student), the null curriculum (what is not included), the experienced curriculum, and the hidden curriculum (what is experienced collaterally by the student, that is, the unwritten, often unintended transmission of cultural values and attitudes) (see Webster & Ryan, 2014, p. 10).

To recruit staff participants I attended Acacia Primary School on a number of occasions to develop a rapport with staff members. During a staff meeting, I presented a brief summary of the study and encouraged all interested staff to participate. I stressed that the interviews were open for anyone, not only those with an interest in ecological sustainability (see Appendix B for introduction letters, Appendix C for information sheets and Appendix D for consent forms).

It was anticipated that at least 5–10 teachers from a staff body of 37 (not all full time) would participate. In the occurrence of a large number of staff members volunteering, prior to invitations being issued, it was determined that participants would be chosen randomly across the year levels. Ultimately, 10 staff members volunteered to participate in interviews, 3 males and 7 females.

School students

While the adult participants are seen as key stakeholders in the policies and practices of the school, the students are also important. While they are the consequential stakeholders of the education they are involved in (Groundwater-Smith, 2007, 2009; Groundwater-Smith & Mockler, 2007) they are also dynamic agents and participants

in our society. This study also acknowledges that young participants often have a greater understanding of their own lives and experiences than adults (Dockett & Perry, 2005). Therefore, the involvement of students is paramount in ascertaining the effect their school education has on their beliefs, values and commitment to ecological sustainability. In this study focus groups were held with students as it was deemed that the nature of a focus group may be less threatening and more empowering for young participants than individual interviews and therefore more productive (Madriz, 2000).

It was anticipated that a sample of approximately 15 students in years 4–7 would be involved in the research. Subsequently 14 students, 6 males and 8 females, from years 5, 6 and 7, ranging in age from 10 to 12-years-old participated in focus groups (see Appendix F for the key characteristics of the student participants). The student sample was composed through negotiations with the school staff. The decision to undertake focus groups with upper primary students and not lower primary students was that the older students could draw from at least four years' experience at the research site, Acacia Primary School. Those students who had previously attended other schools had four years' experience in a school context and could make comparisons and draw from their experiences. In an attempt to obtain an inclusive student sample, it was anticipated a range of student interests would be taken into account, from the enthusiastic, to those who may have been be disengaged. However, most participants were members of the school's environmental group.

Community members

To engender a more thorough understanding of the negotiations involved, following the webs of significance, I undertook interviews with community members who were connected to the school through ecological sustainability and/or place. These external stakeholders were identified purposefully through discussions with the school staff as well as through my own investigations into members with both a direct and indirect connection to the school site. I approached identified community members directly with a brief account of the study and an invitation to participate.

I anticipated that at least 5–10 community members would participate. Seven community members volunteered to be interviewed. To encapsulate a diversity of members, this group comprised two parents, two education department employees,

one environmental education employee, one community member with involvement in the national curriculum and the school's grounds person (while the grounds person was a school staff member is was deemed more appropriate that they be counted as a community member as their influence could be understood as more on a community level as an external stakeholder).

As a whole, the interviews and focus groups provided insight into the understandings encircling ecological sustainability. They also illuminated differences between participants' understandings of ecological sustainability and place, and how the various understandings are negotiated within the school's context and practices.

4.2.3 Researcher's role and potential ethical issues

Participation was voluntary, and participants were able to withdraw from the study at any time and were free to decline to answer particular questions without prejudice or penalty. Participants were assured that confidentiality and anonymity would be maintained throughout the study. No information that identifies an individual will be published and confidentiality of any information provided by the participants will be respected. To preserve the anonymity of the participants, pseudonyms are used in this thesis and subsequent publications. All information has been coded to ensure the participants cannot be identified. To assure anonymity of the participants, the school has also not been identified. This has been ensured by assigning the pseudonym Acacia Primary to the school, not identifying the location of the school, and not naming the participants (see Appendices A and B for letters of introduction and information sheets).

I undertook the transcribing. Where additional support was sought by anyone other than myself, the same requirements to respect and maintain confidentiality and anonymity of the participants are assured. All data are appropriately and securely stored.

Ethical approval from Flinders University and the DECS to conduct the research was obtained prior to commencing data collection. Signed consent from school staff members, key community members, parents and students was also obtained prior to data collection (see Appendix D for consent forms for interviews, focus groups and observations).

4.3   Methodology and design

Consistent with social constructionist theory, language is key within this research as language "marks the coordinates of [ones] life in society and fills that life with meaningful objects" (Berger & Luckmann, 1966, p. 36). Within social constructionism, a major concept is the attention that is paid to the constantly changing and varied role of language and textuality in the co-construction of reality (Burr, 2003). Therefore, when undertaking research underpinned by a social constructionist perspective, it is critical to interrogate the language that is being used in context through an examination of texts. With this awareness, and utilising ethnographic methodologies, the texts in this study were collected in a range of ways. These were through identifying and collecting documents of relevance such as strategic plans, annual reports and school context statements. Transcriptions were produced from the interviews and focus groups, and anecdotal notes of observations were collected. The language within the collected data was then analysed using a social constructionist form of thematic analysis to determine the dominant, subordinated, competing, complementary or absent discourses, not only of ecological sustainability and place, but also of other discourses that may emerge.

Following the "webs of significance" (Geertz, 1973, p. 5), the main stakeholders involved in all state primary schools, including Acacia Primary, are:

- ACARA, an independent statutory authority that takes direction from the Australian Government and controls the national school curriculum and national assessment programs
- the South Australian Government
- DECS, the state government department whose function is to lead and manage South Australia's public education system
- teachers and other staff members, including leaders within the school such as the principal and deputy principal
- students
- community members linked to the school, for example:
  - parents, which may include members from the governing council (a legally constituted group consisting mostly of parents that has joint responsibility with the principal for the governance of the school. The council's role is to

set future directions and goals for the school, and it also has responsibility for final approval of the school budget)

– members from government and non-government organisations, which may include education and environmental education employees

– curriculum writers.

These national, state and local stakeholders all operate to construct the context of schools. In addition to the stakeholders identified above, indirect stakeholders such as the media may influence the research site.

Engagement with various stakeholders through analysing documents, such as DECS strategic plans as well as school context statements, helped to determine which conceptualisations of ecological sustainability and place were being promoted or subordinated at the school. Furthermore, it was important to determine what knowledges and practices were absent or silenced from and by these documents, in addition to what agendas were preferenced or promoted. To engender a more nuanced understanding, interviews were undertaken with school staff and with the community members who were connected to the school through ecological sustainability and/or place. The interviews provide understandings of the common knowledges around ecological sustainability. They also illuminate differences between participants' understandings of ESE, and how they negotiate their understandings within the school's context and practices. Discussions with students provided insights into how the understandings of ecological sustainability are transmitted and transferred through the webs of significance identified. These discussions were undertaken in the form of focus groups because gathering information from young children is considered more fruitful and reliable when carried out in group interviews (Dockett & Perry, 2005; Hoppe, Wells, Morrison, Gillmore, & Wilsdon, 1995; Lewis, 1992). Observation of the research site and the participants provided an additional means of gaining a fuller picture of how the school negotiates ESE. Field notes were generated with attention paid to what was happening and also to what was absent or silenced. More detail on the document analysis, interviews, focus groups and observations are provided below.

As a result of the data collection, I collected three sets of texts:

- documents from a federal, state and school level deemed to manifest priorities at each level
- interview transcripts produced from interviews with school staff members and key community members, as well as from focus groups with students (the transcripts were supplemented with notes taken by myself during the interviews)
- anecdotal field notes generated from observation of, and participation in, various educational practices underpinned by a place-based philosophy and/or ecological sustainability.

The three sets of texts were analysed using thematic analysis with a social constructionist lens. A more in-depth discussion of the forms of data collection follows, followed by a discussion of the method of data analysis.

4.3.1   Document analysis

To identify the conceptualisations of ecological sustainability the school draws on to inform its policies and practices, this study includes analyses of publicly available documents from a national, state and school level. Primarily based on what is prioritised in the documents, these analyses investigate the directions the participants are compelled to take, as well as where they have discretion. This helps ascertain what influences the school leaders and teachers in their approaches to ESE. The key documents from the federal and state education authorities comprised: the national *Australian Curriculum*; the *My School* website, which included NAPLAN results; the state's strategic plans; and DECS/DECD strategic plans as well as DECS/DECD annual reports. At a school level, the school's context statements were also analysed.

A preliminary analysis of the documents helped to formulate guiding questions for the interviews and focus groups, reflecting what had been identified within the documents. The document analysis was ongoing throughout the study to ensure inclusion of any new materials the school may have used and/or produced.

4.3.2   Interviews

Interviews are a powerful tool for attempting to understand people (Fontana & Frey, 2000), as they are useful in obtaining and interpreting the conceptualisations of ecological sustainability and place that are being negotiated in and around the

selected school site. The interviews facilitated an exploration of the participants' knowledges and understandings while also highlighting enablers and limiters of ESE. The webs of significance were traced to identify how ecological sustainability and place are conceptualised, represented and circulated throughout the school. Including staff members, students and various community members in the interview process enabled a deeper understanding of the school's and the participants' strengths, challenges and limitations.

All interviews were audio recorded and then converted into transcripts. These transcripts were supplemented with notes taken by myself during the interviews. Both transcripts and notes were analysed together (see Appendix B for introduction letters, Appendix C for information sheets, Appendix D for consent forms and Appendix E for key guiding interview questions).

Individual interviews

To best gain an understanding of the complexities involved in the inclusion of ESE, the most appropriate interview method utilised was semi-structured interviewing. Semi-structured interviews involve both closed and open-ended questions (Creswell, 2005) and are appropriate because they maintain the focus of the interviews while allowing the researcher flexibility to delve deeper into participants' comments and alter or adapt the interview to suit the situation (Fielding, 1993). A social constructionist approach to a semi-structured interview emphasises the active nature of the interview whereby both the interviewer and interviewee(s) interact in a conversation and co-contribute to the production of knowledge and meaning (Holstein & Gubrium, 2003).

The duration of each interview with staff and community members was approximately 30 minutes to an hour. The interviews were conducted in a mutually agreed location such as a classroom or other suitable room within the school, or in or near the participant's workplace that was private and quiet, in an attempt to avoid distractions and allow good quality audio recording (Creswell, 2005). Funding from Flinders University assisted in the payment of relief teachers to release the teacher participants so that the interviews did not encroach on their private time, nor increase their already heavy workloads.

Focus group interviews

In this study three focus groups were held with students from Acacia Primary School (Focus Groups A, B and C) to gauge the impact their participation in PBE has on their beliefs, values and commitment to sustainable practices. Focus groups are a potentially productive qualitative "research technique that collects data through group interaction on a topic determined by the researcher" (Morgan, 1996, p. 130). It is called a focus group because the main role of the researcher or facilitator is to keep the group focused on the topic of discussion (Johnson & Christensen, 2000; Kitzinger, 1994; Krueger & Casey, 2000; Madriz, 2000). As with the individual interviews, the focus groups were semi-structured with guiding questions to help maintain the focus of discussion, while their open-ended format left room for the participants to introduce additional material.

Focus groups are a particularly useful form of data collection with young participants as compared with one-on-one interviews because they can result in a greater range of responses (Lewis, 1992). They can also encourage participation from students who may feel safer and more in control in a group environment (Dockett & Perry, 2005; Hoppe, et al., 1995; Lewis, 1992). Further, it is argued that focus groups are valuable as "the collective nature of the group interview empowers the participants and validates their voices and experiences" (Madriz, 2000, p. 838). Focus groups are therefore beneficial in validating the voices of the young participants who often have a greater understanding of their own lives and experiences than adults (Dockett & Perry, 2005). However, they are also useful for determining, through the participant interactions, the dominant, subordinated, competing, or complementary discourses.

There is much debate about the optimal size of focus groups with children, however, using recommendations from the literature, the focus groups each consisted of four or five students, (Hoppe, et al., 1995; Lewis, 1992; Morgan, Gibbs, Maxwell, & Britten, 2002). Friendship groups and similar ages are also recommended with student participants (Hoppe, et al., 1995; Lewis, 1992) and this aspect was considered when negotiating the focus groups.

Each focus group interview ran for approximately one hour. The number, locations, times and participants were negotiated with the school principal and teachers, and the

sessions were held within the school to maintain familiar surroundings, to help reduce anxiety and encourage additional disclosure (Fallon & Brown, 2002, p. 199).

4.3.3   Observations

Observation and participation were undertaken as a means of gaining a richer understanding of the school's approach to ESE (Patton, 2002). Observation allows a broad appreciation of the school's context to develop, and participation in the various educational practices allows the researcher to get closer to the participants to gain a richer understanding of their perspectives (Crotty, 1998). Observations involved being in areas of the school to focus solely on the context, and included such things as documentation of classroom set-ups and any posters and other materials adorning the school. Observations also included actual interactions between students, teachers and community members. Observation and participation were undertaken in negotiation with the school staff members. By invitation, I observed specifically planned events underpinned by place-based and ecological sustainability education. These involved many whole-school activities, and were undertaken as an opportunity to develop a rich description of the school's context, as well as to distil which discourses were present in the public face of the school.

I generated field notes from my observations. Of importance was gathering evidence that a focus on ecological sustainability was, or was not, being maintained. Ideally, I attempted to record field notes during, or soon after the observations. Mulhall (2003) argues that unconscious analysis occurs concurrently with the writing of field notes; however, a further, preliminary analysis of the field notes was undertaken while I was still in the field to help lead to more focused observations (Mulhall, 2003).

4.3.4   Interview and focus group questions

Guiding questions were generated and piloted for the interviews and focus groups to help answer the key research questions of this study. The main question guiding this research was: *In a neoliberal context, how might an urban primary school facilitate and sustain a focus on ecological sustainability education?*

The following sub-questions were created to address the main guiding research question and in response to a review of the relevant literature (see Chapters 2 and 3).

- What are the discourses of ecological sustainability that are circulated and negotiated through the school?

- What challenges are involved in the inclusion of ecological sustainability in the curriculum of an urban primary school, in an environment characterised by the demands of neoliberalism?

- In what ways does the school connect with the community, both local and global, to build, retain and progress its commitment to ecological sustainability education?

- Is there evidence of a place-based approach to ecological sustainability education at work in the school and community?

In total, five sets of questions were produced. These sets included key questions for leadership, staff and students, as well as two different sets of questions for community members. The second set of community questions was for a participant who had an indirect connection with the school and therefore the questions were tailored correspondingly. Each set of questions were grouped under four categories: biographical details, understandings (attitudes, beliefs, origins), practices and challenges.

Predominantly, the biographical details included questions about the participants' affiliation with the school and what they thought was special about the school. The understandings (attitudes, beliefs and origins) specifically looked at the participants' definitions and conceptualisations of sustainability and where they got these ideas. Drawing from Lewis (2012), as a means of efficiently garnering students' conceptualisations of ecological sustainability in the focus groups, each student was asked to draw a mind map of everything they knew about sustainability. In contrast, the adult participants were asked verbally, from their own perspective, to define sustainability. Under the understandings category, all participants were asked about the benefits or disadvantages of ESE and their thoughts and connection pertaining to an environmental sign at the school were collected. Under the category of practices, the questions were specifically about practices and resources that the participants connected with ESE. Finally, the category of challenges included questions about the barriers, limitations and successes of ESE, along with future possibilities.

As well as drawing from Lewis' (2012), Moore's (2005) research into sustainability education programs was another valuable source with regard to the interview and focus group questions. While each set of questions was framed with the same four categories, each was modified to suit the particular group of participants. All five sets of questions can be seen in Appendix E. The next section describes the method of analysis that was used on the data that was collected for this study.

4.4   Data analysis

The data collection in this study produced three sets of texts: documents, interview transcripts and field notes. As this study is underpinned by social constructionism, a method that engages with language and is conducive to determining dominant, subordinated, competing, complementary or absent discourses was needed. The use of thematic analysis to analyse the data was an appropriate choice to elicit the realities within the three sets of texts. There are various approaches to thematic analysis, and while all approaches are primarily concerned with the examination of language, including both verbal and non-verbal language, they involve an array of characteristics. Therefore, a social constructionist lens guided the thematic analysis.

Thematic analysis is a research method where the researcher actively identifies patterns or themes within their data. These patterns or themes are analysed and refined and reported to the reader (Braun & Clarke, 2006). A social constructionist thematic analysis seeks to emphasise "how topics are constructed and also how accounts construct the world" (Braun & Clarke, 2013, p. 175). Therefore, when engaging with texts it is crucial to go beyond reading them at face-value and look deeper into what may be taken for granted, silenced or missing, and emphasised. Therefore, when utilising a thematic analysis thought needs to be given to the level at which the researcher is examining. These levels are either a semantic or a latent level (Braun & Clarke, 2006). The semantic level describes what can be seen on the surface of the text, where explicit themes are drawn from the data. The latent level is more interpretive, where the researcher "starts to identify or examine the *underlying* ideas, assumptions, and conceptualizations – and ideologies – that are theorized as shaping or informing the semantic content of the data" [italics in original] (Braun & Clarke, 2006, p. 84). The latent level is more congruent with a social constructionist approach to thematic analysis as it seeks to determine the social and structural

processes, influences, conditions and assumptions that underpin the content of the data (Braun & Clarke, 2006). It is also important to be reflexive in the way research is analysed and interpreted, endeavouring to be aware of the preconceived ideas and assumptions researchers bring to the research process (Mauthner & Doucet, 2003). The researcher needs to step back from the text, attempt to recognise any preconceived notions and adopt a critical lens.

Thematic analysis may be driven by key research questions, and allows the researcher to pay particular attention to the various dominant, subordinated, competing, complementary or absent discourses that may be identified. Identifying these aspects will draw attention to the strengths and challenges and/or limitations that are involved in negotiating ESE into the school's context and practices. These aspects are particularly important when the influence of neoliberalism and its preferencing-marginalising duality pervades the school's context, as neoliberalism has been criticised for silencing those who ask questions (Davies, 2005), and establishing and maintaining privilege while disregarding the vulnerable and marginalised (Davies & Bansel, 2007).

To reveal the scope and diversity of knowledges and/or understandings, the thematic analysis undertaken in this study adopted a hybrid approach of inductive and deductive coding and theme development (2006). This form of analysis facilitates rigour, as it is simultaneously data and theory driven. The inductive approach seeks to identify themes residing within the raw data, and a deductive approach utilises existing theory to formulate themes a priori (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006; Joffe, 2012). A theme need not be dependent on quantifiable measures, but encapsulate the important information gathered in relation to the research question, and represent the patterned response from within the data set (Braun & Clarke, 2006, p. 82).

4.4.1   Process of analysis

A thematic analysis is a process involving different phases; it is not a linear process, rather an iterative, recursive, reflexive process (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). The following phases, outlined by Braun and Clark (2006, 2013), depict the recursive process used:

Transcription – noting down initial ideas

The process of analysing the interview data began during and directly after the interviews when brief notes were taken. Ideas were also noted during the transcription of the interviews.

Reading and familiarisation of the data – taking note of items of potential interest

Items of potential interest were noted through a reading and re-reading of the interview transcripts, supplemented notes, anecdotal notes and key documents.

Coding – across entire data set

The entire data set, including transcripts and supplementary notes, anecdotal notes and key identified documents, was initially coded with three main deductive themes – discourses of ecological sustainability, challenges in a neoliberal context, and place (local and global community connections and PBE). Various terms are used to describe these main themes, therefore, it was important to see them as broader concepts. In the literature, ecological sustainability can be understood as sustainability or sustainable development; it is also closely related to concepts such as climate change, the environment, global warming and nature. The characteristics of neoliberalism include features such as an emphasis on choice, competition, accountability, marketisation and performativity. Place is closely related to such terms as community, local and global. Initially analysing the data broadly allowed subtleties in the texts, and subsequently the identification of other interpretations and inductive themes.

Searching for themes

Having initially coded the data utilising the deductive themes above, inductive themes were drawn from the data.

Reviewing themes – generating a thematic map of the provisional themes and subthemes and relationships between them

For clarity, the document analysis was kept separate from the analysis of the interview data. The interview data including staff, community and student interviews, was merged and grouped under the three main deductive themes with provisional subthemes.

Defining and naming themes

The process of defining and naming themes involved some preliminary writing up, grouping, regrouping and tightening themes and relationships.

Writing up – finalising analysis.

The final analysis involved a thorough review of the chosen themes and then a further analysis of the themes as a whole as a means to revisit and address the key research questions. As a result, a number of significant tensions were identified which were discussed and addressed in the final two chapters. Utilising this inductive and deductive approach to thematic analysis strengthened the rigour of the analysis.

4.5   Limitations/delimitations

Strategically situating the research in one school and following the community connections that influenced the school allowed deep insight into the practices and negotiations that occurred within and around the school, and could be seen as limited. However, purposefully choosing this particular "information-rich" (Patton, 2015, p. 264) school site was a powerful way to illuminate the phenomenon of the research. The breadth and depth of this study means that many of the connections made to, in and around the school may also be made in other school contexts. Further investigation could be to increase the number of schools in the study; however, this was beyond the scope and purpose of this particular study.

While this study is not limited by geographical boundaries, it had to be delimited so that not all the connections to, in and around the school were followed. Tracing all of the threads and paths that connect to the school would be unrealistic and irrelevant for the scope of this study. The webs of significance that *were* followed were connected in some way to ESE, therefore addressing the key research questions and delimiting the number of threads and paths that were followed.

In addition, when recruiting participants to the study with respect to the school staff, while I stressed that I was interested in the views of people both with and without an interest in ecological sustainability, ultimately those staff members with an interest in sustainability volunteered to be participants. To gain a broader view on the negotiations involved in facilitating a focus on ESE, it may be advantageous to elicit

the perspectives of school staff who do not have an interest in ecological sustainability.

4.6 Summary

Gaining insight into how, in a neoliberal context, an urban primary school might facilitate and sustain a focus on ESE requires a research design and methodology that can elicit and interrogate inherent contradictions and intricacies. This chapter has outlined the methodological design of the research as underpinned by social constructionism, including the epistemology and ontology grounding this study. The participants were identified as well as any ethical considerations. In addition, the methods used to collect and to analyse the data were described. Last, the limitations and intentional delimitations are addressed.

Guided by the theory of social constructionism the following chapter engages with an analysis of key documents pertaining to the inquiry of this study. Particularly illuminating in this analysis are the priorities from a national to a local level, and where ecological sustainability fits within these priorities. Understanding what agendas are being prioritised or promoted to the school also enables an awareness of what is being marginalised. This is especially evident with regard to the preferencing-marginalising duality of neoliberalism.

CHAPTER 5:

Preferencing or marginalising of ecological sustainability education within key 'texts'

> *There is nothing outside of the text.* [italics in original] (Derrida, 1997, p. 158)
>
> The concept of text ... is limited neither to the graphic, nor to the book, nor even to discourse, and even less to the semantic, representational, symbolic, ideal, or ideological sphere. ... "text" implies all the structures called "real," "economic," "historical," socio-institutional, in short: all possible referents. ... That does not mean that all referents are suspended, denied, or enclosed in a book ... But it does mean that every referent, all reality has the structure of a differential trace, and that one cannot refer to this "real" except in an interpretive experience. (Derrida, 1988, p. 148)

In the current era, the purpose of education is predominantly to enhance economic productivity and enable countries to compete in the globalised economy (Bowers, 1995; Cachelin, Rose, & Paisley, 2015; Hursh & Henderson, 2011). Furthermore, schools operate under the auspices of a neoliberal preferencing–marginalising duality that promotes autonomy, diversity and entrepreneurialism. Concurrently, schools also exist under a regime of neoliberal governance and regulation. Notwithstanding this, education is an area regarded as powerful and crucial in the support of ecological sustainability (Bowers, 1995; Duhn, 2012; Gruenewald, 2003a; Linke, 1980; Sterling, 2001; World Commission on Environment and Development (WCED), 1987). A school, as a place that *matters* (Collins & Coleman, 2008) and a powerful agent in the formation of society (Campbell & Proctor, 2014), is a prime location in which to base research into the phenomenon of how ESE is being facilitated and sustained within the paradoxical context of neoliberalism.

The site, in which this research is largely based, was purposefully chosen so the complexities of how an urban primary school, its staff, students and community connections negotiate the inclusion of ESE could be explored and understood.

The social constructionism theoretical framework concerns the study of humans as social animals and aims to account for the ways in which phenomena are socially constructed while endorsing "a critical stance toward our taken-for-granted ways of understanding the world, including ourselves" (Burr, 2003, pp. 2-3). Increasingly, in an era of neoliberal governance, schools must act as enterprises; businesses with many stakeholders and competing agendas. With this understanding, texts were collected and analysed using a social constructionist form of thematic analysis (Braun & Clarke, 2006, 2013; Fereday & Muir-Cochrane, 2006; Joffe, 2012). This method examines how the phenomenon is constructed in the documents and participants' accounts as well as how the world is constructed through these accounts (Braun & Clarke, 2013). As stated in Chapter 4, following the "webs of significance" (Geertz, 1973, p. 5), key stakeholders involved in all Australian public primary schools, including Acacia, exist at a national, state and local level. This chapter involves an analysis of key texts (including documents and websites) from each of these levels. Analysing strategic plans and annual reports highlights what agendas are being prioritised or promoted to the school. Additionally, analysing documents, such as context statements, helps to identify the knowledge, understandings and conceptualisations of ecological sustainability and place being promoted or subordinated at the school, and also what knowledge and practices are absent or silenced from and by these documents. The ensuing three chapters are centred on an analysis of the interview and focus group data.

This chapter begins with an analysis of texts pertaining to the Australian Government's leading curriculum and assessment authority, ACARA. Following this is an analysis of key documents from the state government and its education department, including their strategic plans and the education department's annual reports. Finally, the priorities of the research site, Acacia Primary, are examined through its school context statements. The particular texts were chosen as they encapsulate the primary characteristics of each stakeholder's priorities.

5.1 The Australian Government and the Australian Curriculum, Assessment and Reporting Authority

The Australian Government, along with Australian states and territories, plays a significant role in identifying national priorities for schooling. Therefore, the

political agenda of the government and its relevant policies inevitably shape a school's practices and affect how a school negotiates ecological sustainability into its curriculum. Currently the Australian Government is largely guided by the principles of a neoliberal agenda characterised by competition, marketisation, accountability, and transparency. The Australian Government established ACARA to support these principles.

Guided by the *Melbourne Declaration on Educational Goals for Young Australians* (Ministerial Council on Education, 2008), ACARA's function is to develop and administer a national school curriculum and a national assessment program. Its mandate is also to collect and report data about educational performance and outcomes at a national level (ACARA, 2011a). These functions, respectively, are in the form of the national Australian Curriculum; national reports on schooling; the NAP, of which NAPLAN is the most significant; and *My School*, a website that was created to publish information on individual schools and disseminate NAPLAN results.

The next section examines two key areas from ACARA that influence what schools do; the national Australian Curriculum, pertaining specifically to the key questions of this research; and the NAPLAN results from Acacia Primary School, as published on the *My School* website.

5.1.1 National curriculum

Implementation of the Australian Curriculum began across the country to varying degrees in 2011, with the introduction of the initial phase consisting of English, mathematics, science and history. Two further phases were introduced covering eight more learning areas. In addition, the curriculum includes the general capabilities of literacy, numeracy, information and communication technology capability, critical and creative thinking, personal and social capability, ethical understanding, and intercultural understanding (ACARA, 2011b). The *Melbourne Declaration* also proposed environmental sustainability be integrated across the curriculum (MCEETYA, 2008). Therefore, in developing the new national curriculum, ACARA encapsulated sustainability in one of three cross-curriculum priorities (CCPs), to be "embedded in all learning areas" with "a strong, but varying presence, depending on their relevance to the learning areas" (ACARA, 2013a). However, the presence of

sustainability in the curriculum has come with much confusion, controversy and "ridicule" (Donnelly & Wiltshire, 2014, p. 100).

To address mounting concerns about the overcrowded Australian Curriculum, including confusion about the CCPs, in 2014 a review was commissioned (see Donnelly & Wiltshire, 2014) and confirmed a number of issues with the curriculum. The review identified the CCPs as complex, controversial, and confusing (Donnelly & Wiltshire, 2014, p. 134). Many submissions to the review argued for the CCPs to be removed (Donnelly & Wiltshire, 2014, p. 136), however, rather than abolish the CCPs, the Australian Government supported the recommendation from the review that the CCPs be reconceptualised and embedded into the curriculum "only where educationally relevant" (Australian Government Department of Education, 2014, p. 8).

In light of the ongoing complexities surrounding sustainability as a CCP, the initial excitement experienced by the environmental and sustainability education fields (Hill & Dyment, 2016) may now have turned to flagging optimism. Amongst the confusion and controversy, there have been some key points in time that have significantly diminished the 'priority' of sustainability. As shown in Chapter 3, the *Guidelines for the implementation of the Australian Curriculum in DECD schools: Reception–Year 10* (DECD, 2013b), contained no mention of sustainability (DECD, 2013b), highlighting it was not an essential part of the curriculum. McGaw's statement that the "cross-curriculum priorities are options, not orders" (McGaw, 2014) also rendered sustainability as optional, and not essential. In addition, the review (Donnelly & Wiltshire, 2014) further diminished any prominence of sustainability in the curriculum by recommending the CCPs inclusion only where relevant.

Having the CCPs embedded into the curriculum only where relevant is highly contentious because of the subjectivity across and within various disciplines (Salter & Maxwell, 2016). For example, subject specialist, Mr Alan Hill, submitted to the review of the Australian Curriculum that although geography was well placed to support the sustainability CCP he warned against its overuse (Donnelly & Wiltshire, 2014). Reflecting on the explicit time allocations for each learning area as prescribed in the DECD guidelines (DECD, 2013b) (Table 4) is concerning. If geography is one

of the subject areas where sustainability is educationally relevant but must not be "saturated" by it (Donnelly & Wiltshire, 2014), then, in the geography early primary curriculum, half an hour per week far exceeds the explicit time that should be spent on sustainability.

Table 4.
Australian Curriculum time allocation in minutes per week for learning areas/subjects, R–7

Learning area		Year Level							
		R	1	2	3	4	5	6	7
English		(DECD guaranteed minimum teaching times: 300 mins per week)							
		432	432	432	352	352	320	320	192
Mathematics		(DECD guaranteed minimum teaching times: 300 mins per week)							
		288	288	288	288	288	256	256	192
Science		(DECD guaranteed minimum teaching times: 90 mins (R–3) and 120 mins (4–7) per week)							
		64	64	64	112	112	112	112	160
Humanities and Social Sciences	History	32	32	32	64	64	64	64	80
	Geography	32	32	32	64	64	64	64	80
	Civics and Citizenship				32	32	32	32	32
	Economics and Business						32	32	32
The Arts	Dance								
	Drama								
	Media Arts	64	64	64	80	80	80	80	128
	Music								
	Visual Arts								
Languages		80	80	80	80	80	80	80	128
Health and Physical Education		128	128	128	128	128	128	128	128
Technologies	Design and Technologies	32	32	32	64	64	96	96	128
	Digital Technologies								
Unallocated time		448	448	448	336	336	336	336	320

Note. Adapted from *Guidelines for the implementation of the Australian Curriculum in DECD schools: Reception–Year 10* (pp. 27–29), by Department for Education and Child Development (DECD), 2013, Adelaide, South Australia: Government of South Australia

Furthermore, there is a discrepancy between the allocated teaching times for English, mathematics and science as directed by DECD and ACARA. This has significant ramifications for timetabling. With regard to the time allocations in Year 7, if the

guaranteed minimum allocation from DECD is considered alongside ACARA's time allocations then the total allocated time is 1456 minutes per week, leaving only 144 minutes of unallocated time per week. This exemplifies a considerably constrained curriculum.

Bringing sustainability to life in the curriculum is complex. This is particularly evidenced by Donnelly and Wiltshire's (2014) review and the education department's guidelines (DECD, 2013b). Drawing from Deleuze and Guattari (1987) the Australian Curriculum can be understood as tree-like concept with a vertical hierarchy.

In contrast to the more definitive curriculum as produced by ACARA, sustainability as a CCP has received much contestation, and Hill and Dyment (2016) question whether it is "oxymoronic" (p. 226) and not a priority at all since it is not part of the hierarchy. Taking Deleuze and Guattari's (1987) rhizomatic view, sustainability as a CCP holds the potential for:

> creative and imaginative thinking about socio-environmental problems. It dispenses of the ambition to clarify the meaning of sustainability (education) to the extent that it becomes a settled issue. It also produces vectors of escape from potential homogenising and normalizing effects of notions of sustainability (education). (Le Grange, 2011, p. 752)

Therefore, rather than privileging Western, neoliberal framings of sustainability that prioritise the economy and markets over society and the environment (Hursh & Henderson, 2011; Le Grange, 2011), embracing the unbounded specificity of sustainability as a CCP allows multiple possibilities including engaging with indigenous knowledges (Le Grange, 2011). However, while ecological sustainability is an ideal to be aspired to, it does involve day to day operational complexities. The *Australian Curriculum* is a very powerful and pervasive framing of what happens in schools. Teachers are also accountable to a number of other mandated documents and policies, such as child protection. However, teachers do have a certain amount of autonomy and room to make their own judgements. In spite of the various forms of surveillance on teachers, there is significant capacity for creating space, and it is within this space that teachers have the potential to negotiate ecological sustainability in the curriculum.

5.1.2 My School and National Assessment Program – Literacy and Numeracy

This section specifically looks at the *My School* website of the research site, Acacia Primary School. The website is a significant text in this analysis, as it is a public representation of the school. The NAPLAN results on the website also offer some insight into what is being prioritised by the school and whether ESE is being preferred or marginalised. As discussed in Chapter 3, NAPLAN has been wrought with concern and controversy, with arguments that high-stakes testing is inequitable, forces teachers to 'teach to the test' and is politically and economically driven, with very little educational merit (Literacy Educators Coalition, 2013). Confidentiality obligations require anonymity of the school, therefore the exact source of the information and quotes from the *My School* website have been withheld.

Once on the *My School* website (https://www.myschool.edu.au/) the user can simply type in any school in Australia to see certain information about that school. Each school's page provides a number of tabs that can be expanded for particular information such as the school profile, school finances and NAPLAN results in a number of formats, including results in graphs, results in numbers, results in bands, student gain and similar schools. There is also further information for secondary schools and additional information on local schools and student attendance.

A look at the profile of Acacia Primary School as offered on the *My School* website gives insight into what the school is promoting publicly. While Acacia has a significant environmental focus this is not conveyed on their school profile on the *My School* website. Instead, the school promotes that it brings in external consultants to support the teachers' education in literacy and mathematics and that the teachers prioritise these areas. Information technologies are also promoted "to transform learning and prepare children for an innovative future" and languages the school offers are also a key focus. What is not mentioned is that the school also brings in external 'experts' to educate the staff, students and school community about concepts related to ecological sustainability. The description of the school profile is provided by the school. Therefore, not explicitly including ESE on the school's profile is a decision made by the principal of Acacia Primary.

Overall the profile of Acacia on the *My School* website reflects some of the Australian Government's priorities as identified in the *Melbourne Declaration* (MCEETYA, 2008), particularly with respect to literacy and mathematics being "of fundamental importance" (MCEETYA, 2008, p. 14) and the insistence students "need to be highly skilled in the use of ICT" (MCEETYA, 2008, p. 6). The school's profile may have been written with the explicit intention to link with the NAPLAN focus on literacy and numeracy; however, an additional emphasis on languages and community go beyond this rationale. A strong connection to the school community on the school's profile is discussed in terms of connecting with various cultures, local sporting groups and the local council. The profile ends with the statement that the school has "a reputation for being caring and inclusive with staff who go to extraordinary lengths to meet the needs of our children and families". The emphasis on the identity of the school, including the community, the staff and also the students, who "bring enthusiasm, a love of learning and a welcoming attitude to newcomers", indicates a strong sense of pride in the school. This inherently gives a picture of a school with a strong connection to place (Comber, et al., 2001; Reay & Lucey, 2000). Many of the comments that go beyond the narrow focus on literacy and numeracy are resonant of an intelligent school. The school's inclusive reputation indicates an *ethical* intelligence (MacGilchrist, et al., 2004). Its explicit interconnectedness and sense of community reflects a *spiritual* intelligence (MacGilchrist, et al., 2004). Its self-awareness and awareness of others reveals an *emotional* intelligence and to some extent *collegial* intelligence and it seems to exhibit some *contextual* intelligence with its internal, local and global appreciation.

The next source of data from the *My School* website is the NAPLAN results in graphs, a snapshot from 2008, when NAPLAN was first introduced, to 2016. The results are presented under the domains of reading, writing, narrative writing, spelling, grammar and punctuation, and numeracy. All domains except writing and narrative writing have test results for each year. To demonstrate how the results are displayed one graph from each year level has been selected.

Each graph shows the average test results in the school for the particular domain. The graphs presented in Figures 1, 2 and 3 are the Year 3 grammar and punctuation results, the Year 5 numeracy results, and the Year 7 spelling results. The results are

coloured, as shown in Table 5, to show where the school is placed in comparison to the average of all Australian schools.

Table 5.
Interpreting the My School graphs

	Selected school's average is
🟢	**substantially above**
🟩	**above**
◇	**close to**
🟥	**below**
🟥	**substantially below**
	the Australian schools' average

Note. Adapted from *My School*, by Australian Curriculum, Assessment and Reporting Authority (ACARA), 2017, Retrieved 12 July, 2017, from https://www.myschool.edu.au/

In addition to the information in the above key, the average achievement of students across Australia is depicted in the graphs as a coloured square like this: ■.

Students	2008	2010	2011	2012	2013	2014	2015	2016	Average 2014 – 2016
Assessed	90%	42%	68%	68%	73%	65%	71%	73%	70%
Exempt	3%	0%	12%	0%	0%	0%	0%	0%	0%
Participation	93%	42%	80%	68%	73%	65%	71%	73%	70%
Absent	7%	16%	4%	5%	3%	8%	7%	2%	6%
Withdrawn	0%	42%	16%	27%	24%	27%	22%	25%	25%
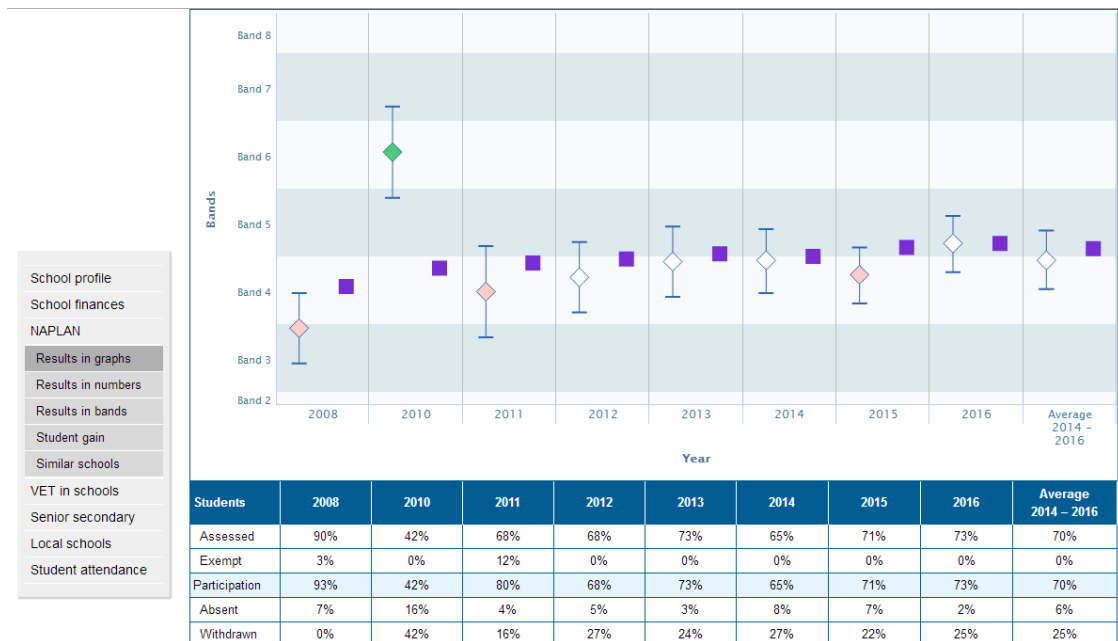
Figure 2. Acacia Primary Year 3 Grammar and Punctuation - NAPLAN results. Sourced from "*My School,*" by Australian Curriculum, Assessment and Reporting Authority (ACARA), 2017, Retrieved 12 July, 2017, from https://www.myschool.edu.au/

Students	2008	2010	2011	2012	2013	2014	2015	2016	Average 2014 – 2016
Assessed	92%	42%	81%	69%	67%	83%	65%	68%	72%
Exempt	0%	0%	6%	0%	0%	0%	0%	0%	0%
Participation	92%	42%	86%	69%	67%	83%	65%	68%	72%
Absent	8%	6%	6%	9%	6%	6%	7%	6%	6%
Withdrawn	0%	52%	8%	22%	27%	11%	28%	26%	22%

Figure 3. Acacia Primary Year 5 Numeracy - NAPLAN results. Sourced from "*My School,*" by Australian Curriculum, Assessment and Reporting Authority (ACARA), 2017, Retrieved 12 July, 2017, from https://www.myschool.edu.au/

Students	2008	2010	2011	2012	2013	2014	2015	2016	Average 2014 – 2016
Assessed	95%	54%	83%	84%	75%	87%	88%	83%	86%
Exempt	3%	0%	10%	0%	0%	0%	0%	0%	0%
Participation	98%	54%	93%	84%	75%	87%	88%	83%	86%
Absent	3%	8%	0%	3%	7%	3%	9%	0%	4%
Withdrawn	0%	38%	7%	13%	18%	10%	3%	17%	10%

Figure 4. Acacia Primary Year 7 Spelling - NAPLAN results. Sourced from "*My School,*" by Australian Curriculum, Assessment and Reporting Authority (ACARA), 2017, Retrieved 12 July, 2017, from https://www.myschool.edu.au/

What is striking about these graphs is they demonstrate a considerable disjuncture between the first, second and subsequent tests. In the first round of NAPLAN testing, in 2008, no students were withdrawn from sitting the tests in each domain with a

total of 90–95% of students assessed. As can be seen from the graphs the school achieved a score that is reported as "substantially below" the national average. The 2008 score is also below the school's subsequent test results. Of interest is it looks like the school was so concerned with this low score that in the 2010 round of tests there were an extremely high number of students withdrawn from the tests, ranging from 38% for Year 7 spelling (Figure 4) to over half the school population at 52% for Year 5 numeracy (Figure 3).

This change resulted in the school attaining substantially higher results for the 2010 tests as can be seen in each of the graphs. Therefore, students had been strategically withdrawn so the school would obtain better results. In the following years there is a small fluctuation in the number of students assessed (from 65–88% of students), which has resulted in maintaining a more consistent level of achievement. This level is also more in line with the national average.

Presumably, for formatting reasons, the 2009 data are not shown on the NAPLAN results in graphs, and this seems to be the case for all schools across the whole *My School* website. However, looking at the results in numbers confirms the dramatic change in results from 2008 to 2009 (see Figure 5 and Figure 6).
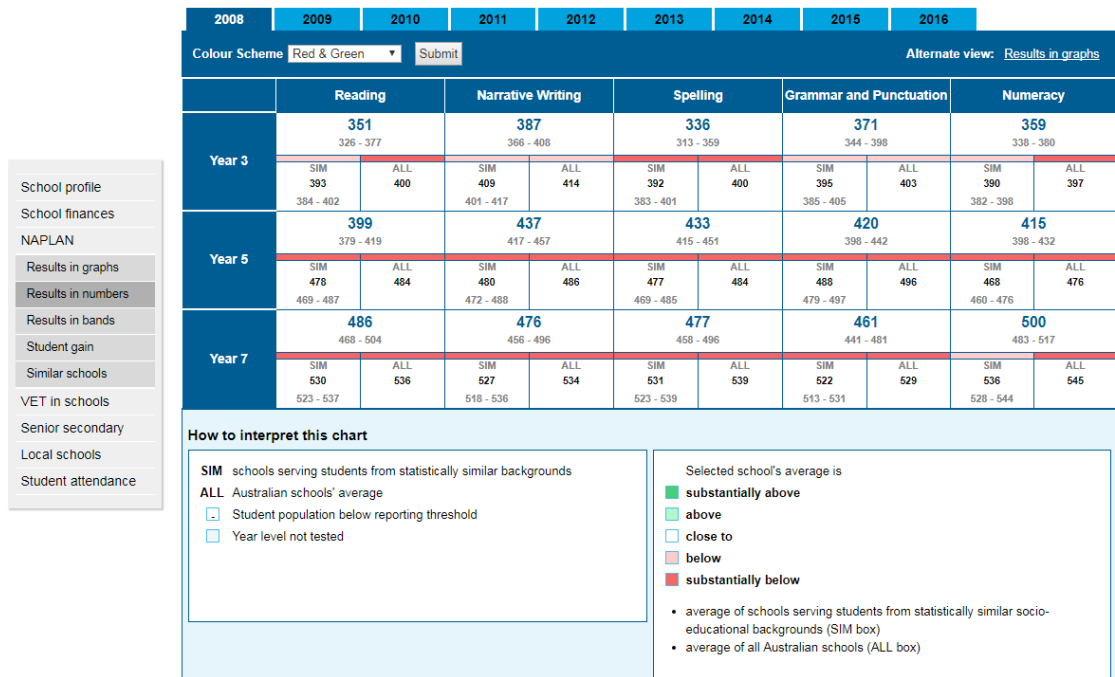
Figure 5. Acacia Primary 2008 Results in numbers - NAPLAN. Sourced from "*My School,*" by Australian Curriculum, Assessment and Reporting Authority (ACARA), 2017, Retrieved 12 July, 2017, from https://www.myschool.edu.au/

The dominance of red in the 2008 results in numbers (see Figure 5) shows predominantly Acacia Primary School performed substantially below the average of all other schools in Australia in most areas and across each year level (3, 5 and 7). In contrast, the prominence of green in the 2009 results in numbers (see Figure 6) exemplifies that with a strategic and concerted effort, performance can be increased, in many cases, to results substantially above the national average. However, this may come at a great cost to the remainder of the curriculum and areas that are not considered literacy or numeracy.
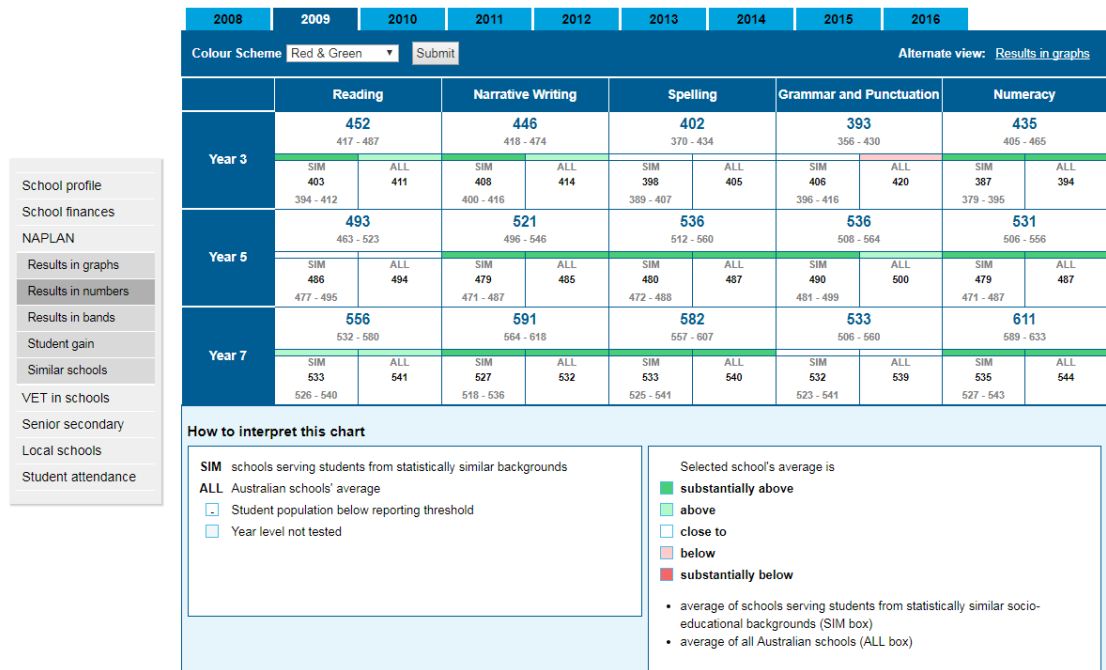
Figure 6. Acacia Primary 2009 Results in numbers - NAPLAN. Sourced from "*My School,*" by Australian Curriculum, Assessment and Reporting Authority (ACARA), 2017, Retrieved 12 July, 2017, from https://www.myschool.edu.au/

The significantly low scores in the initial NAPLAN tests on the *My School* website renders Acacia as a school achieving below the national benchmark, an underperforming school, albeit in terms of a particular way of determining success. Consequently, the publicised results potentially could convince the parent consumers, or "informed chooser[s] of schools" (Campbell, et al., 2009, p. 4), to seek out other, higher achieving, schools. The results publicised in these high-stakes tests, particularly in the results in the graphs, demonstrate that for this school it was not advantageous for the whole school population to participate in the tests. Following low test scores, the school may be grappling with the consequences of the transparency the *My School* website offers by making strategic efforts for improvements. This is evidenced in the high number of students withdrawn from the tests resulting in significantly higher results. This form of "crisis management with short-term score improvement as the measure of success" (Brennan, 2011, p. 275) could also reflect a change in emphasis, initially with little attention paid to the first round of tests, followed by a concerted effort in achieving high scores.

In research done in a similar school setting, Comber (2012) found "with strategic, but appropriate, student withdrawals and a concerted focus on NAPLAN, [that] school was [also] able to 'turn around' their results within a year, thereby changing their

status" (p. 132) from a school that was failing. Similarly, Acacia Primary School staff may be compelled to teach to the test so their students and their school are "brought 'up to standard'" (Brennan, 2011, p. 275). Whatever the reason for such a dramatic change in results, it seems NAPLAN and its publicised results on the *My School* website have affected how Acacia Primary School responds to these tests.

The 2009 annual report from Acacia Primary School proves to be illuminating on the reasons for the change in NAPLAN results. The school's annual reports are not a key source in this document analysis as the context statements were considered an adequate representation of the school's priorities. However, Acacia Primary's 2009 annual report proves very informative in explaining their literacy results. Although the direct source cannot be identified for confidentiality reasons, a direct quote is used to maintain the integrity of their statement as it clearly explains the dramatic change in results:

> The school's literacy results in 2009 were very good. They were good in comparison to previous years and good compared with other 'like schools' because we did a number of things differently in 2009.
>
> 1) We withdrew the children in the New Arrivals Unit because they don't know enough English for it to be a fair assessment of their learning.
>
> 2) We withdrew several children at years 3, 5 and 7 on Negotiated Education Plans. These are children with learning difficulties for whom the test would have been discouraging …
>
> 3) The teachers spent several months teaching about the test, how to get the best results in each section of the test and to practise the skills necessary to do well in each of the test's components. It was a very time consuming approach but the results in 2009 were very very good. Our school outperformed nearly every other 'like school' in the state. NAPLAN is a high stakes test and the staff and Governing Council agree that we should do everything possible to get the best results possible. (Acacia Primary School: Annual report 2009, p. 8)

Strategically withdrawing students and having teachers spend months teaching to the test confirms Comber (2012) and Brennan's (2011) views on the negative impacts on high-stakes tests such as NAPLAN, and highlights that other areas of the curriculum, such as ecological sustainability, may be further pushed to the margins, particularly in the months leading up to the tests. Concurrently, this strategic thinking is indicative of what MacGilchrist, Myers and Reed (2004) term 'operational intelligence', an attribute of an *intelligent school*.

The next section focuses on the priorities of the state government as ultimately it affects what is prioritised, promoted or subordinated by the state education department. Following this is an analysis of the education department's strategic plans and annual reports.

5.2 State government and state education department priorities

The Australian Government has some authority over schools, however, constitutionally the responsibility for education is primarily the state and territory governments. DECD is the current South Australian Government's central education department. DECD manages South Australia's public education system and works in partnership with the Australian and other state governments as well as the community sector.

As stated previously, sustainability has featured in many education-related government documents for a number of years. At a more local level, sustainability can be found in varying degrees in state education department documents as well as school context statements.

This section consists of an analysis of three sets of documents. The first set is based on the South Australia's strategic plans and spans the years 2004 to 2017. The state education department's planning is guided by South Australia's strategic plans as well as its own strategic directions. Thus, two key sets of departmental documents that highlight the education department's priorities are its own strategic plans and its annual reports. Therefore, this analysis includes the education department's strategic plans, covering the years 2005 to 2017. Following this is an analysis of the education department's annual reports, encompassing the same date range.

5.2.1 The state government's strategic plans 2004–2017

The state education department is accountable to the state government. Therefore, it is important to consider the strategic directions in place by the state government as these equally affect the direction of the education department. The key documents of significance pertaining to the general directions, and therefore priorities, of the state are South Australia's Strategic Plans 2004, 2007 and 2011 (see Government of South Australia, 2004, 2007, 2011a). In 2004, the state government released its inaugural

10-year plan, *South Australia's strategic plan: Creating opportunity* (SASP) (Government of South Australia, 2004). Previously a number of different plans had shaped South Australia's direction. However, the SASP was intended as a comprehensive, long-term plan for South Australia producing an overarching framework to inform policy across all areas of governance.

The 2004 SASP consisted of 79 targets relating to the following six key objectives: growing prosperity, improving wellbeing, attaining sustainability, fostering creativity and innovation, building communities, and expanding opportunity (Government of South Australia, 2004, p. 1). Subsequently, the SASP was updated in 2007 (see Government of South Australia, 2007) and, after further consultation and recommendations, a second update was released in 2011 (see Government of South Australia, 2011a). Currently the state government's strategic framework encompasses organising priorities from the 2011 SASP (Government of South Australia, 2011a), in addition to 10 economic priorities (see Government of South Australia, 2016) as well as seven strategic priorities. The seven strategic priorities currently are: creating a vibrant city; an affordable place to live; every chance for every child; growing advanced manufacturing; safe communities, healthy neighbourhoods; realising benefits of the mining boom for all; and premium food and wine from our clean environment (Government of South Australia, 2013). At a glance, the economic emphasis in the state government's strategic framework is obvious considering the status given by allocating 10 economic priorities as well as the economic prominence amongst the seven strategic priorities. The SASP, however, seems to hold a broader emphasis.

The 2011 SASP retained most of the 2007 targets, although some have merged or been altered, and includes additional targets, totalling 100. The 2011 SASP has been restructured and framed around six new priority areas – our community, our prosperity, our environment, our health, our education, and our ideas (Government of South Australia, 2011a, p. 21). These organising priorities are linked to visions as well as goals. Specific targets are aligned under each goal, collectively forming part of the state's strategic framework. Each of the 100 targets in the SASP is allocated a lead agency, with the education department being one of these agencies.

The key objectives or priorities of the various SASPs reflect some of the main concerns of the time. With regard to ecological sustainability, in 2004, out of six key objectives, one was titled *attaining sustainability* (Government of South Australia, 2004, p. 32). This objective comprised seven key points, including to "foster a culture of sustainability" involving everyone in the state having "a clear understanding of their environment and a stake in sustainable development" (Government of South Australia, 2004, p. 33). The plan also stated sustainability as "a necessity" (p. 33); however, the focus of the targets were predominantly on "protecting our biodiversity, securing sustainable water and energy supplies, and minimising waste" (Government of South Australia, 2004, p. 32). The emphasis on sustainability was congruent with the manifestation of sustainability in the public arena at the time. The 2004 plan was published when the concept of sustainability had gained some prominence. Sustainability was part of a national action plan, *Environmental Education for a Sustainable Future* (Environment Australia, 2000), the AuSSI had commenced, and an Office of Sustainability had been established.

The "necessity" of "attaining sustainability" (Government of South Australia, 2004, pp. 32-33) in 2004 has now changed direction. While 'our environment' is now one of six priority areas in SASP 2011, the emphasis within this priority is on preparing for climate change with underpinning goals that revolve around resource management; recycling, reusing and reducing consumption; and adapting to climate change (Government of South Australia, 2011a, pp. 46-49). The change in terminology is consistent with concurrent changes in departmental foci. In 2006 the Office of Sustainability was replaced by the Sustainability and Climate Change Division, which has been subsumed within the Department of Environment, Water and Natural Resources; however, there is a Climate Change and Carbon Neutral Adelaide Taskforce that has been established within the Department of Premier and Cabinet, therefore tackling climate change is seen as the priority. Largely, the emphasis has changed from the sense of a hopeful, sustainable future to one responding and adapting to the detrimental effects of climate change. In addition to the change in emphasis, one of the key points under the 2004 SASP objective, attaining sustainability, "reinforce our 'clean and green' image for food and wine exports" (Government of South Australia, 2004, p. 32) has grown in status. Rather than just being a key point under attaining sustainability it has now morphed into one

of the state's seven strategic priorities – premium food and wine from our clean environment (Government of South Australia, 2013).

The prosperity of the state has always been a high priority within strategic plans; however, sustainability seemed to have more status in the 2004 plan compared to the 2011 plan. The emphases under the attaining sustainability objective, based on the recommendations of thinker in residence, Herbert Girardet[2], was linked more to wellbeing and the desire for the state to "be world-renowned for being clean, green and sustainable" (Government of South Australia, 2004, p. 33). In the 2011 plan, the emphasis seems more in support of the economy through investments, efficiency and increasing the competitive edge of the state. However, the power in working collaboratively is highlighted as well as "leaving a lasting legacy for future generations" (Government of South Australia, 2011a, p. 46). Although a target to reduce the state's ecological footprint has been removed from the original plan for being too difficult to measure, a number of new targets in support of sustainability have been added (Government of South Australia, 2011a, pp. 96-99). Overall, although the biophysical environment is still a key priority of the state government and the maintenance of prosperity and sustainability are identified concurrently in the state's long-term vision (Government of South Australia, 2011a, p. 8) the economic emphasis has clearly risen since the production of the 2004 version of the plan.

As stated above, the SASP is implemented through various agencies, including the education department (DECD). Therefore, the targets from the SASP are assigned to the education department influence the department's planning and priorities. The next section discusses the strategic plans of this key state education agency.

5.2.2 Education department strategic plans 2005–2017

This section considers the strategic plans of the state education department from 2005 to 2017 and includes *DECS statement of directions 2005–2010* (DECS, 2005a); DECS *Strategic Directions 2011* (DECS, 2010d); *The strategic plan 2012–2016: for South Australian public education and care* (DECS, 2011b); and finally the *DECD strategic plan 2014–2017* (DECD, 2014d). As the interviews for this thesis were

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[2] Herbert Girardet is a world renowned specialist in sustainable cities. He was the inaugural 'Thinker in Residence' in Adelaide in 2003 where he was commissioned to report on sustainability strategies for South Australia (see Girardet, 2003).

undertaken between 2013 and 2014, the strategic plan this analysis is mostly focused on is *The strategic plan 2012–2016: for South Australian public education and care* (DECS, 2011b). However, it is also pertinent attention is paid to the historical context in which the participants operate. Therefore, the strategic plans before and after the main period of data collection have been examined.

The education department's directions and strategic plans are primarily for principals of schools and others working with the education department. The purpose of the plans are to drive the delivery of the state government's priorities and targets as well as providing clarity in the education department's own directions. The strategic plans also influence programming, resource and budgetary decisions (DECS, 2005a).

Statement of directions 2005–2010

From 2005 to 2010 the education department was guided by its *Statement of directions 2005–2010* (DECS, 2005a), which framed three key priorities: our children and students; our staff; and our children's services, schools and communities (p. 1). Each of these priorities are supported by key goals, and each goal consists of a number of targets derived from the education department and the SASP. In addition, each goal has key objectives. These goals, targets and objectives help the department to achieve their main strategic priorities. One of the goals under the children's services, schools and communities priority is directly related to sustainability – Goal 8: a sustainable system. The objectives of this goal are to "Foster a culture of sustainability; ... Reduce energy and water consumption; ... [and] Provide more efficient and effective systems" (DECS, 2005a, p. 15). These objectives, with a strong emphasis on sustainability, connect directly to the key points in the 2004 version of the SASP (Government of South Australia, 2004). While the education department has a large number of its own goals, it also adopted 19 targets from the SASP and of those, five specific targets are listed under the sustainable system goal (DECS, 2005a, p. 15). Therefore, it can be concluded sustainability was a key direction for the education department at this time.

Strategic directions 2011

In November 2010 the education department released a new plan; *Strategic Directions 2011* (DECS, 2010d) with a key vision that "young people in South Australia achieve a positive social and economic future" (p. 4). This plan indicates a

distinct change in priorities. Like the 2011 version of the SASP (Government of South Australia, 2011a), the emphasis on sustainability has significantly reduced. However, in *Strategic Directions 2011* (DECS, 2010d) neither the terms 'environment', nor 'sustainability' are mentioned and, unlike the 2011 SASP, neither is 'climate change'. Instead, there is a distinct focus on the "globalised economy" (Government of South Australia, 2011a, p. 1) with the "economic future" (p. 4) being part of the plan's key vision. It is clear the main priorities for the education department have narrowed to being chiefly about performance and achievement, particularly in literacy and numeracy.

The strategic plan 2012–2016

Following the 2011 strategic directions, the state education department released *The strategic plan 2012–2016: for South Australian public education and care* (DECS, 2011b). The plan is available online in three different formats with a slight variation in content: a PDF of a poster version of the plan (DECS, 2011c), a PDF of the publicly distributed plan (DECS, 2011b) and a Word document of the plan (DECS, 2011d). The education department claims the 2012 plan focuses "on the fundamental purposes of education. It provides a framework of the key priorities that will be pursued collectively across the sector to reinforce and extend the quality of public education in South Australia" (DECS, 2011a).

The poster version of the 2012 strategic plan

The poster version of *The strategic plan 2012–2016* (DECS, 2011c) (see Figure 7), is a snapshot of the plan, highlighting the crux of the department's priorities.

Figure 7. The Strategic Plan 2012–2016: for South Australian Public Education and Care. Sourced from "DECS strategic plan 2012–2016: Poster," by DECS, 2011, Retrieved 14 October 2011. from http://www.decs.sa.gov.au/aboutdept/files/links/DECS2012StratPlanPoster.pdf

On the poster, the education department presents four strategic directions (DECS, 2011c). As can be seen in Figure 7, under direction "4. A successful and sustainable organisation", it seems the department understands sustainability, not in terms of the

environment or ecosystem but in terms of the sustainability of the organisation, the sustainability of the *system*. Sustainability is purely about "effective educational and care systems [that] are responsive to the needs of students and the workforce" (DECS, 2011c). This subsumes sustainability into the neoliberal agenda where the economy and workforce are prioritised. Jickling (2010) suggests, "society has been … conditioned to believe that sustainability carries positive connotations" (p. 176). The department's use of sustainability language is deceptive. The education department appears to be addressing ecological sustainability through its reference to a "sustainable organisation"; however, the direction seems to have nothing to do with the environment. Instead, the sustainability term in the poster equates to what van Manen calls a flat word, a word that was previously meaningful but with overuse, has become empty and powerless (van Manen, 1990). It is not until the plan is examined in its entirety that a reference to ecological sustainability is found, as shown in the following section.

Directions and objectives of the 2012 strategic plan

The full plan consists of the same four strategic directions and includes a number of associated objectives. Looking hierarchically at the strategic directions and their objectives seems to exemplify the priorities of the education department and its associated government. The first objective in Strategic Direction 1 is to "cultivate a high standard of learning and achievement within a context of individual student capacity, especially in our state's priorities for literacy, numeracy, maths and science" (DECS, 2011b, p. 4; DECS, 2011d, p. 3). This indicates these subject areas are prioritised by the state in terms of education, as this is the only reference to the SASP (see Government of South Australia, 2011a). Consequently, as the purpose of the plans is to help facilitate the state's priorities, these areas also appear to be the department's main priorities.

Ironically, the only mention of anything related to ecological sustainability is found at the very last dot point of the final direction – a successful and sustainable organisation. This objective is to "actively promote sustainable business practices and sustainability education" (DECS, 2011b, p. 5; DECS, 2011d, p. 4), as shown in Table 6.

Table 6.
A successful and sustainable organisation

Effective educational and care systems are responsive to the needs of students and the workforce. We will:

- develop creative, effective leadership and accountability at all levels
- plan for future workforce needs – then recruit, support and retain staff
- tailor professional development in the context of a changing workforce
- build physical infrastructure that meets changing needs
- focus business and support systems on meeting the changing needs of learners
- continuously improve business and support systems
- encourage a culture that is innovative, adapts to new challenges and works across boundaries
- actively promote sustainable business practices and sustainability education.

Note. Adapted from *DECS strategic plan 2012-2016: for South Australian public education and care* (p. 5), by Department of Education and Child Services (DECS), 2011, Retrieved 14 October 2011. from http://www.decs.sa.gov.au/aboutdept/files/links/DECS2012StrategicPlan.pdf.

Although the strategic direction is titled 'a successful and sustainable organisation', the last objective is the only one that could be loosely construed as targeting the sustainability of the *ecosystem*. All the other objectives can be understood in reference to the sustainability of the *system*. In comparison to the previous *Strategic Directions 2011* (DECS, 2010d), which had no mention of the environment, sustainability, nor climate change, *The strategic plan 2012–2016* (DECS, 2011b) does at least include this one objective regarding "sustainable education" (p. 5). However, as a whole, the 2012 plan carries through the same agenda as the 2011 plan around improving performance and achievement.

Progressively throughout the education department's strategic plans, the influence of neoliberalism is apparent with "buzzwords" (Gillies, 2010, p. 104) like quality, excellence, reporting, transparency, monitoring, accountability and choice. This influence is evident in the 2012 plan as well, particularly under the heading 'being transparent and open to change'. Here the department proposes to "develop a system of reporting, monitoring and accountability ... towards [its] strategic commitments" (DECS, 2011b, p. 4; DECS, 2011d, p. 5), all hallmarks of neoliberalism. The influence of neoliberalism can also be seen in the 2012 plan's engagement with the main purposes of education.

The purpose of public education in the 2012 strategic plan

Considering *The strategic plan 2012–2016* (DECS, 2011b) focuses "on the fundamental purposes of education" (DECS, 2011a), Professor Alan Reid prefaces the full version of the 2012 plan by arguing the three main purposes of education are an individual purpose, an economic purpose and a democratic purpose (DECS, 2011b; DECS, 2011d).

- The first is an *individual* purpose. Public education provides opportunities for all children and young people to develop skills and understandings and to pursue interests that will enable them to lead rich, fulfilling and productive lives.

- The second is an *economic* purpose. Public education makes an important contribution to the Australian economy by preparing people for work in the many occupations that comprise the modern labour market.

- The third is a *democratic* purpose. Public education prepares young people as citizens who are able to play an active and constructive role in democratic life [italics added]. (DECS, 2011b, p. 2)

These broad purposes constitute, respectively, a 'private' purpose, a 'constrained public' purpose and a 'public' purpose. The first two purposes align with conservatism as it has been posited the focus on the individual is residual from the Howard government and the economic purpose inherently stems from the Rudd/Gillard governmental agenda (Reid, 2009, 2011a). Both governments have been connected with emphasising human capital, a main focus within the conservative political neoliberal agenda (Brennan, 2009; Comber & Nixon, 2009; Reid, 2009, 2011a). In the preface the three purposes are all deemed as "important but it is the fostering of democracy that gives public education its distinctive ethos" (DECS, 2011b, p. 2) through transforming "a group of people with a host of differences into a civic entity: a democratic community" (DECS, 2011b, p. 1; DECS, 2011d, p. 1).

The purposes of education within the 2012 strategic plan originate from the research paper, *Exploring the public purposes of education in Australian primary schools* (Reid, Cranston, Keating, & Mulford, 2011). Of significance is the purposes in this foundational document are arranged in a different hierarchical order to the 2012 plan, heading with the democratic purpose as the one of most importance. The reason for preferencing democracy in this document is similar to it being highlighted by Professor Alan Reid in the 2012 plan. This is because one of the lead investigators of

the document is the same Professor Alan Reid, who argues, "there is need to return to a renewed emphasis on democratic **public purposes** [emphasis in original] for Australian education. That is, the public purposes of education should be the dominant purposes" (Reid, 2011a, p. 4). Considering it is usually the dominant purpose that is politically produced and informs educational practice, a commitment to the public purposes of education is also highly recommended in Reid, Cranston, Keating and Mulford's (2011) research paper. Conversely, as evidenced in the state's strategic plans, with the increasing influence of neoliberalism, the trickle-down effect from government is predominantly a narrowing of the vision of education by viewing students as human capital. This, therefore, prioritises the economy and may be the reason the education department positions the democratic purpose last in *The strategic plan 2012–2016* (DECS, 2011b). The individual purpose commodifies education and the economic purpose of education prepares students as "economic contributors" (Reid, et al., 2011, p. 8). The prioritising of 'private' and 'constrained public' purposes (Reid, et al., 2011) is also articulated in the description of the 2012 plan on the Analysis & Policy Observatory (APO) website that offers open access to resources such as the plan. The description states the:

> three purposes are: individual purpose, economic purpose and democratic purpose. Public education can provide opportunities for all children and young people to develop skills and understandings and to pursue interests that will enable them to lead rich, fulfilling and productive lives. This makes an important contribution to the Australian economy by preparing people for work in the many occupations that comprise the modern labour market. (Analysis & Policy Observatory (APO), 2017)

Reviewing the text about the three purposes (as seen above) it can be seen this description only expands on the individual and the economic purposes. Therefore, education can be deemed narrowly as "preparing people for work".

Within the preface of the 2012 plan, Reid acknowledges, "globalisation, technological advances and environmental challenges will continue to impact on the ways in which schools are organised. However, the three major purposes [an individual, an economic and a democratic purpose] remain the hallmark of a robust and vibrant public education system" (DECS, 2011b, p. 2; DECS, 2011d, p. 1). Therefore, while sustainability could be incorporated in the environmental challenges the plan refers to, this and the other aspects are rendered as subordinate in education given the importance of the three declared purposes. The preface also only mentions

the impact on the *organisation* of schools, whereas these challenges may potentially affect all aspects of school life and beyond.

Overall, although the education department states the 2012 plan focuses on the three fundamental purposes of education, these being an individual, an economic and a democratic purpose, there is little evidence of the democratic purpose. Instead, the plan seems more heavily weighted towards the individual and economic purposes. The need to advance the public democratic purpose is not heeded. Furthermore, as stated by the chief executive of the education department, the goal over the five years following the release of *The strategic plan 2012–2016* is to align the public education system with the three declared purposes of education (DECS, 2011b, p. 2; DECS, 2011d, p. 2). One way of ensuring this is that all "investments in education will be assessed against their contribution to the Strategic Plan" (DECS, 2011b, p. 4; DECS, 2011d, p. 5), therefore, financially and practically, anything that does not readily contribute to the plan, such as a support in ecological sustainability, will likely struggle in its purpose and implementation.

Strategic plan 2014–2017

In October 2010 Families SA, an organisation that provides child protection and family support services, was merged with the education department. Subsequently, in 2012/13 the education department came under review due to the mishandling of an incident at a school. The ensuing Royal Commission independent education inquiry, known as the Debelle report (see Debelle, 2013) was the catalyst for a review into the operations and culture of the education department, known as the Peter Allen review (see Allen, 2013). Commissioned by the Minister for Education and Child Development, the Peter Allen review recommended an organisational reform with a number of changes to the education department. Therefore, in light of the education department "emerging from an *annus horribilis* [italics in original]" (Allen, 2013, p. 13) the release of the *DECD strategic plan 2014–2017* (DECD, 2014d) signified another substantial change in the education department's priorities.

Although it was the intent of the education department in 2011 that the public education system align with the three declared purposes of education (DECS, 2011b, p. 2; DECS, 2011d, p. 2), the 2014 strategic plan (DECD, 2014d) makes no reference to these purposes. The new plan was purposefully produced as a comprehensive plan

comprising the merged organisations. However, due to the inadequacies and mismanagement of the education department, brought to light by the investigations taking place, the plan indicates a form of damage control with their "immediate priority … to lift the standard of service provided" (DECD, 2014d, p. 1). Furthermore, the plan "reflects the need for [the department's] policies and systems to be more robust, transparent and flexible" (DECD, 2014d, p. 1). This is even more apparent considering the 2014 plan is supported by another planning document, *Building a high performing system* (DECD, 2014b). This companion document, a business improvement plan, acknowledges the department had many issues and identifies necessary changes to attain the vision of the strategic plan (DECD, 2014d, p. 2).

While *Building a high performing system* (DECD, 2014b) is a likely response to the independent reviews and issues with the education department, the *strategic plan 2014–2017* (DECD, 2014d) also reflects the department's identified shortcomings and the recommendations ascribed in the Peter Allen review (see Allen, 2013) as it is framed around six strategic priority areas:

- Higher standards of learning achievement
- Improve health and wellbeing
- Improve and integrate child safety
- Engage children, families and communities
- Right service at the right time
- Build a better system. (DECD, 2014d, p. 12)

Although "sustainability" is one of the stated values in the plan (DECD, 2014d, p. 2) there is no other mention of it elsewhere, and the priority areas have seemingly no connection to sustainability. For example, the priority to improve health and wellbeing is based on intervention, support services and developmental screening (p. 6) and the building a better system priority is based on being "effective, efficient and transparent" (DECD, 2014a). In addition, the curriculum areas identified in the priority for higher achievement are predominantly literacy and numeracy.

The influence of neoliberalism is ever more present in the *strategic plan 2014–2017* (DECD, 2014d), with the prominence of efficiency, effectiveness, accountability and transparency. Furthermore, what is strikingly apparent from the Peter Allen review

(Allen, 2013) and its included recommendations is evidence of what is termed 'the governance turn' (Lingard, 2011b; Lingard, Creagh, & Vass, 2012; Ozga, 2009; Ozga, Segerholm, & Simola, 2011). The proposed organisational reform epitomises the audit culture of neoliberal governance that is central in the Government steering from a distance (Lingard, 2011b). This "shift towards governance rather than government in education ... is intimately connected with the growth of data, and the increase in possibilities for monitoring, targeting and shifting cultures and behaviour that data apparently produce" (Ozga, et al., 2011, p. 85). This highlights a paradox inherent in neoliberalism that pairs liberty and autonomy with heightened levels of government surveillance, regulation and compliance.

Embroiled in the neoliberal audit culture of governance and performativity and data-driven reporting, inherently based on "mistrust" (Lingard, 2011b, p. 370), it seems the education department has little space for *insignificant* priorities such as sustainability. This is particularly evident considering the purpose of the *strategic plan 2014–2017* (DECD, 2014d) is to guide planning across all education department sites and these sites must report against the plan's "success statements" (DECD, 2014d, p. 11), none of which relate to sustainability. This, therefore, renders ecological sustainability firmly off the education agenda.

In 2016 as a result of the above-mentioned investigations and consequential leadership changes, the merged super-department (DECD) reverted once more into separate departments (DECD, 2017a). As at the time of writing, an updated strategic plan is yet to be released.

To further ascertain the priorities of the education department the following section looks at the department's annual reports as these are key documents that cover the department's achievements, and ultimately its priorities over each calendar year.

5.2.3   Education department annual reports 2004–2016

The annual reports are significant documents that highlight the education department's priorities by reporting what it has done over the course of each calendar year. This section focuses on annual reports dated 2004 to the latest report from 2016, however, reference is also made to the 2002 and 2003 reports to gain insight into priorities of the department before the introduction of SASP.

The year 2004 marks a significant time in the structure of the education department's annual reports. Prior to 2004, the education department was largely guided by the *Children's Services Act 1985*, the *Education Act 1972*, and the *Senior Secondary Assessment Board of South Australia Act 1983*, as well as other action plans and initiatives. While the education department is still required to report on their compliance with these Acts and plans, from 2004 the annual reports demonstrate an alliance with the state's strategic plans.

The presence of ecological sustainability varied in the annual reports. However, it is largely found under the guise of the management of energy. In 2002, the state government launched an Energy Efficiency Action Plan (EEAP) that required all government departments to reduce their energy use and greenhouse gas emissions by 15% and incorporate awareness-raising strategies. Guided by this obligation, in 2002 the education department appointed an ESD/energy efficiency administration officer for a period of six months. In addition, ecologically sustainable development design guidelines involving basic energy efficiency principles were considered in all capital works projects (DECS, 2002; DECS, 2003; DECS, 2004); these continued throughout the subsequent annual reports. Consistent with the EEAP, the education department also implemented a number of energy savings projects. One of these initiatives was a Schools Energy Program with the aim of "conservation of energy resources through active environmental stewardship" (DECS, 2002, p. 94). Further initiatives included:

- a departmental ESD Project Fund of an annual $1 million budget for schools and children's centres "to introduce curriculum projects to improve and continue their ecological sustainability practices, actively integrating with student voice and action, positive learning outcomes and community partnerships" (DECS, 2002, p. 95),
- photovoltaics uptake predominantly involving solar power installation,
- solar cars and bikes,
- energy audits,
- a computer recycling scheme
- an Energy Matters newsletter publishing information about energy efficiency,
- a fortnightly energy column published in the department's newspaper,

- the addition of boats to the solar cars and bikes project in 2003 and
- from 2003, the department held an annual ESD display showcasing energy efficiency initiatives (DECS, 2003).

From 2004 onwards, the education department's planning was informed by the SASP (see Government of South Australia, 2004, 2007, 2011a). In 2004, the department was also guided by the Economic Development Board, and in all subsequent years the reports reference the education department's own strategic plans. In each annual report from 2004 to 2016, the education department states its accountability to the SASP and identifies the targets for which it is responsible.

With reference to the SASP, from 2004 to 2006 the education department was the lead agency for 10 education-related targets, three from Objective 4, fostering creativity and innovation and seven from Objective 6, expanding opportunity. In addition, in 2006 the education department was lead agency for "Target 3.10: Extend the existing Solar Schools Program so that at least 250 schools have solar power within 10 years" (DECS, 2006, p. 13).

In 2004 when the SASP was released, while still included in the annual report, the energy imperative from the EEAP, was adopted as "Target 3.2: Reduce energy consumption in government buildings by 25% within 10 years and lead Australia in wind and solar generation within 10 years" (DECS, 2004, p. 49). Although the education department was not considered a lead agency for this target, by default, as a government organisation, it is considered a contributing agency and, while the target has changed slightly over time, the department remains accountable to it.

The education department continued with the 2002/03 projects listed above, and, aligned with the SASP Target 3.2, a state government funded SA Solar Schools Program was underway bringing solar power to South Australian schools. Although the Solar Schools Program continued until 2008 and was replaced by a national Solar School Program that ended in 2013, it was only in 2006 that the education department stated its accountability as a lead agency to extend the Solar Schools Program (DECS, 2006, p. 13). In terms of raising energy awareness, the department continued the energy column in 2004 but there was no mention of the Energy Matters newsletter.

A commitment to ecological sustainability?

The 2005–2009 annual reports reflect an apparent commitment and alignment with the SASPs (see Government of South Australia, 2004, 2007) and the *DECS statement of directions 2005–2010* (DECS, 2005a). This includes the objectives to "foster a culture of sustainability, reduce energy and water consumption and provide more efficient and effective systems" (DECS, 2005a, p. 15).

In addition to the projects carried over from the previous three years, in 2005 the ESD/energy efficiency administration officer position became permanent and an energy management strategy group was formed. The energy column continued, and it seems instead of the Energy Matters newsletter a website, as well as a brochure, were developed to showcase energy saving initiatives. The department was also guided by another state governmental initiative, Greening of Government Operations. The Schools Energy Program was not mentioned; however, a new initiative began between the education department and the Department for Environment and Heritage, the Sustainable Schools and Children's Services Initiative. This initiative was supported by the department's *statement of directions 2005–2010* (DECS, 2005a) and its "commitment to continue the strong curriculum focus on sustainability, the environment and management of our resources" (DECS, 2005b, p. 52). Furthermore, the department highlights a number of environmental initiatives it achieved during 2005, including water saving initiatives using the $1 million ESD funds, LP gas in department vehicles; and the encouragement of 'green' purchasing.

The 2005 annual report also highlights its contributions to the state government's Urban Design Charter (see Planning SA - Department of Transport and Urban Planning, 2004) through which it incorporates "three themes of Integration, Cultural and Social Capital and Ecological Sustainment" (DECS, 2005b, p. 89). Furthermore, under the Urban Design Charter, the 2006 report proclaimed its "commitment to sustainability and its desire to further develop its reputation as a leader in environmental education and environmentally sustainable building design" (DECS, 2006, p. 102). This is expanded in the 2007, 2008 and 2009 annual reports claiming the education department:

> has a well deserved reputation for being a leader in environmental education
> and environmentally sustainable building design. We will continue to focus
> on these key areas and influence the attitudes, aspirations, practices and

values of our students. We will ensure our students have a clear understanding of their natural and constructed environment and a stake in sustainable development. (DECS, 2007a; DECS, 2008; DECS, 2009a)

This pledge for students to have a stake in sustainable development correlates directly to the SASP's attaining sustainability objective (Government of South Australia, 2004, p. 33). However, although the education department states their commitment to sustainability and influencing their students "attitudes, aspirations, practices and values" (DECS, 2007a, p. 61), the 2005 and 2006 annual reports indicate a change in priorities. The $1 million ESD funds, originally for curriculum projects and integrating "student voice and action" (DECS, 2002, p. 95), seem to be predominantly about reducing costs through water saving initiatives. This occurs in 2005 with grants going to schools to "conserve water and reduce costs" (DECS, 2005b, p. 53) and in 2006 the grants went to identified high water-using schools and preschools. This continues in 2007 where the ESD grant is understood to be purely for energy management with the funds going to "targeted schools identified as exceeding thresholds for key energy indicators such as energy consumption per student, level of after hours energy consumption, and rate of consumption increase over recent years" (DECS, 2007a, p. 63). In 2008 the ESD grants were replaced by the Green School Grants program that was exclusively to assist schools improve their energy and water efficiency, (DECS, 2008); this program ceased in 2010 (DECS, 2010e).

Throughout the 2005 to 2009 annual reports , the focus increasingly targets resource management, in line with the objectives in the department's *statement of directions 2005–2010* (DECS, 2005a) for 'A sustainable system' (DECS, 2005a, p. 15). Furthermore, although the education department's stated commitment supports the objective, *to foster a culture of sustainability*, there is very little evidence of this, apart from the national AuSSI, which began in 2005 as the Sustainable Schools and Children's Services Initiative, jointly funded by the state and federal governments. The AuSSI approach supports resource management but takes a broader view of sustainability, seeking to encourage a holistic, whole-school approach to living sustainably that inherently seeks to foster a culture of sustainability.

Sustainability in the margins

An emphasis on education for work is apparent from 2007 to 2011. This is evident through the department's accountability to the SASP targets from Objectives 1 and 4, and 10 from Objective 6 (DECS, 2010e, p. 11).

In accordance with stated environmental commitments of the state government, from 2010 the annual reports are only available online. The sustainability claim made in the previous five reports is not made in the education department's 2010 annual report. Instead, the department's *Strategic Directions 2011* (DECS, 2010d) guides the report where neither *environment*, nor *sustainability* are mentioned and where it is clear the main priorities are literacy and numeracy performance. Without the goal of a sustainable system from the previous *statement of directions 2005–2010,* nor direct accountability to any sustainability targets in the SASP, the presence of sustainability and the environment in the 2010 annual report has reduced significantly. There is a brief section titled 'Sustainability in public schools' (DECS, 2010e, p. 34), commenting on AuSSI, however, AuSSI was no longer managed through the education department. The remaining connections with ecological sustainability are through the statutory reporting section with references to energy efficiency, energy use and energy management and include the Green Schools Grants, the national Solar Schools Program and the Urban Design Charter. In addition, the department produced an energy management guide available online to help schools understand measuring and improve their energy use (DECS, 2010e, p. 91). However, this guide provides a superficial approach to a "journey towards sustainability" (DECS, 2010a, p. 4), focusing on lighting, heating and cooling, and electrical equipment.

From 2012 to 2016, under the direction of the 2011 SASP, the education department was the lead agency for the priority area: *our education*, of which none of the targets relate to ecological sustainability. However, although not explicitly identified as priorities, the education department does refer to some targets that are associated with ecological sustainability.

The 2011 to 2013 annual reports were all informed by the 2011 SASP and *The strategic plan 2012–2016* (DECS, 2011b). The 2012 and 2013 annual reports also reflect the larger change in the portfolio of the department. The 2011 and 2012

reports retain the sustainability in public schools section with a brief reference to the AuSSI, as well as acknowledging the presence of sustainability as a CCP in the Australian Curriculum, highlighting the need for sustainability programs and initiatives in schools and preschools (DECD, 2011) and stating the department's commitment to sustainability through the SASP (DECD, 2012). However, the stated need for sustainability in schools diminished in the 2013 annual report. The only mention of sustainability was within the statutory and other reporting section, in terms of the governmental energy efficiency target, the national solar schools program (in its final year), and a small section on water efficiency and water use (DECD, 2013a).

Sustainability and education for the economy

The introduction of the new *DECD strategic plan 2014–2017* (DECD, 2014d) made little impact on the emphasis on sustainability in the 2014 and subsequent annual reports, as sustainability lacks presence in this key document. The CCPs are mentioned in the 2014 annual report; however, only in terms of increasing the number of schools participating in the AuSSI, which was sustained and delivered by the NRM with a minimal web presence through the education department. Otherwise the focus is solely on energy and water use and efficiency with an additional reference to the SASP Target 75 for sustainable water use (DECD, 2014c). The emphasis continues in the 2015 annual report to be merely on energy efficiency, water efficiency and sustainable water use (DECD, 2015).

At the time of writing, the 2016 annual report is the latest available report and offers a slight return to a sustainability emphasis. As stated in the report:

> As per South Australia's Strategic Plan, Climate Change Strategy 2015 to 2050 and Carbon Neutral Adelaide, DECD is committed to supporting and working towards environmental sustainability targets. The department actively investigates and implements programs to improve the environmental performance of schools and preschools. (DECD, 2016, p. 101)

This presents an increased number of platforms from which the education department can deliver sustainability initiatives. However, the initiatives still lack the focus on "stewardship" (DECS, 2002, p. 94) and the ability to "influence the attitudes, aspirations, practices and values of our students" (DECS, 2007a; DECS, 2008; DECS, 2009a) that was evident in earlier versions of the annual reports. Instead,

continuing the trend from the previous reports, the initiatives consist of energy and water efficiency, largely in building design and for irrigation purposes, with little impact on curriculum. However, the 2016 annual report does refer to a new initiative that, the department claims, holds "curriculum opportunities [albeit] for renewable energy and energy efficiency" (DECD, 2016, p. 101). This initiative is the science, technology, engineering and mathematics (STEM) learning strategy (2017 to 2020) with the intention to increase students' performance in science and mathematics. This strategy is supported by $250 million in funding from the state government for the purpose of upgrading and refurbishing STEM facilities in 139 schools (DECD, 2016). Therefore, funding again seems to be a key incentive and enabler.

As with the previous report, the 2016 annual report is structured around the six priority areas from the *DECD strategic plan 2014–2017* (DECD, 2014d). Since the education department had a vast portfolio for the majority of the calendar year, as a merged super-department including the Office for Child Protection, the report covers education as well as child protection functions. Consequently, the priority areas in the *DECD strategic plan* have varying relevance to the schooling side of the department.

As highlighted in the 2016 annual report, with reference to SASP:

> DECD is the lead agency for education and early childhood, which has 7 targets:
> - T12 Early Childhood – Increase the proportion of children developing well
> - T14 Early Childhood – Year 1 Literacy – by 2014 achieve a 10% improvement in the number of children reading at an age-appropriate level by the end of year 1 and maintain thereafter (the target of 74.7% was met for 2014 and measurement for this target ended in 2014)
> - T15 Aboriginal Education – Early Years – increase yearly the proportion of Aboriginal children reading at age-appropriate levels at the end of year 1
> - T27 Understanding of Aboriginal Culture – Aboriginal cultural studies included in school curriculum by 2016 with involvement of Aboriginal people in design and delivery
> - T87 Reading, writing and numeracy – By 2020, for reading, writing and numeracy, increase by 5 percentage points the proportion of South Australian students who achieve: above the national minimum standard; higher proficiency bands
> - T88 Science and maths – by 2020, increase by 15% the number of students receiving an Australian Tertiary Admissions Rank (ATAR) or

> equivalent in at least one of the following subjects: mathematics, physics or chemistry

- T89 SACE or equivalent – Increase yearly the proportion of 15-to-19-year olds who achieve the SACE or comparable senior secondary qualification. (DECD, 2016, pp. 9-10)

Consistent with the previous annual reports the targets identified from the SASP (Government of South Australia, 2011a) that the education department is responsible for are largely education related and based on improving students' academic achievement, predominantly in literacy and numeracy. To achieve these targets there is a heavy reliance on numerical data, therefore increasingly the reports refer to data from tests, particularly NAPLAN.

Over the course of the reviewed annual reports, the diminishing space for ecological sustainability in the curriculum is very apparent. While the energy efficiency initiatives are arguably supportive of ecological sustainability there is no longer any commitment to students having a stake in sustainability, as there was from 2007 to 2009, nor the stewardship from 2002. It is clear funding is a key driver of initiatives that support ecological sustainability, and the department is required to undertake many projects aligned with governmental imperatives. Although many of the initiatives may support ecological sustainability, increasingly they are linked to data and statistics. Furthermore, the economic benefits, rather than environmental or social benefits, are emphasised through referencing how much money has been saved through the initiative.

In 2002, the education department stated in its annual report:

> Public education plays a pivotal role in the development of our state. The attitudes, skills and knowledge instilled in today's children and students will help shape the social cohesion, environmental sustainability and economic progress of the next decade. (DECS, 2002, p. 5)

This quote reflects a sustainability discourse in identifying the three pillars of society, environment and the economy; however, increasingly it seems the mandate for improving the economy is taking precedence. As the education department is compliant to the state government, the targets from the SASP in which the education department is lead agency for, are significant. Not only, are the targets predominantly performance focused, there is an underlying connection to the economy as evidenced by the plan's urge to improve literacy and numeracy, ultimately "unlocking long

term economic benefits" (Government of South Australia, 2011a, p. 60). However, supported by the SASP, the new STEM learning strategy (2017 to 2020), referenced in the 2016 annual report, may provide a space in which schools can re-engage with ecological sustainability.

The following section focuses on the school context statements from Acacia Primary School. While the previous sections highlight the priorities of the state and the education department, the school context statements provide a concise and public overview of schools priorities.

5.3   School priorities

Schools produce a number of documents, however, the context statement of a school is particularly useful for highlighting school priorities. School or site context statements are documents produced by public schools to share information in a consistent manner for staff and community (DECD, 2017e). These documents are usually included on each state government school's websites to meet departmental requirements (DECS, 2010c). Each document is based on a template (see DECS, 2009b) to retain consistency between sites and is ideally reproduced each year to accurately reflect the current context of the school. In general, school context statements consist of the following sections:

1.   General information
2.   Students (and their welfare)
3.   Key school policies
4.   Curriculum
5.   Sporting activities
6.   Other co-curricular activities
7.   Staff (and their welfare)
8.   Incentives, support and award conditions for staff
9.   School facilities
10. School operations
11. Local community
12. Further comments.

This section includes context statements from Acacia Primary, spanning 2007 to 2017. Since the format of the context statements are relatively generic they are easily comparable across years and across other sites (to protect the anonymity of Acacia Primary the other sites are not identified). A number of school context statements from different schools, including some in the same vicinity as the research site, some in different areas and from different socio-economic levels, and some involved in the Sustainable Schools initiative, were reviewed (see Appendix G, Table 12). This highlighted that in general, the main priority areas are consistent with those of Acacia Primary. A comparison of Acacia Primary School's priority areas from its key school policies are as follows:

- 2007: Literacy & Numeracy Development R–7, e-learning and Social Education/Wellbeing
- 2009: Literacy, e-Learning and Social Education/Wellbeing
- 2010: Literacy, e-Learning, Social Education/Wellbeing, Science and Mathematics
- 2011: Literacy, e-Learning, Social Education/Wellbeing, Science and Mathematics
- 2013: Literacy, E-learning, Social Education/Wellbeing and Mathematics
- 2014: Literacy, E-Learning, Social Education/Wellbeing, and Mathematics
- 2015: Literacy, Wellbeing, Mathematics and Learning Technologies
- 2017: Literacy, Wellbeing, Mathematics and Learning with Digital Technologies.

This comparison signifies that for the 10-year period, from 2007 to 2017, the priorities have changed very little, except in terminology. These priorities are reflected throughout Acacia Primary School's context statements as well as a number of other schools' context statements. However, Acacia Primary's context statements differ to many other schools with a substantial inclusion throughout of aspects connected to ecological sustainability.

This analysis initially draws attention to the segment listed as key school policies, where the above priority areas are listed. In 2007, this section consisted of two dot points, one featuring the priority areas and the vision of the school and another listing recent key outcomes. A substantial change in the key school policies of the procured context statements is that from 2009 the recent key outcomes dot point was replaced with information relating to ecological sustainability, highlighting the environmental focus of the school. Including this information under key school policies is

significant, as it seems a step up from its inclusion in the 2007 document where the main reference to ecological sustainability was under school facilities. From 2010, the school's membership with the Sustainable Schools network was also included in this section; however, this is not mentioned in the 2017 context statement. The 2010 key school policies states:

3. Key School Policies

- Site Learning Plan and other key statements or policies
  Priority areas are Literacy, e-Learning, Social Education/Wellbeing, Science and Mathematics
  Vision
    [Acacia] Primary School is committed to excellence in education for all students, recognising and valuing its Indigenous, cultural and social uniqueness.
    Our vision is that in the next 5 years:
    - We work together to meet the needs of all learners
    - We have a safe and secure learning environment
    - We support excellence in our staff team
    - We provide a comprehensive curriculum
    - Sport has a high profile
- [Environmental] Focus School
    [Acacia] has been committed to teaching about climate change and reducing our ecological footprint since 2005. The process has involved the staff learning about the science research and teachers integrating the relevant science and social studies across the curriculum.
    The [Environmental] Student Group is involved in many activites to mitigate the effects of climate change. We intend to help children take action against climate change so that they can feel optimistic about the future.
    [Acacia] is a member of the Sustainable Schools network.

(Acacia Primary School, 2010 School Context Statement, p. 4)

It could be assumed the section identifying the school's environmental focus was so important it deserved to stand alone with its own dot point. Conversely, it could be argued this placing reflects what Sterling (2001, 2005) refers to as a 'reformation' approach, a conservative approach of adding on programs with little change to the curriculum. The section mentions integration and the Sustainable Schools initiative advocates a whole-school approach to sustainability, integrating "sustainability into all elements of school life" (Government of South Australia, 2011b). However, although aspects related to ecological sustainability are mentioned, it is not *integrated* into the remainder of the document, it does not appear as a priority area, nor is it mentioned in the school's vision. However, in 2013 the school "Values" of "Respect and Responsibility" were included in the first dot point and from 2014 to 2017 "Vision" was removed and instead "Values" included "Mission: Through education we all become active, responsible, global citizens" (Acacia Primary

School, 2014 School Context Statement, p. 4). This therefore portrays a global commitment not reflected in earlier context statements. It also implies the school is moving beyond a *vision*, which can be understood as thought-based, to a *mission* that resonates as more action-based.

An additional noteworthy change to the school's environmental focus from 2009 states, "the process has involved the staff learning about the *science* [emphasis added] research and teachers integrating the relevant science and social studies across the curriculum" (Acacia Primary School, 2009 School Context Statement, p. 4). Learning solely through science research could be problematic, particularly if the science research is based on Newtonian physics, which has dominated Western culture, as this science holds a mechanistic, reductionistic, view of the natural world, a conservative "science of the parts" (Holling, Berkes, & Folke, 1998, p. 346). Alternatively, a systems approach to science may be more supportive of sustainability as it is a "science of the *integration* [emphasis added] of parts" (Holling, et al., 1998, p. 346) where knowledge of the systems is always evolving and never complete.

From 2011 this section was amended to include a broader source of information, beyond just the science research, where, "the process has involved the staff learning about the *current* [emphasis added] research in climate change. Teachers focus on climate change in their science, technology and humanities lessons" (Acacia Primary School, 2011 School Context Statement, p. 4). This amended section also indicated the scientific research on climate change and ecological footprints was integrated "across the curriculum"; however, the emphasis seems to have narrowed to being about climate change only in "science, technology and humanities lessons". In 2015, however, this changed again to depict that climate change would be taught through additional subjects and included "science, maths, arts, technology and humanities lessons" (Acacia Primary School, 2015 School Context Statement, p. 4). Although this is not integration across the whole curriculum, it does seem to reflect a pragmatic response encompassing the majority of the curriculum with the exception of English, health and physical education and languages. However, a true whole-school approach to ecological sustainability would see its integration across all areas of the

curriculum. The current key school policies in the 2017 context statement reflects the change, as follows:

3. Key School Policies

Site Learning Plan and other key statements or policies
Priority areas are Literacy, Wellbeing, Mathematics and Learning with Digital Technologies

Values
Our school values are "Respect and Responsibility"
Mission: Through education we all become active, responsible, global citizens

[Environmental] Specialist School
[Acacia] has been committed to teaching about climate change and reducing our ecological footprint since 2004. The process has involved the staff learning about the current research in climate change. Teachers focus on climate change in their science, maths, arts, technology and humanities lessons.

The [Environmental] Student Group is involved in many activities to mitigate the effects of climate change. We intend to help children take action against climate change so that they can feel optimistic about the future.

... The Principal is often asked to share the school's environmental journey with other teachers and leaders.

(Acacia Primary School, 2017 School Context Statement, p. 4)

While ecological sustainability is not included in the identified priority areas alongside literacy, wellbeing, mathematics and learning with digital technologies, it does represent a significant portion of the key school policies section, therefore its presence in the context statement does exhibit significant weight.

In addition to the key school policies section, across all the context statements the notion of ecological sustainability is included in school facilities. In 2007 it stated, "the school has instigated a variety of sustainable practices (in terms of water conservation, recycling, reducation [*sic*] of carbon dioxide emissions and biodiversity projects) and is developing a culture of caring for the environment". (Acacia Primary School, 2007 School Context Statement, p. 8). This represents an active response to ESE that goes beyond the identified key curriculum areas. In 2017 this section states:

> A variety of sustainable practices (in terms of water conservation, recycling, planting native vegetation, energy conservation, land care, vegetable and fruit growing, procurement practices and biodiversity projects) have been instigated to reduce our ecological footprint. The school promotes a culture of caring for the environment (Acacia Primary School, 2017 School Context Statement, p. 8)

Not only have the sustainable practices in the school increased, the school has moved beyond simply "developing a culture of caring for the environment" to *promoting* this culture. This subtle difference indicates that rather than building this caring culture it seems the school has achieved it and is now promoting it more widely.

Two aspects within the context statements that connect to both ecological sustainability and place are found in Section 6, other co-curricular activities, stating "the school has an Our Patch corner dedicated to local Indigenous plants"; and in Section 12, further comments, stating a rare plant on the school grounds had "been used to propagate seed for regenerating the species". These inclusions illustrate the school may be aware of its local environment and displays a level of commitment to ecological sustainability. However, these inclusions are only present in the context statements up to and including 2014. There is no mention of these from 2015 onwards. The reason for not mentioning the corner dedicated to native plants may be because "planting native vegetation" (Acacia Primary School, 2017 School Context Statement, p. 8) is one of the sustainable practices that has been instigated at the school and therefore native plants may now be more widespread across the school rather than confined to a specific corner. With regard to the rare plant, it may be the plant is no longer rare as it was used to regenerate the species, or it may be the plant no longer exists on the school grounds.

An overall look at the school context statements indicates that, while the prominence of literacy and numeracy aligns with state and national priorities, Acacia Primary School seems to be supporting ESE. This is demonstrated by what can be understood as a threefold approach encompassing education *about*, *in* and *for* the environment or sustainability (Davis, 2009; Hedefalk, Almqvist, & Östman, 2015; Palmer, 1998; Sterling, 2005; Tilbury, 1995). Education *about* the environment and sustainability focuses on knowledge and providing information to the learner. This is evidenced in the key school policies section where it states the school is teaching *about* climate change. If this were the only indication of the school supporting ecological sustainability it would be a cause for concern as it is suggested education *about* sustainability, or indeed *about* climate change, is largely teacher directed and transmissive and facts, skills and values about the environment are transmitted to students (Miller & Seller, 1990) with little effect on their ideals and behaviours. This

transmissive approach to education aligns with the conservative orientation whereby the teacher is the authority and the student is the receiver of 'knowledge' (Kemmis, et al., 1983). Ultimately, the function of this approach to education is for social reproduction (Jickling & Wals, 2008). It could be argued this aligns with what Sterling refers to as an 'accommodation' approach to sustainability education in which the school supports sustainability ideas but the school itself is not affected, nor is there noticeable change in the values and behaviour of those involved (Sterling, 2001, 2005). However, there are also examples provided in the context statements of education *in* the environment.

Education *in* the environment or *in* sustainability involves direct participation in nature (Hedefalk, et al., 2015; Palmer, 1998; Sterling, 2005; Tilbury, 1995) and is evidenced by the numerous sustainable practices initiated by the school. Finally, education *for* the environment or sustainability goes beyond the understanding and appreciation engendered by the above two approaches by developing a sense of responsibility for ecological sustainability and actively solving environmental problems (Hedefalk, et al., 2015; Palmer, 1998; Sterling, 2005; Tilbury, 1995). This form of education, education *for* sustainability, is apparent in the context statements where the school states it "promotes a culture of caring for the environment" (2017, p. 8). Furthermore, the involvement of the [Environmental] Student Group is representative of education *for* sustainability as the students problem-solve to "mitigate the effects of climate change" (2017, p. 4).

The threefold approach, as seen in Figure 8, is a combination of education *about*, *in* and *for* ecological sustainability. Education *about* ecological sustainability develops awareness, knowledge and understanding; education *in* ecological sustainability develops awareness and concern; and education *for* ecological sustainability fosters an orientation of responsibility and action. In addition, a futures aspect is crucial in this threefold approach that supports ESE as focusing on preferred, more sustainable futures has the capacity to foster a sense of hope, optimism and empowerment for positive change (Gidley & Inayatullah, 2002; Gidley, 1998; Hicks, 2014; Tilbury, 1995). This combination represents a learning cycle and is indicative of what appears to be occurring at Acacia Primary. The school appears to be providing opportunities for its staff to learn by means of current research, and students are enabled to

increase their knowledge and understanding about ecological sustainability through explicit teaching in their science, maths, arts, technology and humanities lessons. The various sustainable practices the school is involved in help to develop a concern for ecological sustainability in both staff and students and potentially, the school community. In addition, the school's priority to help the students take action as well as promoting a culture of care for the environment encourages a sense of responsibility and wider action for ecological sustainability.
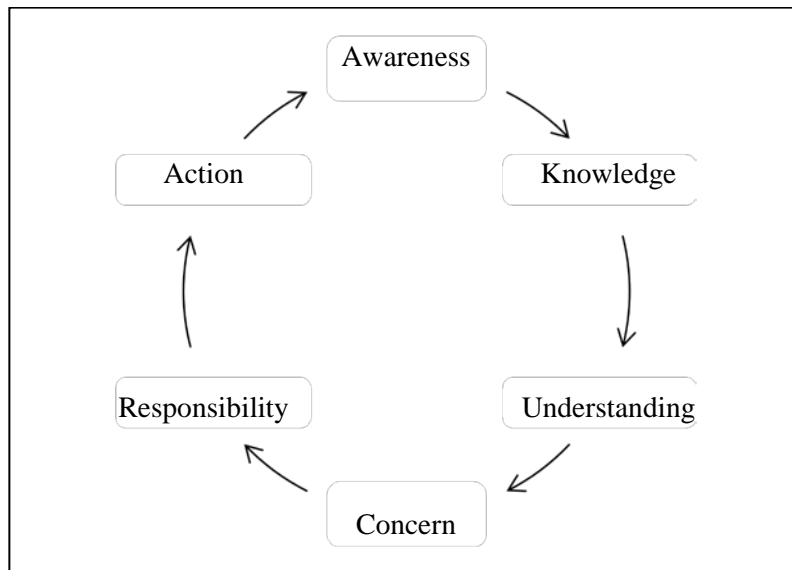
Figure 8. A Threefold Approach to ecological sustainability education. Adapted from "Environmental education for sustainability: Defining the new focus of environmental education in the 1990s", by D. Tilbury, 1995, *Environmental Education Research*, *1*(2), p. 208

The emphasis on individualism, so endemic within the current political agenda, is problematic in the quest to support sustainability, as what is needed is a move away from the egocentric dominant individualistic paradigm to an ecocentric collectivism that recognises the interdependence and interconnectedness of humans and their environment. This is what the school and its [Environmental] Student Group embody, a collective alliance, problem solving in support of ecological sustainability. The school is nurturing this to stimulate a sense of optimism for the future, and this futures perspective is vital in ESE.

5.4 Summary

This chapter engaged with significant texts from the national, state and school contexts, looking particularly at what is prioritised and any evidence of ecological

sustainability throughout. At a national level the key driver is ACARA, which influences the curriculum chiefly though the national Australian Curriculum, NAPLAN, and its associated *My School* website. The national curriculum has been wrought with controversy and concern, particularly the CCPs, one of which is sustainability. However, it embodies the enduring 'traditional' curriculum hierarchy where English and maths dominate through allocated time and emphases. In spite of the complexity and confusion surrounding sustainability as a CCP, it remains a key part of the curriculum, providing its space can be negotiated.

The NAPLAN results of Acacia Primary School on the *My School* website shows clearly NAPLAN has a significant effect on the curriculum, and to improve results, schools need to approach these standardised tests strategically and teach for the test. Consequently, literacy and numeracy have the potential to dominate the curriculum, particularly leading up to the tests.

The state's strategic plans offer insight into what is prioritised at a state level. While the economy is always a priority of the state the emphasis on it seems to be increasing, whereas attention to ecological sustainability is decreasing. The inclusion of ecological sustainability in the 2004 SASP was relatively significant, and although the targets focused mainly on conservation and resource management there was a desire to create a state-wide "culture of sustainability" (Government of South Australia, 2004, p. 33). Conversely, rather than nurturing the sense of a hopeful, sustainable future across the state's population, the current 2011 version of the SASP places greater emphasis on the economic benefits of a clean environment as well as responding and adapting to the detrimental effects of climate change, largely through resource management. This concentrates on crisis management rather than green futures.

As the state education department's planning is guided by the SASP, the targets from the SASP the education department are responsible for are significant. These targets essentially place an emphasis on education for work and the improvement of literacy and numeracy for economic benefits. Consistent with the SASP, the presence of ecological sustainability in both the education department's strategic plans and its annual reports has reduced significantly, with a growing emphasis on the economy. In addition, government funding, undoubtedly connected to government priorities,

appears to be a key determinant of programs related to ecological sustainability. An example of this is the Australian Sustainable Schools Initiative – South Australia (AuSSI-SA) that was a fundamental part of the state education department's involvement in supporting a global drive for sustainability, as envisaged through the UN DESD, 2005–2014. However, the space for ecological sustainability in the department has diminished, partly due to the introduction of the national curriculum. With a shift in focus came a shift in funding and currently the AuSSI-SA is wholly implemented and maintained by a separate organisation. Currently the state is rolling out a new government initiative called the Sustainable Schools program (DECD, 2017c). This $15 million initiative involves the installation of LED lights across 240 schools to replace inefficient lighting and to install solar panels in 40 selected schools, "to improve the economic and environmental sustainability of schools" (DECD, 2017c). While using renewable energy and energy efficient lighting is arguably beneficial for ecological sustainability, the economic emphasis behind the initiative seems to dominate with references to reducing costs, saving money and creating jobs.

With the decline of ecological sustainability to the margins of education over the period 2004-2017, the task to negotiate it into the curriculum appears daunting. However, there appears to be a new space for its inclusion with significant funding attached. The new STEM initiative may provide the space in which, supported by the inclusion of sustainability as a CCP priority in the Australian Curriculum, schools can engage with ecological sustainability.

Overall, while predominantly the improvement of literacy and numeracy for economic benefits is arguably the main priority of education at a national and state level, the school context statements from Acacia Primary School, highlight there could be space for the inclusion of ecological sustainability that align with the priorities of literacy and numeracy . The following chapters will explore whether this is the case through interviews with students, staff and community members. The interviews illuminate how the participants negotiate their understandings and commitment to ecological sustainability within the school's context and practices, therefore highlighting whether there is space for facilitating and sustaining a focus on ESE.

CHAPTER 6:

The diversity and complexity of discourses

> The whole point of talking about Discourses is to focus on the fact that when people mean things to each other, there is always more than language at stake … being in a Discourse is being able to engage in a particular sort of 'dance' with words, deeds, values, feelings, other people, objects, tools, technologies, places and times … being able to understand a Discourse is being able to recognize such 'dances'. (Gee, 2008, p. 155)

Discourses are diverse and complex. In the introductory chapter of this thesis I introduced Vincent, Ball and Braun's (2008) premise that generally people who *manage* to cope align with dominant discourses and people who *struggle* and lack agency align with marginalised discourses. This is an important concept to explore in terms of the agency involved in supporting ESE. It is crucial to determine the discourses circulating within and around a school and whether they affect how teachers and their students negotiate the demands of their curriculum forged under a neoliberal agenda. For research grounded in social constructionism it is pertinent to establish the discourses that may be influencing people's realities and, in particular, it is fundamental to examine the discourses surrounding ecological sustainability to ascertain whether the identified discourses enable or limit a focus on ESE.

In response to the main question guiding this research: *In a neoliberal context, how might an urban primary school facilitate and sustain a focus on ecological sustainability education?* this chapter and the two that follow present an analysis of the interview data. The interview data were collected through individual interviews with internal and external stakeholders from Acacia Primary School, including

school leaders and teachers, external advisers, parents and other community members, as well as through focus groups with students[3].

Drawing from Fereday and Muir-Cochrane (2006), a hybrid approach to theme development is used that began by drawing deductive themes from the key sub-questions. This was followed by a latent analyses of the data, going beyond the surface level of what the research participants had to say and formulating themes through the identification of "*underlying* ideas, assumptions, and conceptualizations – and ideologies [italics in original]" (Braun & Clarke, 2006, p. 84). Consistent with a social constructionist approach, the latent level focuses on the language used and seeks to engage with the sociocultural contexts and the structures by which the participants are bound (Braun & Clarke, 2006). To encapsulate the analysis this chapter gives an account under the main theme of discourses of ecological sustainability; Chapter 7 presents an analysis of the challenges in a neoliberal context; and Chapter 8 focuses on place (local and global community connections and PBE).

Framed under discourses of ecological sustainability, this chapter introduces predetermined discourses identified by Dryzek (2013) and how they are present within the interview data. In addition, an in-depth, latent analysis of the interview data identified a number of themes that comprise various discourses and highlight the complex tensions involved in negotiating and managing ESE: individual/global responsibility and ethical dilemmas, the right/wrong thing to do, and acknowledging the past, present and future. While many of these themes align with the paradoxical nature of ESE in a neoliberal context, this chapter also identifies that a discourse of individualisation is dominant and consequently marginalises all other discourses. This has a significant effect on the negotiation of ESE.

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[3] When direct quotations are drawn from the transcriptions the participant is identified by number and the source of the quotation is identified by page and line numbers. For example, a quotation from staff member number 3 which was on page 7 of their transcript, on lines 30-33, will be noted as: [T3:7.30-33]. In instances where the quotation runs across two pages an example of the reference is: [4-5.36-1] indicating the quotation runs from page 4, line 36 to page 5, line 1. In this example, the staff member would have already been identified. Staff are identified by the letter 'T', students by 'S', community members by 'C' and the researcher by 'R'. The addition of 'a', 'b' or 'c' refers to the focus group, for example, S1c, refers to student number 1 in focus group C. Participant quotations are in italics.

6.1 Discourses of ecological sustainability

> *S2b: I think life would be boring without nature.* [16.37]

The first guiding sub-question that links to the key research question is: *What are the discourses of ecological sustainability that are circulated and negotiated through the school?*

The deductive theme of discourses of ecological sustainability was drawn. While this is the only research sub-question with an explicit reference to discourse, it was expected that through the latent analysis the other sub-questions would also elicit discourses, which are examined in more detail in the following chapters.

Discourses include the various understandings and interpretations of ecological sustainability. Furthermore, considering ecological sustainability is a *wicked* concept (Peterson, 2013), identifying inherent discourses also encapsulates the particular ways ecological sustainability is represented. In addition, discourses are not only understood as spoken interactions between people, they are "practices that systematically form the objects of which they speak" (Foucault, 1972, p. 49). The discourses of ecological sustainability, like environmental discourse, may be "fragmented and contradictory" (Hajer, 1995, p. 15) and could be different between and within staff, students, community and documents. Focusing on the discourses of ecological sustainability that circulate through the school highlights how ecological sustainability is being formed and re-formed dialectically. This provides insight to discourses that are dominant and competing or promoted, and suppressed or silenced. These discourses are embedded in, and have an effect on, the facilitation and support of ESE at the school. Understanding the significance of discourses to this study also evokes a pertinence in recognising and appreciating the wickedness of ecological sustainability.

6.1.1 Ecological sustainability as a 'wicked' concept

Nearly half a century after the emergence of the environmental movement in the West, the struggle to address humans' part in the continuing decline and degradation of the environment may be attributed to the various discourses and the lack of

definitional clarity surrounding the concept of ecological sustainability. A key term synonymous with the environmental movement is sustainability; however, sustainability can be understood as a wicked problem. Rittel and Webber (1973) propose that wicked problems are not wicked in the immoral sense, rather they are "tricky" (Rittel & Webber, 1973, p. 160). Wicked problems are *social* problems that are ill-defined and never solved but require ongoing resolutions (Rittel & Webber, 1973). Sustainability displays many of the characteristics proposed by Rittel and Webber (1973) including the paradox that implicates humans as a major cause of environmental destruction as well as collaborators for social and environmental change (Brown, Harris, & Russell, 2010).

Table 7 highlights four characteristics that Peterson (2011, 2013) draws on to demonstrate sustainability's wickedness.

Table 7.
Characteristics of sustainability as a wicked problem

Criteria for a Wicked Problem	Sustainability
No definitive formulation of the problem exists.	Ideal definition lacks specificity and is reduced to slogan or tagline such as triple bottom line (economic, social and environmental) performance
Its solution is not true or false, but rather better or worse.	One can never know if sustainability has been achieved. Only progress in its trajectory can be predicted.
Stakeholders have radically different frames of reference concerning the problem, and are often passionate in their position on the problem.	Businesses strongly favour economic outcomes. Environmental groups strongly favour environmental outcomes. Social justice groups strongly favour social outcomes, such as fair wages and equitable access.
System components and cause/effect relationships are uncertain or radically changing.	Many claims are made about what is sustainable (such as local food systems are sustainability while global food systems are not) with unclear knowledge of what system characteristics assure or even promote sustainability.

Note. Adapted from "An epistemology for agribusiness: Peers, methods and engagement in the agri-food bio system," by H. C. Peterson, 2011, *International Food and Agribusiness Management Review*, 14(5), p. 22.

The underlying tensions highlighted in Table 7 necessitate managing and negotiation. In addition to sustainability as a wicked problem, climate change, which is closely connected to aspects of sustainability, is acknowledged as a super wicked problem (Levin, Cashore, Bernstein, & Auld, 2007). Therefore, with so much uncertainty

surrounding the concept of sustainability, discerning its associated discourses is a way of shedding light on what is actually being supported, promoted, negated and negotiated.

Identifying how ecological sustainability is discursively constructed can be related to the literature on environmental discourses. Various authors identify and discuss environmental discourses (see Alexander, 2009; Epstein, 2008; Hajer, 1995; Hopwood, Mellor, & O'Brien, 2005; Litfin, 1994; McGregor, 2004; Roper, 2012); however, while each account has its own merit, they are largely based on specific case studies or particular environmental aspects. An author who gives a broader overview of current dominant environmental discourses is Dryzek (2013).

6.1.2 Dryzek's discourses

Dryzek (2013) describes and organises a number of current, conflicting discourses, and his typology is a fertile tool when looking into discourses of ecological sustainability. According to Dryzek, prior to the 1960s, the dominant ideologies of industrialism (liberalism, conservatism, socialism, Marxism and fascism) had no regard for environmental concern except where it contributed to industrial processes. An example Dryzek offers is the conservation movement, which, when it first came to prominence, was more concerned with managing resources for the benefit of the economy than preserving the environment for its aesthetics and the health and wellbeing of humans or for the inherent value of nature. However, from the 1960s, public environmental concern began to increase due to a number of significant events, such as the publication of Rachel Carson's *Silent Spring* (1962), subsequent texts espousing impending doom (e.g. Ehrlich, 1968; Meadows, et al., 1972) and the first photograph of the planet Earth from outer space (Hajer, 1995). From this time, the industrialism hegemony started to fragment and a variety of complementing and competing environmental discourses emerged.

The environmental move away from the conditions created by industrialism, with its unlimited growth in goods and services, is classified by Dryzek (2013) as either reformist or radical. Reformist measures can be small or gradual and work within the industrial political economy, whereas radical measures seek a significant move away from industrial ways of living and being. A further classification by Dryzek characterises these departures as either prosaic or imaginative. Prosaic alternatives

are unimaginative and do not necessitate societal change, therefore there is no disruption to the status quo of the dominant industrial discourse. In addition, prosaic responses only consider environmental problems if they affect the established industrial political economy. In contrast, imaginative alternatives do not place the environment and the economy in opposition, rather, they seek to redefine the structure of the industrial political economy. A combination of these two dimensions of departure produces four basic environmental discourses from which additional discourses can be drawn (see Table 8 below). The four central discourses Dryzek highlights are environmental problem-solving, limits and survival, sustainability, and green radicalism, as indicated below (Dryzek, 2013, pp. 14-17).

Table 8.
Classifying environmental discourses

	Reformist	**Radical**
Prosaic	[Environmental] problem-solving	Limits and survival
	Administrative rationalism	Survivalism
	Democratic pragmatism	Promethean
	Economic rationalism	
Imaginative	Sustainability	Green radicalism
	Sustainable development	Green consciousness
	Ecological modernisation	Green politics

Note. Adapted from *The politics of the Earth: Environmental discourses* (3rd ed.). (p. 16), by J. S. Dryzek, 2013, Oxford: Oxford University Press.

In addition to the four central discourses, Dryzek (2013) identifies specific discourses that sit within and alongside each one. Dryzek also proposes that a way to tie all the environmental discourses together is through an ecological democracy. All of these discourses provide a valuable and informing point of reference in identifying discourses of ecological sustainability, therefore the following briefly describes each discourse.

Limits and survival discourse
The limits and survival discourse is a radical, prosaic move away from industrialism. It is based on the belief that the Earth's natural resources and ecosystems cannot sustain the current economic and population expansion. It is radical because it supports a change to the industrial political economy and how power is distributed. It is also prosaic where the changes advocated are consistent with the industrialism

discourse and power is bequeathed to "administrators, scientists, and other responsible elites" (Dryzek, 2013, p. 16). Concurrent with the discourse of limits and survival with its rhetoric of looming tragedy and a need for drastic global action is a promethean discourse. Coordinated by elites, the promethean discourse supports unlimited growth with the belief that human ingenuity and technology can solve all problems and environmental issues should be left to the market, albeit with some governmental steering.

Problem-solving discourse

Sitting within a reformist, prosaic classification is a problem-solving discourse. This discourse does not advocate wide societal change and the status quo is accepted. However, adjustments are needed to deal with environmental problems, but not to the detriment of a healthy economy. The main focus of the environmental problem-solving discourse is through three approaches to solving problems, all of which are anthropocentric: 1) administrative rationalism coordinates problem-solving through a bureaucratic hierarchy of scientific and technical experts 2) democratic pragmatism, like administrative rationalism, does not disturb the liberal capitalist status quo; however, it drives problem-solving through collective action involving government and the wider public 3) economic rationalism views people as consumers rather than citizens and places all faith in the market and competition to solve problems (Dryzek, 2013).

Sustainability discourse

A reformist but imaginative departure from industrialism can be understood through the discourse of sustainability, and the two main discourses that can be identified within this quest for sustainability are 1) sustainable development, a popular discourse that considers the need for the environment, the economy and society to be equally balanced. This individualised discourse accepts the current capitalist economy but endorses a restructuring of the political system so that key agents can address the challenge of sustainability. 2) ecological modernisation uses a systems approach to viewing consumption, production, resource depletion and pollution that requires political as well as public commitment. It involves minimal restructuring of the capitalist political economy so that economic development and environmental

protection can progress together, ultimately supporting the economy and businesses making money by addressing how environmental problems can be profitable.

Green radicalism discourse

Within the imaginative and radical realm, Dryzek (2013) identifies two categories in the field of a green radicalism discourse. One discourse is green consciousness that seeks to change people's consciousness by appealing predominantly to emotions and focusing on individual change. The belief proposed in the green consciousness discourse is that to achieve ecological sustainability the way people experience and think about the world must change, and then ultimately, wider social structures, policies, institutions and economic systems will change (Dryzek, 2013). The other is discourse is green politics that advocates a collective response to change social, economic, and political structures, practices and policy. Together, these discourses may create a "green public sphere" (Dryzek, 2013, p. 185) that combines consciousness and political change (Dryzek, 2013). However, Dryzek (2013) questions how such a decentred approach to addressing ecological sustainability can have an effect on the hegemonic neoliberal capitalist political economy.

In response to the identified discourses and their individual shortcomings, Dryzek (2013) proposes that a thread that can tie all the environmental discourses together is an ecological democracy that is deliberative and "transcend[s] the boundary between human social systems and natural systems" (p. 238). This democracy considers interests at a global level, includes future generations and non-human nature, and is focused on the common good.

Following on from the above discussion of Dryzek's identified discourses, the next section focuses specifically on the interview data collected from participants connected to Acacia Primary School, and draws connections to apparent discourses. Initially this is done by analysing the participants' definitions of sustainability, then looking at the interview data in its entirety.

6.2   Discourses within definitions of sustainability

> *S5a: Um I've got a question, what does stainabilumm mean?*
>
> *Ra: Sustainability?*
>
> *S5a: Yep*
>
> *Ra: Have you heard of it before?*
>
> *S5a: Yes, but I never knew what it meant.* [9.10-14]

The intricacy of looking at discourses of ecological sustainability and related environmental problems are complex as "environmental problems …are found at the intersection of ecosystems and human social systems, thus doubly complex" (Dryzek, 2013, p. 9). This complexity means that a large variety of understandings of ecological sustainability may exist and this was evident in the interview data.

To gain some insight into the participants' understandings of ecological sustainability, the adult participants were each asked for their own definition of sustainability. Within the focus groups, the students were each asked to draw a mind map of everything they know about sustainability and what sustainability means to them. Many participants suggest that sustainability is very hard to define: "*Um that's a tough one. I know it shouldn't be tough*" [T3:5.42]; "*Ohhh that's a tricky one*" [T6:6.4]; "*I don't actually think one exists*" [T2:4.5]. Part of the complexity with defining sustainability is that it is a social construct; it means different things to different people, encapsulated in the multifaceted question: what, for whom and why does it need to be sustained? Sustainability has also been called "a fragile theoretical construct" (Wilson, 1992, p. 328). Dobson (1996) argues that there are more than 300 definitions of the various sustainability terms. For example, many would link sustainability with the natural environment; however, when considering *what* should be sustained one participant suggests it is "*people's ability to have freedom in their lives, and opportunities should be sustained for people as well too, so that people can have the opportunity to raise their children for example*" [T3:7.30-33].

Comments made during the interviews on defining sustainability support this complexity, and collectively indicate that a number of understandings exist. These comments are also reflective of different discourses of ecological sustainability.

6.2.1   Problem-solving: Administrative rationalism

Drawing from Dryzek (2013) to look at the participants' varying definitions of sustainability is a revealing introduction to a number of apparent discourses. Some comments suggest an administrative rationalism response:

> *T5: I suppose using what resources are available, but also using resources that ... you're not going to deplete ... and managing that properly.* [5.22-25]

Here the onus is on managing resources and can be linked to the idea within administrative rationalism of achieving maximum sustainable yield. Management is a key factor within this discourse, and it is explicit in this quote that renewable and non-renewable resources must be properly managed, with no reference to environmental preservation, aesthetics or the reduction of pollution. The participant goes on to explain that the purpose of managing the resources is to keep "*our planet cleaner and hopefully creat[e] a smaller carbon footprint*" [T5:5.36].

6.2.2   Limits and survival discourse: Promethean

Other responses highlight discourses more in line with promethean ideals where one resource is substituted for another:

> *T5: Well instead of using fossil fuels, you can use solar power ... instead of using the water from the mains; you've got rainwater tanks ... things like buying products that are made out of recycled paper rather than chopping down trees.* [5.27-33]

There is no suggestion of living more simply, reducing resource use, nor of more radical activism, rather, one can have their cake and eat it as well via thoughtful substitution. In addition, this solution for a more sustainable world may be restricted to the more privileged developed nations rather than people from poorer nations who may not have access to alternative resources. This comment could also be regarded as in line with ecological modernisation ideals, particularly with regard to the promotion of purchasing of environmentally friendly products.

6.2.3   Sustainability discourse: Sustainable development

It is apparent that the sustainability discourse is dominant, predominantly the development dimension. The definitions many of the participants offer are akin to the oft cited 1987 Brundtland definition, which states that, "sustainable development is development that meets the needs of the present without compromising the ability of

future generations to meet their own needs" (World Commission on Environment and Development (WCED), 1987):

> *T4: Living within our means and not ... leav[ing] the debt to the future.* [6.3-7]

> *T8: To* conserve *so that there's enough for everyone in the world I guess.* [6.40]

> *C3: It's about respect, respect our environment and people.* [14.13-14]

The focus is on the sustainability and wellbeing of humans rather than nature. The needs of nature and wilderness are not considered, rather nature is seen as the means for human wellbeing and is respected because of its value and usefulness to humans (Dryzek, 2013). One participant acknowledges their own anthropocentric bias in their definition of ecological sustainability, stating, "*it's the ability to sustain ... some aspect of the environment that is important ... for supporting people, the welfare of people. ... but I guess my view of sustainability is a very anthropocentric one*" [C1:1.6-15].

Dryzek (2013) states that the sustainable development discourse is a balanced equilibrium of economic growth, environmental protection and social progress and equality can be achieved without having to make any major changes. This is evident with a participant's acknowledgement that sustainability means "*enough for all forever ... but look in reality Western society – it is really hard for us to live purely sustainably*" [C5:9.38-40]. While this comment reflects a desire for a balanced environment, economy and society, "*enough for all*", the reference to the difficulty in the rich, Western society living sustainably supposes that they have a choice in the way they live, that may differ from those in poorer societies.

Consistent with the sustainable development discourse are many of the student participants' ideas about sustainability. As a means of eliciting the students' individual understandings, their individually created mind maps were discussed (see Appendix H, Table 13). The mind maps the students produced contain an emphasis on "*respect*" and "*caring*" for the "*environment*", "*nature*", "*plants*" and "*animals*", particularly "*healthy plants/animals*" and "*looking after the world*". Other terms that feature predominantly are ones about resource management, including renewable and non-renewable resources and "*rubbish*", "*bins*" and "*recycling*". There is also an

emphasis on the individual and *"looking after yourself"* by *"keeping fit"* and *"eat[ing] healthy"*. In addition, *"heat waves"* and the *"weather"* are also referenced a number of times.
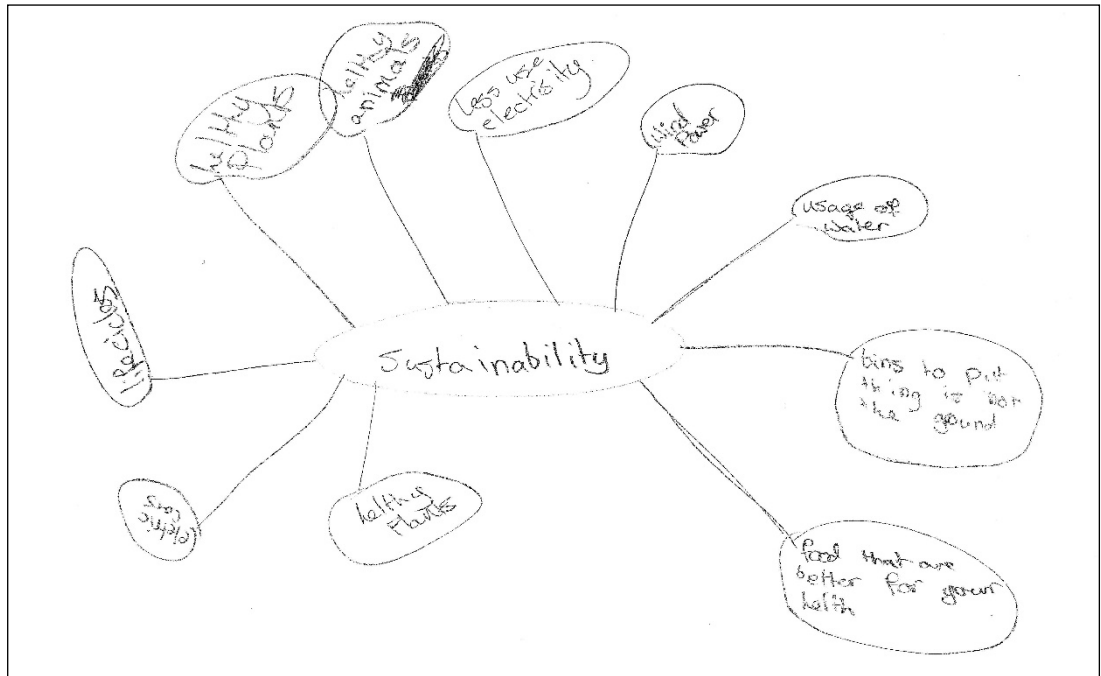
Figure 9. Mind map - Student representation of sustainability (Year 7, Age 12)

The mind maps in Figure 9 and Figure 10 show some of the common themes presented by the student participants. These themes relate well to the sustainable development discourse, and overall the mind maps consisted of a strong emphasis on aspects of the environment and society; however, only one mind map mentioned the *economical* pillar of sustainable development.
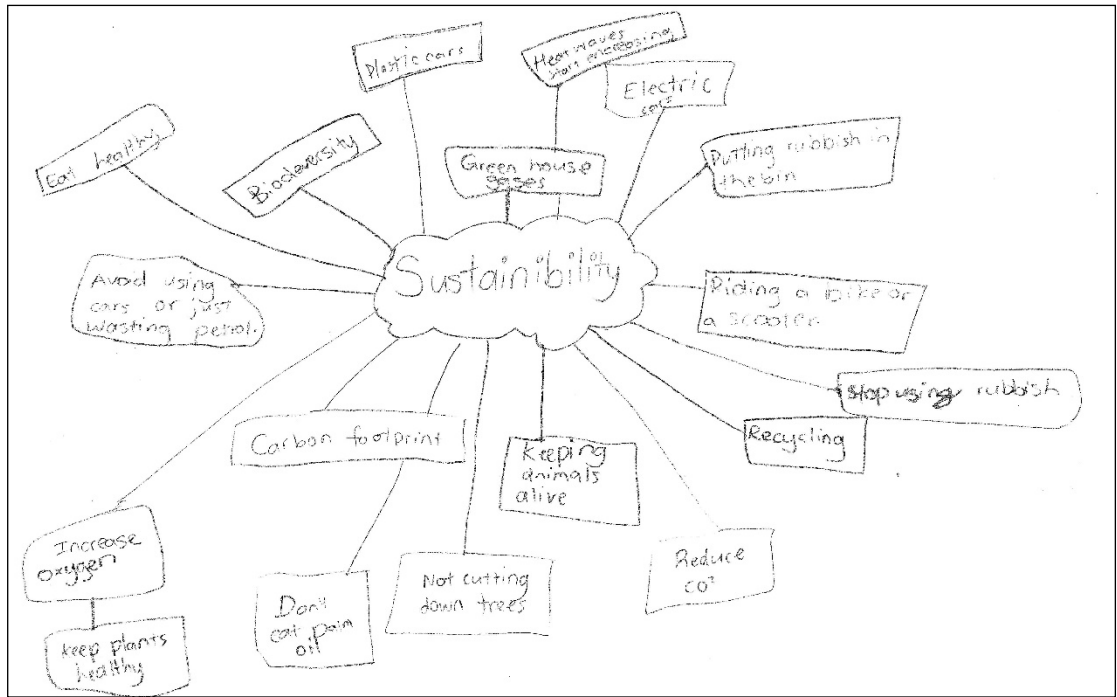
Figure 10. Mind map - Student representation of sustainability (Year 6, Age 11)

6.2.4 Sustainability discourse: Ecological modernisation

Ecological modernisation is dominant within many participants' comments, with the belief that economic development and environmental protection should run concurrently. However, unlike the sustainable development discourse, there is little reference to social justice and the gap between the rich and poor. This is apparent in the following sustainability definitions from two staff members:

> *T10: Involving probably a number of things ... being able to live in harmony with our environment ... and how do we sustain our lifestyle without further damaging the environment.* [5-6.40-7]

> *T7: Doing things to actually make sure that the planet is healthy – there's lines that I cross all the time ... I still do things that I probably could do better, but to do as much as I possibly can and still remain sane.* [4-5.36-1]

T10 articulates a goal of living "*in harmony*", without any significant lifestyle changes, instead the focus is on how they can *sustain* their current lifestyle. The rhetoric of reassurance (Dryzek, 2013) is also evident where T7 points to a commitment to the health of the planet but confesses that she "*could do better*" but does not because of the need to keep sane. This reference highlights there are different levels of commitment, and T7 feels that she is doing as much as she can at a level that she feels most comfortable. Going beyond this level and making choices that are more difficult is regarded as insane.

The following comments also elicit some evidence of an ecological modernisation discourse with a "rhetoric of reassurance" (Dryzek, 2013, p. 159):

> *T1: Well [sustainability] it's lots of things. It's, being able to provide ... a small group of people, with what they need.* [8.18-19]

> *T6: Um. Sustainability, I think it's to be able to feel comfortable that you're actually contributing or owning part of what's happening in your country. About maintaining sustainability for farmers to be able to produce, factories, to be able to operate. Um I think it's about sustaining our ability to feed our population and see how that is going to project into the future.* [6.4-9]

The "rhetoric of reassurance" (Dryzek, 2013, p. 159) is particularly evident within these definitions of sustainability as the focus is on a "*small group of people*" and feeling "*comfortable*" with "*what's happening in your country*". This narrow view on what is largely about food security uses ecological modernisation to secure food production for their country's own advantage with no reference to the conditions of poorer nations.

Another staff member's comment connected to ecological modernisation is:

> *T3: Um sustainability, I, I think, is about to do with balance, and it's to do with having something that is sustainable, or maintainable. Something like a system that has got, inputs and outputs which has very little damage to what's in between the start and the finish.* [5.36-39]

This comment reflects a view of nature as a system with "*inputs and outputs*", "a source of resources and a recycler of pollutants – a giant waste treatment plant, whose capacities and balance should not be overburdened" (Dryzek, 2013, p. 173).

6.2.5   Green radicalism discourse: Green consciousness

Many of the student participant comments are more consistent with a green radical discourse. When articulating the meaning of sustainability from the mind maps the students produced, one student proffered:

> *S2b: Something that can keep going like you can help it to continue. I put in 'healthy environment a thriving ecosystem'. That will help the sustainability of the Earth.*

> *Rb: So what does that mean? Can you explain what that means?*

> *S2b: A thriving ecosystem?*

> *Rb: Yeah, can you explain it?*

> *S2b: Like ecosystem is like every living thing here, in the world and some*
> *endangered or rare animals aren't, they're either getting killed off, dying or*
> *they're not breeding. So thriving as in they keep going, they keep breeding*
> *and they keep living healthily and continue the lifecycle.* [8-9.28-4]

This student identifies the sustainability of "*every living thing*" "*thriving*", not just humans. Therefore, within the green radical discourse, these comments align with a green consciousness that sees people and nature as equal.

Some comments from community participants were also connected to a green radical discourse imbued with a sense of green or nature-based spirituality:

> *C2: It's not a word that has a definition it's how we live our lives ... if I had*
> *to define sustainability for me it would actually be spiritual ... for me it's*
> *about my relationship with the world.* [13-14.39-1]

> *C3: Living as one with mother Earth.* [10.43]

Furthermore, the green consciousness discourse is apparent in the following teacher's comment about the understandings she is aiming to develop in her students:

> *T2: Sustainability – yep it's about making sure that I've be-gifted the kids*
> *some understandings that they can pursue and build on in their lives.*
> *There's any small things like the fact that they know how to sort their*
> *rubbish or they've got less plastic in their lunchbox or we've got more*
> *money in our school budget because we haven't wasted our pens ... they're*
> *kind of bricks in the building the process.* [10.36-41]

This comment evokes a desire to change people's consciousness. However, rather than adopting a deeper kind of consciousness that engages with the holistic web of nature, critiques any androcentric bias and fosters a sense of place, spirituality, stewardship and responsibility for the Earth, its reference to recycling and conservation supports Dryzek's (2013) argument that "the main impact so far of green consciousness change is probably at the level of changing consumer behavior" (p. 202). A deeper ecological consciousness is one that resonates amongst many indigenous cultures such as Indigenous Australians who regard themselves as connected to all natural things, and that all species, plant life, land and water are different forms of the same matter (Grieves, 2009). Similarly, American Indians have a fundamental belief in the symbiotic relationship between humans and the natural world so that nature is a part of them and they are a part of nature (Cajete, 2000).

The student participant's mind map below, Figure 11, stands out from the other mind maps as it shows an awareness of the complexity of ecological sustainability, stating, "*there are more than two diffrent* [*sic*] *sides to the sustainability argument*" and reflecting that "*sustainability is also a lot like necessities*". There is also a more global awareness "*where people in poorer countrys* [*sic*] *are not getting what they need*". Furthermore, this student seems to exhibit a belief that there is a bias towards the sustainability of the coal industry in comparison to sustainability of other things, including the natural environment, stating, "*the sustainability of diffrent* [*sic*] *places is to* [*sic*] *much in the coal area*". The student's mind map is therefore more consistent with the green public sphere, that is, a merging of green consciousness and green politics.
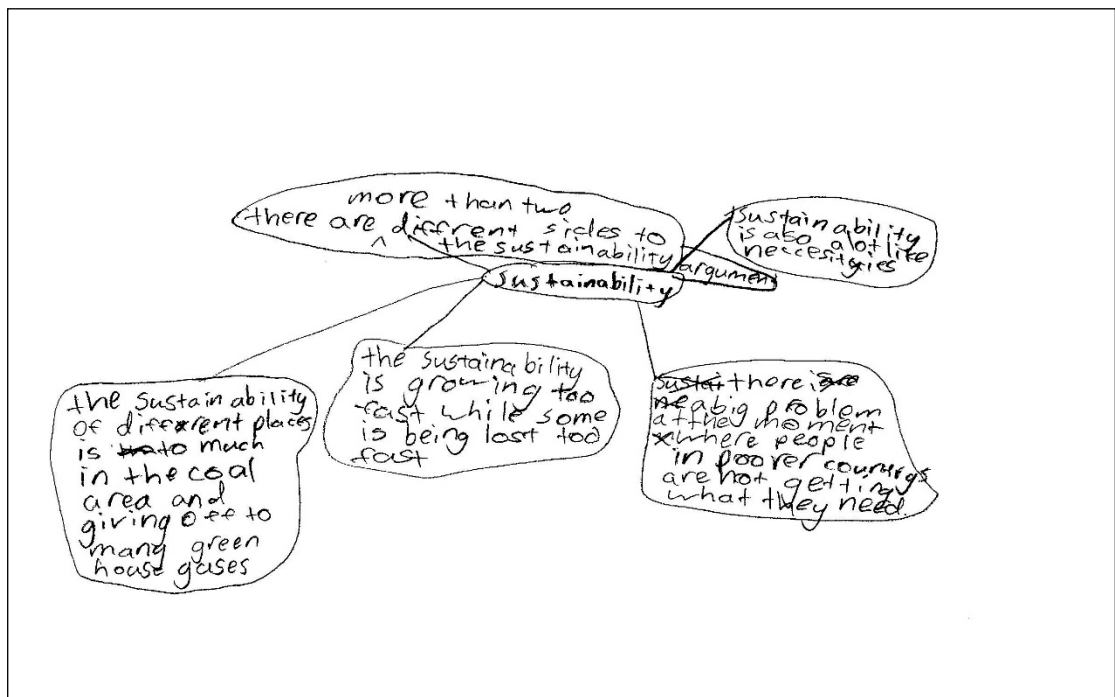
Figure 11. Mind map - Student representation of Sustainability (Year 5, Age 10)

6.2.6   "*There's no such thing as sustainability*"?

By considering the participants' definitions of sustainability, there are a number of discourses that can be determined. While the discourses identified, such as sustainable development, ecological modernisation and green consciousness, all support some form of ecological sustainability, do not disrupt the status quo, which, unless any flaws or other options are brought to light, is rendered invisible. The reason for the dominance of these discourses may be linked to Lockie's proposal that

the idea of "sustainability distracts attention from the root causes of environmental and social degradation (i.e. capitalist relations of production) and thereby legitimates the continued exploitation of people and environments" (Lockie, 2016, p. 1). Therefore, if the participants were asked a more explicit question about the causes of unsustainability and ways of addressing these, the answers may have been very different.

While some of the participants find sustainability difficult to define, another perspective presented is "*the problem with working towards sustainability is that there's no such thing as sustainability. I think that's your fundamental problem*" [C2:16.14-15]. Similarly, another participant proposes there is no such thing as ecological sustainability and the protection of *all* living things because "*probably every time we breathe we kill a few life forms*" [C1:2.6] and to maintain all life would be "*just impossible*" [C1:1.22]. This difficulty is reflected in the literature. In its simplest form, sustainability is the ability to sustain; however, Quiggin (1999) raises a concern by indicating that terms such as sustainability are seen as capturing all issues, while really explaining nothing. Similarly, Rasmuson (2012) suggests that sustainability is like a worn-out word that we cling to so that the term no longer holds any real value. Therefore, sustainability when it first emerged, always related to the environment (Aguirre, 2002), whereas now it may have lost its life and precise definition (Rasmuson, 2012). Likewise, the principal of Acacia Primary spoke of preferring to use the term *climate change* over sustainability, "*because sustainable doesn't have the impact. It doesn't have the same sense of urgency … [Climate change] just seemed to be the issue that sat above the others*" [T4:5.13-18]. In addition, the principal felt that she "*needed people to understand that big global, slowly evolving catastrophe that was happening*" [T4:5.20-21] that she felt was not conveyed with the term sustainability. Furthermore, environmental education is another term she thinks, "*just seems a little bit softer, yeah, a little less urgent*" [T4:5.43-44].

As anticipated, there are various understandings of sustainability. Some did not know what sustainability meant, some thought there was no such thing and others recognised its complexity.

Dryzek's (2013) discourses have been particularly productive in terms of exposing the dominant environmental discourses apparent within the participants' understandings and definitions of sustainability. However, Dryzek's compartmentalised discourses are broad and there are more contributors within the context of schooling, both in a confined and an expansive sense, which help to generate and sustain particular discourses of sustainability. The following sections move beyond specific definitions and predefined discourses of sustainability to look at some clustering of contributors. These contributors consist of dominant or marginalised discourses, and may influence participants' definitions of sustainability as well as affect the negotiation of ESE. Therefore, so as not to be constrained by Dryzek's typology but recognising when his identified discourses are apparent, the following makes reference to both Dryzek (2013) and discourses not specifically identified by him. Doing this helps to gain an appreciation of the intricacies and subtleness of the discourses drawn from the interviews. This means that space is created for discussion of a variety of discourses that may be dominant and competing or promoted and those that may be suppressed or silenced within the context of Acacia Primary School.

To ascertain the discourses that exist beyond participants' definitions of sustainability, the whole of the interview data was analysed and dominant and marginalised themes were identified. The following sections present the analysis under these themes: individual/global responsibility and ethical dilemmas; the right/wrong thing to do; and future thinking. These themes comprise various discourses and are discussed in more detail below.

6.3   Individual/global responsibility and ethical dilemmas

> *S1a: I love my pork ribs but I feel really bad when I eat them.* [13.27]

A dominant characteristic of neoliberalism is the glorification of individualism as a detriment to the common good. This characteristic was apparent within the interviews, particularly with regard to individual practices to support ecological sustainability. As argued below, these individual practices, have the potential in the aggregate for wider societal changes. While a discourse of individualisation was

dominant in the interviews, there were also aspects more aligned with social responsibility and, particularly with the student participants, a responsibility for non-human animals.

6.3.1 Individualisation of responsibility

Much of the interview data focused on individual practices at Acacia Primary School that participants claimed were in support of ecological sustainability. Many were implemented by the principal because "*she was really into climate change and doing the solar panels and the rainwater and everything around that*" [T9:3.3-5]. Participants articulated a support of ecological sustainability in a diversity of ways, such as conserving water and energy, and planting vegetables and other plants:

> *T2: It's nice that the school has a recycling system and it has a vegetable garden and it has the big sign out the front and it has a watering system and it has rainwater tanks and it has solar –so the physical environment is full of indicators of that stuff.* [16.1-4]

> *T7: Oh, we always talk about energy. … and renewable energy sources and we talk about different forms, solar power, water power … we're always talking about water and water conservation.* [13.12-30]

The student participants also emphasised similar examples of practices in support of ecological sustainability, such as reducing, reusing and recycling, and gardening:

> *S4c: We plant like pretty much do gardening and keep our gardens clear of rubbish and stuff.* [2.26-27]

> *S2c: Avoid using cars that waste petrol, like use electric cars or riding a bike or a scooter.* [8.15-16]

> *S2c: That we reduce our carbon footprint.* [2.29]

> *S2b: We're learning in each class recycling and what happens if you don't recycle properly or put the wrong things in each bin. So for what, for quite a while the little kids got really excited about putting their rubbish in certain bins. So then [the principal] bought different bins for each class in different colours.* [6.9-13]

> *S4b: Use less water.* [18.30]

> *S1b: Because it's like wasting electricity and it's wasting energy that we could be using for other things.* [19.8-9]

> *S3b: I'll probably put trees and plants and stuff in my garden.* [19.14]

The above quotes highlight that, for many participants, supporting ecological sustainability largely involves reducing their carbon footprint by conserving energy

and having rainwater tanks, solar panels, a recycling system and a garden. Almeida and Vasconcelos (2011) propose that a focus on the 3Rs (reduce, reuse and recycle) reflects the idea that environmental education centres on resource management and is underpinned by anthropocentric values. However, staff members consider that these practices are of great benefit to students, particularly those with little knowledge about where their food, energy and water come from.

Predominantly the actions highlighted by the participants align with discourses that do not upset the status quo, such as the sustainable development discourse, ecological modernisation and green consciousness. In addition, many of the specified practices can be understood as the practices things an individual can do in support of ecological sustainability rather than practices that support collective action. There was also an understanding that these practices are "*small things*". Jointly, these aspects exemplify what can be understood as the "individualization of responsibility" (Maniates, 2001). Through the individualisation of responsibility Maniates (2001) provides a way of giving depth to the understanding of the sorts of individual consumer actions described above. He proposes that, accelerated by neoliberalisation, environmental problems are understood as individual shortcomings and increasingly individuals are positioned as consumers rather than citizens. In addition:

> when responsibility for environmental problems is individualized, there is
> little room to ponder institutions, the nature and exercise of political power,
> or ways of collectively changing the distribution of power and influence in
> society – to, in other words, 'think institutionally'. (Maniates, 2001, p. 33)

Therefore, the individualisation of responsibility, or private-sphere environmentalism (Stern, 2000), deflects, displaces and depoliticises environmental degradation and instead of supporting political action, consumer action is promoted and individuals are encouraged to "plant a tree, ride a bike or recycle a jar in the hope of saving the world" (Maniates, 2001, p. 42). Furthermore, when responsibility is delegated to the individual onus is taken away from the big players, such as factories emitting greenhouse gases. The problem with individualising responsibility, Maniates (2001) argues, is that it does not work to save the world. Instead, a broadening of collective action for social change, or public-sphere environmentalism (Stern, 2000) should be promoted. Most of the actions the participants discuss are focused on what the

individual can do, for example, resource management. While the participants could feel good about the contributions they were making to a more sustainable world, except for the cumulative effect of these small actions, there was very little discussion of the causes of environmental and social degradation, nor about supporting and enacting major structural and societal change. Lockie (2016) proposes this is a major obstacle to ecological sustainability.

Therefore, what the participants in this study are doing does little to disrupt the current status quo, which is connected to "a global liberal capitalist political economy that is more secure and powerful than ever before" (Dryzek, 2013, pp. 205-206). In addition, when examining the associated discourse of the individualisation of responsibility, while the intent is to support green consciousness change, the resultant lifestyle changes are more in line with the ecological modernisation discourse that requires consumers to reduce, reuse, recycle and improve the efficiency of their energy use. Chawla and Cushing (2007) warn that confining education to this private sphere of environmentalism may work in detriment to encouraging a support of ecological sustainability in their students. What is needed for more of a green consciousness discourse to prevail is a deeper ecological consciousness, a changed way of thinking that embraces the holistic web of nature.

The individualisation of responsibility may not be an adequate response for ecological sustainability (Maniates, 2001) and any significant effect of this sort of private-sphere environmentalism can only happen in the aggregate (Stern, 2000). However, Giroux (2003) proposes that for many, the private sphere is the only way people can "imagine any sense of hope, pleasure, or possibility" (p. 4). Furthermore, it was proposed in the interviews that many "*small things*" can actually lead up to "*big things*" [S1c:3.14], which may move beyond an individual response. Carson's *Silent Spring* (1962) exemplifies an instance of a small thing leading to bigger things and this is why, in my view, *small things* cannot be dismissed. The following highlights these aspects from the interviews.

From little things big things grow?

There are many and varied responses to the challenge of ecological sustainability. While participants cited numerous practices in support of ecological sustainability at school and at home, which can be understood as pro-environmental actions, there

was also the opinion that they could be "*incredibly small things*". T2 suggests that the "*scope*" of ecological sustainability is so "*huge ... defining [the] small things is incredibly ... difficult*" [T2:6.2-16]; however, they include things like recycling, conservation, growing vegetables and planting trees. T6 conveyed similar ideas, "*I think each person in their own small way can make those changes*" [T6:5.17]. These "*small*" changes like recycling and conservation were seen as important things to pass down to the next generation otherwise there was the likelihood that that generation would not take on any environmental responsibility, become "*very blasé*" and see it as "*not my problem*" [T6:5.23]. The "*small*" changes were also encouraged throughout the school community:

> *T9: This site has a big focus on trying to change, well not change but trying to, um what's the word, um teach children and adults and everyone around that there are great ways to make the world sustainable and to show you how to do that, by all these different little things that they can do.* [3.26-30]

Again, these changes are understood as the "*little things*" one can do that are taught at school and extend to peoples' home lives. Incidentally, the overarching impetus for sustainable practices at home was for economic reasons:

> *T9: At home we're really into it all. We've got 30 solar panels up and we've got massive water tanks all around the place because we've plumbed into all our own water tanks ... so our electricity bill ... our bill this quarter was $17 ... instead of a couple a hundred.* [3-4.33-8]

> *T3: At least if you've got solar, you're gonna reduce your costs.* [6.25-30]

While these participants discuss the changes they have implemented or encourage at home, the associated discourse is not one of green consciousness – there is no consideration of the implications of making solar panels, which are presented as economically beneficial. Therefore, the ecological modernisation discourse is more dominant as the emphasis is on the personal economic advantages of practices that support ecological sustainability.

The benefit of carrying out all these "*small*" or "*little*" things was articulated by one staff member who proposed that sustainability is:

> *T9: You are creating your own little world, like your home or your environment that you're in, to help the bigger environment. So you're doing everything* you *can to make the bigger environment more sustainable, so every little step is a big step towards making the world a better, more sustainable place to be with.* [4.23-27]

Therefore, it is understood that "*every little step*" is actually "*a big step towards*" ecological sustainability. The onus is on doing *your* bit in "*your own little world*", which places faith in the aggregated effect of everybody doing his or her *own* thing to make the world a better place. The emphasis, again, is on the individual; however, the ultimate focus is on the common good. The size of these "*small*" or "*little*" things also varied greatly from solar panels to cleaning products.

The emphases on undertaking "*small*" things reflects a position Sterling (2005) refers to as a "reformation" (p. 282) response and Dryzek's (2013) sustainable development discourse and is a strong argument for ecological sustainability without disrupting the status quo (Sterling, 2005). However, the students' responses seem to display an awareness that goes beyond this level, where they demonstrate a collective change due to the school's recycling efforts.

> *S2b: Most kids use containers and recyclable plastic bags so they can take home and reuse them … everyone used to bring just packets of chips and muesli bars and stuff like that so now they're eating more healthy things that don't require wrapping.* [6.20-25]

These quotes demonstrate that introducing a recycling program into the school has the potential to change people's eating habits. Being educated about the different forms of rubbish has made the students aware of their actions, supporting the green consciousness discourse. Furthermore, the students were aware that although many of their practices were small, they proposed, "*small things lead up to big things*" [S2c:12.31]. Proposing the idea of small things leading to bigger things has merit; however, the danger in this is that small things may be seen as sufficient, with people already doing their bit with no need to advocate for bigger changes.

This idea of small things leading to big things can be linked to the slogan connected to sustainable development and green radical discourses, which is "think globally, act locally" (Dryzek, 2013, p. 158). It can be understood as the aggregated effect of many small practices supporting ecological sustainability, or the initial small practices spurring on bigger, collective action that can potentially have global effects. Positioning the individual as an active agent rather than simply a consumer creates future possibilities, as individuals with agency have the potential to create big things. Furthermore, Dahl (2015) and Ross et al. (2016) contend it is more likely that

individuals or groups will accept significant changes in support of global ecological sustainability if they first embrace small actions for sustainability

Students who saw the difference between small and bigger actions articulated the potential for significant change:

> *S3c: The smaller things would be –just picking up a bit of rubbish every now and then … but the bigger things would be probably, it'd be stopping big factories from working and then which makes less greenhouse gases and then the Earth is like us, it'll heal itself so it'll take about a year or two coz it's like us very slow too. So it'll take a year or two but it'll eventually get back to what it originally was.* [13.5-10]

This student acknowledges that picking up rubbish is a small thing, but a big thing could be stopping factories from emitting greenhouse gases. This highlights that these students have some awareness that individual, pro-environmental actions are "*smaller*" things but social action, grounded in a green politics discourse, is a "*bigger*" thing. Of interest is this student's sense of time and that the Earth will be able to heal itself within "*about a year or two*". While this draws attention to this student's capacity to understand scale and differentiate change at a global level, it should be noted that the students interviewed were aged between 10 and 12-years, demonstrating the student's assertion of small things leading to big things may either be optimistic or a higher level of thinking. The following student continues:

> *S2c: Instead of just acting, if you got other people to start acting too – instead of one person acting, more people is more effective so putting rubbish in the bin and recycling .. and actually passing things on and actually going – trying to learn things instead of, like if there's a climate change meeting you don't go then you won't learn. The Earth wouldn't get any better.* [13.15-20]

This student recognises power in numbers and the aggregation of impact and recommends collaborative action because "*more people is more effective*", demonstrating the cumulative effect that from little things big things grow.

From the analysis, it is apparent the individualisation of responsibility is a dominant discourse within the interviews. This finding is interesting considering Kenis and Mathijs (2012) proclamation that within environmental policy "individual behaviour change is fast becoming a kind of 'holy grail'" (p. 45). While a discourse of individualisation is dominant and many of the comments about doing "*little*" or "*small*" things revolved around individual consumer action and were largely about

resource management, there were comments that reflected a more collaborative discourse of ecological sustainability that is more in line with Dryzek's (2013) green politics. In contrast with the individualisation discourse apparent in the interviews, there was also an advocacy for the social responsibility of ecological sustainability.

6.3.2   Social responsibility

T2 believed that everybody should be socially responsible for a better environment because we need to consider the state of the future.

> *T2: I believe that everybody should be working towards social responsibility about equitable shares and about caring for the environment so that we leave a better, not a worse place for future generations and so everybody should be doing things to better that cause. The fact that it doesn't happen is huge, but sustainability's about everybody should be moving towards those things, because if we don't leave the environment in a better situation then the future's worse for everybody.* [5.10-17]

Here the discourse of social responsibility links to Dryzek's (2013) sustainable development discourse and Brundtland's definition of meeting our present needs while considering the needs of future generations.

In support of ecological sustainability, it was proposed that the responsibility is on sustaining practices that are good for society, such as sustainable "*housing*" and sustainable "*families*" [T3:7.19-21]. "*Whatever it is that [people] do, they should be doing something in order to be able to sustain that practice if it's a, if it's a[n] asset to society*" [T3:7.15-16]. In discussing how one staff member included sustainability education in her practices she offered that she does units of work on it, again, looking at housing and families, but also:

> *T7: With animals ... we talk about the environments and then we talk about the interaction between the animals and their environments and what's actually happening. [Sustainability] gets into the houses unit, it gets into the family unit, what is your family, what are your roles in your family, what are your jobs that you do? How can you actually help your family to, to keep going like they are, save money, save time, save other bits, so it gets into that unit, it pretty much gets into almost anything.* [11.6-18]

The focus of sustainability is predominantly on resources and lifestyle. "*How can you actually help your family to, to keep going like they are*" suggests dramatic change *is not* promoted, rather, what *is* promoted are things like conservation to

"*save money, save time, save other bits*"; however, there is also a sense of social responsibility by looking at "*help[ing] your family*".

One staff member sought to teach about the "*preciousness of resources*" by giving consequences for losing resources and encouraging students to be "*socially responsible*" because "*if you're not socially responsible then, then you have a responsibility to the group to actually do something to compensate*" [T2:7.6-9]. In discussing social responsibility, T2 reflects that Western society's focus on the individual rather than the collective is not "*a useful model*" [T2:7.18]. Instead, T2 proposes:

> *that social responsibility is not just thinking of yourself, because nobody*
> *functions on their own, everybody functions as a part of ... we all function as*
> *a part of a human society that fits on one tiny planet, with very limited*
> *resources and so for me that's, that's social responsibility.* [7.30-33]

T2 asserts, "*nobody functions on their own*". This staff member also acknowledges the benefit of living in a multi-cultural society with "*the influence of the other religions and the other cultures as well, but all of that stuff underpins what is socially responsible and what's okay and what's ethically okay and where we should go*" [T2:8-9.45-2].

Furthermore, social responsibility is presented in the form of global responsibility. T6, on the other hand, understands ecological sustainability as a global issue and believes that students "*need to be aware and, and in tune with what's going on in their environment. Whether they choose to action it or not*" [T6:8.41-42]. This staff member sought to instil a global awareness in her students to take "*care of their environment, ... family and culture and [to have] empathy*" [T6:9.2-3]; however, she acknowledges that it is the student's choice whether or not to be proactive with this awareness. She also suggests that sustainability thinking was "*outside of the immediate square*" [T6:9.8], which indicates that supporting ecological sustainability is not the norm.

When discussing the school's sign identifying their focus on the environment one staff member thought that "*it hones [sic] in on the fact that [the principal's] serious about this and the school is serious about it*" [T7:4.16-17]. T7 also put forward that, "*for me personally, I love the fact that it's up there. Yeah. The fact that it gives me*

some, some hook to actually push the sustainability issues" [T7:4.23-25]. Another staff member stated that it is a constant reminder that "*you can't ignore what's going on around you, you need to be aware and I think the next generation need to be really aware*" [T6:5.41-43]. In addition, having a sign that identifies the school's sustainability focus:

> *T6: means that this school is making a statement about being responsible*
> *future citizens for climate responsibility in the future. And it identifies our*
> *school as allowing students to take that responsibility and whether they use*
> *it or not, it gives them that opportunity to think about not just now, but*
> *global. And I think that's a message, [that] we're also developing a sense of*
> *responsibility in our students globally at some point in time in their lives.*
> [5.4-13]

While this comment aligns with a future focus, it also draws in current and global responsibility and shows that advertising the school's focus publicly on a sign allows the school to bestow responsibility on their students, again iterating, "*whether they use it or not*". In further divulging what she means by instilling global responsibility in students, T6 offers that it is largely about, "*just respecting the land, respecting how we use it*" [T6:5.25] and "*food sustainability and water sustainability*" [T6:5.29]. T6 moves from a local to global perspective by advocating action "*even if it's only in my small area*" [T6:5.25-26] while keeping in mind that "*we are part of the bigger global family*". [T6:5.26-27].

Ownership for the past

Some participants displayed a sense of social responsibility by looking to the past, showing an awareness of the detriment of introduced species and unsustainable living and assuming responsibility for environmental injustices. Claiming ownership over these injustices with the term *we* indicates a sense of shared responsibility: "*we introduced a lot of animals that are killing off native animals*" [S2b:10.34], "*we cleared everything*" [S1b:12.2], "*what we're doing to the environment*" [S1b:12.5], and:

> *S1b: At home we've got a poster … it says, 'Live simply so others can simply*
> *live'. Coz around the world heaps of people are dying because we're taking*
> *a lot of things from their countries. Using them for what we want to do so we*
> *can have nice things and then they're dying coz they can't even have enough*
> *money to buy water.* [19.25-31]

Taking ownership supports the drive to personally address these issues rather than leave it for someone else.

Some students also reflect on how indigenous cultures lived sustainably in the past and how the current mode of unsustainable living "*must hurt them the most that they had they looked after their land*" [S2b:16.24-25]. This is an insightful comment that relates to Cajete's (2012) definition of Indigenous science, the unique body of traditional environmental and cultural knowledge which has sustained people through generations of living within a distinct bioregion (Cajete, 2012). Reflecting on indigenous cultures and taking responsibility for past injustices supports actively participating in present actions.

Within the interviews, ecological sustainability is understood as a social responsibility, for the common good, involving a global perspective. Although not as dominant as the discourse of individualisation, social responsibility comes across as significant and has ethical underpinnings because, "*everybody has some kind of social and personal responsibility to do the right thing*" [T2:5.7-8]. These ethical underpinnings extended to a responsibility beyond the social and included animals. Particularly evident within the student participants, a concern for animals also involved significant life experiences and some ethical dilemmas.

6.3.3 Concern for (some) animals: Ethical dilemmas

Literature abounds about children's natural connection to nature and animals (see Melson, 2009; Shepard, 1997; Sobel, 2008; Wilson, 1984). This concept, known as biophilia, is often taken for granted and Orr (2004) urges that if not encouraged may result in children developing biophobia, a fear of nature. Tipper (2011) points out that "little attention has been paid to children's repeated assertions that relationships with animals *matter* to them [italics in original]" (p. 145). Therefore, it is important to focus on children's own perspectives of their connection to animals and adopt a relational lens with which to understand the complexity and situatedness of these relationships.

Consistent with Tipper's (2011) assertion that children repeatedly refer to animals and their importance, a theme connected both to social responsibility and to ethics that came through strongly in the student focus groups, was the concern for (some)

animals. While social responsibility was predominantly about the responsibility of other humans and moving beyond an individualised view, in the focus group sessions students made many references to animals and a responsibility for their wellbeing. This connects the ethical and moral implications of what is happening to various animals through human actions. Therefore, social responsibility extended to the care of animals. Students were learning about dolphins and what they "*as humans need to help keep them alive*" [T5:12.36] and how to maintain the dolphins' habitat. During lessons on global warming, rather than noting the common environmental effects of things like sea-level rise and changes in climate, this student highlights:

> S2b: *We have focus on global warming, with like polar bears and penguins and all those things.* [7.2-3]

When S2b spoke about how they are currently "*focusing on earthquakes and what humans do to affect what, how the earthquake happens and stuff like that*" [S2b:7.8-9], S1b adds, "*animals' behaviour as well*" [S1b:7.11]. Images of animals being affected by environmental issues, like signs "*saying what animals you're killing by eating products that have palm oil in them*" [S1b:18.16-17] are also influential and prompted the students' view that learning about ecological sustainability is a good thing.

In terms of sustainability, one student stated:

> S3b: *having more trees because we need oxygen to live but we don't need carbon dioxide and if we have no trees there'll be too much carbon dioxide and lots of plants and animals will die and we don't want that to happen.* [9-10.37-3]

This student proposes a collective responsibility that "*we don't want*" plants and animals to die. Another student indicated collective responsibility for the introduction of species such as rabbits and foxes "*that are killing off native animals*" [S2b:10.34], ruining the land and "*giv[ing] deadly diseases to Tasmanian devils*" [S2b:11.2].

The students spoke excitedly about a new project they were embarking on with the school's environmental group to make some "*insect hotels*" [S1c:4.11-14] to attract insects because of their benefits to plants. Frogs are another animal that many

students spoke about because "*they're really fascinating*" [S3b:11.28], but "*they're dying*" because of our pollution:

> *S2b: Frogs indicate a healthy ecosystem or where they live and they're dying coz we're polluting where they live and they take things in through their skin.* [11.30-31]

Again, a collective responsibility for pollution is indicated. Another key aspect many of the comments about animals referred to was that they often involved past, present and future reflections, particularly involving significant change.

Significant life experiences

During the focus group interviews, students were asked:

- *Have you changed the way you feel about the environment? If so, how have you changed?*

- *What was it that made you change?*

In response, a significant number of students cite that an experience with an animal was the turning point or catalyst for change in the way they feel about the environment:

> *S3a: Well last year I didn't really care that much about the environment. Then I ... just changed my mind about it ... coz on the first day I did it I found a lizard, like a baby lizard.*
> *Ra: Yeah*
> *S3a: And it was having a little bit of trouble so I had to help it.*
> *Ra: How did that make you feel?*
> *S3a: Um happy to help.* [15.2-10]

Therefore, having close contact with an animal and being able to help this animal made the student happy and made him look at the environment in a different, more caring way. Other students had similar experiences.

Another student found a dead kangaroo with "*a baby joey in its pouch*" [S1a:16.7] that her family took home to look after. This student developed a deep attachment to the joey. Having this experience changed the way she felt about the environment since she was able to make a difference because "*it was a little baby, if we didn't grab it, it would be dead*" [S1a:16.18]. One student spoke about originally hating dogs and cats but when she "*nearly ran over a little Chihuahua*" [S5a:16.29] it was "*scary*" and changed the way she felt [S5a:16.40]. Another student was affected by a

trip she went on with her family to a place where "*a lot of turtles and other things*" [S2b:12.40] had to be rescued because the lake had "*all dried up and they were all dying coz they were just sitting there in the heat*" [S2b:12-13.40-1].

Drawing from Woolf, Tipper (2013) discusses similar moments as moments of being that are like "sudden shocks" (Woolf, 2002, p. 85) that awaken oneself from the "cotton wool of daily life" (Woolf, 2002, p. 85). These moments can also be articulated as "significant life experiences" (Chawla, 1998; Tanner, 1980). Although significant life experiences made a profound effect on many of the participants, particularly the students, the students also experienced some ethical dilemmas with regard to their concern for non-human animals.

Ethical dilemmas

Some students voiced somewhat moral or ethical dilemmas over the way they feel about animals and their own personal eating habits:

> *S1a: I love my pork ribs but I feel really bad when I eat them.*
> *Ra: You love??*
> *S1a: Pork ribs. They're like the best thing ever.*
> *Ra: Pork ribs? But you feel bad about eating them? [S1a: But I feel bad when I eat them]*
> *S4a: That's why I went pescatarian coz I can't give up meat but I can give up fish.*
> *Ra: So, you eat meat but you don't eat fish?*
> *S4a: Yeah*
> *S5a: I don't even like fish*
> *Ra: So, sorry {S1a} can we go back to you. [S1a: Yeah] So you feel bad about eating pork ribs?*
> *S1a: Ah I feel bad about eating animals and stuff.*
> *Ra: Why is that?*
> *S1a: Oh coz when you see them they can't do anything about it, and they don't choose to die. Like poor them, they had no choice. They didn't even get to live their life. And then they do live their life they [probably want to] die anyway coz they're in a little thing like this big and they don't even get to move around.* [13-14.27-15]

The student, who likes pork ribs, feels bad when she eats them because she is aware of the living conditions of the pigs. However, she loves pork ribs so much, "*they're like the best thing ever*", that she continues to eat them despite the way she feels.

The student who suggests she has gone "*pescatarian*" feels bad about eating fish (although the meaning of pescatarian is a person who does not eat meat but who *does* eat fish). Her assertion may be linked to her stepfather's ethical interest in "*looking after the world and stuff like that. He's gone vegetarian to help keep animals safe*" [S4a:13.16-18] and her desire to do something, or at least look like she is doing something, positive for the environment. She goes on to explain the reason she changed the way she eats:

> *S4a: Oh because I really like meat so I don't like that fact animals die so I thought I will eat meat but I won't eat fish. Coz if I don't eat fish it means less people need to kill them if less people need to eat it.* [14.19-23]

In discussing the conscious effort to change her eating habits: "*I went pescatarian*", this student displays a heightened awareness of the ethical reasons behind not eating fish and that if less people eat fish then less fish will be killed. However, the conversation continues:

> *S5a: But you told me this morning that you love fish*
> *S4a: I never liked fish*
> *S2a: Why?*
> *S4a: It tastes funny, and their eyes just stare at you.* [14.24-28]

It comes out that this student actually "*never liked fish*" so changing her eating habits was an easy and convenient thing to do, not requiring significant change.

Another student spoke of a similar moral dilemma:

> *S2a: I changed because my mum showed me a really disgusting movie about animals dying.*
> *Ra: Oh, ok. And so what?*
> *S2a: Like when they're actually getting killed and their, and then I just stopped eating the*
> *S?a: Meat?*
> *S2a: Yeah. I can't stop eating chicken and fish.*
> *Ra: But you stopped eating other meat?*
> *S2a: Yeah*
> *Ra: Because you saw the video?*
> *S2a: Yep.* [15.16-26]

Because this student was exposed to real-live footage of animals being slaughtered it made her stop eating meat. However, the student differentiates between chickens, fish and other animals. Presumably, because she has not seen similar footage on

chicken and fish, she continues to eat those animals. This student also spoke about how her attitude towards animals had changed over time. As a younger child when she saw:

> *S2a: an animal I'd try, like a lizard or something, I'd just killing them coz I'd stomp on them. At home that's what I'd do when I was little and then when I got to Year 4 and like now I just like I hate dead animals, so I've stopped um stomping them.* [15.30-34]

This change from indiscriminate killing of animals was due to an incident:

> *S2a: Coz one day I saw a lizard and I didn't know I was actually going to get it and then I actually did squish it.*
> *Ra: And that made you feel bad?*
> *S2a: Yeah* [15-16.36-2]

While previous killing of animals was done intentionally, as an older child and "*hat[ing] dead animals*" [S2a:15.33], the moment she unintentionally killed a lizard was a significant one she clearly remembers and was affected by. S2a later suggests that she would like people globally "*to kill less animals*" [S2a:20.9]. Predominantly these death or near-death significant life experiences (Chawla, 1998; Tanner, 1980) or moments of being (Tipper, 2013) with animals had a considerable bearing on the way these students feel about the environment.

The students' environmental perspectives seemed to range from an anthropocentric disposition that privileges human beings over the environment, that is, the environment is subordinated to human needs, to an eco-centric one in which human beings are part of the broader ecology of life on this planet. Viewing plants and animals as there for us to enjoy and are "*useful to us*" [S1b:10.10] reflects an anthropocentric perspective where the benefits to humans are emphasised. Many students spoke about "*helping the environment*" [S3b:3.8] and when they were asked what changes they would make for the environment, one student says:

> *S3b: And I'll, and I probably won't shoo off the birds I'll probably just let them go on my garden because birds actually help a lot with the ecosystem.* [19.16-17]

While not fully eco-centric, this comment reflects an awareness that non-human animals "*actually help a lot with the ecosystem*". In addition:

> *S4c: It gets hotter and some animals need water so that they ... are dying*

and there's some animals help this environment. Most animals. [8.39-41]

Again, while not entirely an eco-centric notion this student displays an understanding that actually, "*most animals*" "*help this environment*". Another student articulates his thoughts in a way more closely linked to an eco-centric disposition:

> *S3c: Well without [the environment] we wouldn't even [be] here. We*
> *wouldn't have been thought of, invented or anything like that.*
> *Rc: Yeah. But now that we are here how important is it?*
> *S3c: Very.*
> *S2c: Still very.*
> *Rc: Yeah? Why is that?*
> *S2c: Because if we didn't have the environment we wouldn't be alive*
> *because the trees give us air to breathe and [S4c: Plants supply food.]*
> *S3c: (?) Low level scientific. Air? Oxygen (?).*
> *S4c: And some plants supply food for the animals.* [11.8-18]

S3c speaks about humans not even being here if there was no environment. Other students add that "*the trees give us air to breath*" and "*plants supply food*", to which S3c mumbles that these are "*low level scientific*" ideas. Perhaps S3c believes that his, more eco-centric, ideas are more advanced than theirs are?

One student describes not being interested in the environment when she was younger and:

> *always be[ing] scared of animals and stuff and if I was standing close to a*
> *tree or something and it the wind was strong or something I'd suddenly*
> *freak out like I was sort of just scared of everything.* [S1b:15.10-13]

This reaction of fear can be associated with a disconnection from nature (Louv, 2010). However, being older S1b "*can see what's happening more*" [S1b:15.15-16]. She equates this to "*not looking at [the environment] properly*" [S1b:15.13], therefore, she felt she needed to look carefully at the environment to understand it. This emphasis reflects an anthropocentric bias where "*everything*" else was foreign to her and she "*just had to get used to being around living things that weren't humans*" [S1b:15.28-29].

The comments above are significant in understanding the effect animals can have on people's connection to nature. Rather than accepting the often dominant discourse of people, particularly children, having a natural affinity to nature and animals, an interrogation of this reveals that "children's relationships with animals can be seen as

situated and contextualised within their ways of understanding and knowing others and within the dynamics that shape their interpersonal relationships" (Tipper, 2011, p. 154). This therefore warrants attention for future thinking about ESE (Chawla, 1999). Bone (2013) advocates viewing the animal as the fourth educator. This builds on the Reggio Emilia approach to education, where a team of two teachers represent the first two educators and the environment is considered as the third educator (Gandini, 2012). While Bone (2013) focuses on early childhood there is merit beyond this realm (Moe, 2016). Furthermore, of additional significance is that animals may actually have a direct influence on the formation of a child's sense of self (Myers, 2007), which is a noteworthy and potentially fertile avenue considering the emphasis on the individual within the current dominating neoliberal context.

As highlighted, a connection with animals often involved some sort of ethical dilemma. These dilemmas can be linked to people's values and in addition, what is perceived as the right or wrong thing to do. This right/wrong discourse closely relates to the discourse of individualisation and was an apparent tension for many of the participants.

6.4   The right/wrong thing to do

> *T2: Like, why would you not, unless you don't value it and in which case – that's a whole different headset and that's the stuff that I oppose.* [11.20-22]

Within the interviews, many participants discussed the support of ecological sustainability as something related to personal values, that is, ethical and the right thing to do.

6.4.1   Values and ethics

Lewis, Mansfield and Baudains (2008) assertion that "values are central to environmental education for sustainability" (p. 153) was apparent in many of the interviews. Consistent with the Brundtland definition, the Deputy Principal of Acacia Primary School sees ecological sustainability as, "*ethically it's important; morally it's important to make sure that there's enough to go around for everybody and for the years to come for the next generations. If we don't I guess there will nothing for*

the future" [T8:7.4-7]. Regarding ecological sustainability as an ethical and moral imperative is a consistent view amongst many of the participants. In addition, "*sustainability's laden with value judgements of what you consider to be something that should be sustained*" [T3:7.26-27].

While doing things like recycling is seen as a good thing, the "*underlying values*" are seen as more important than recycling and gardening, which are just "*surface stuff*" [T2:12.27-31]. In addition, teaching "*ethical considerations about what you're doing in the world, that's a very important part of a rounded education*" [T3:13.40-42]. One staff member responded that explicit ESE is "*not something that I do every day, I don't do lessons on it every single day, but I talk to kids about it and they have questions and they want to know things*" [T3:13.42-44]. This form of education "*in day-to-day conversations*" is seen as "*more effective with individual kids, coz sometimes that will get through to them more*" [T3:13-14.47-2]. This represents two understandings of ESE; one is the stand-alone lessons on various aspects and the other is based on incidental conversations, which are seen to be "*more effective*". This links to T3's differentiation between "*surface stuff*" and the "*underlying values*" so that both participants see the explicit, practical and informative lessons on ecological sustainability, as less efficacious. This notion is supported by Kollmuss and Agyeman (2002) who argue, "more education does not necessarily mean increased pro-environmental behavior" (p. 248). Jensen (2002) puts forward the reason these lessons may not be effective is that they may align with traditional environmental education where knowledge about environmental problems is transmitted to students. Instead, an action-oriented form of ESE should be embraced where knowledge is understood through a lens of action and change.

Furthermore, "*critical literacy*" is seen as "*one of those underpinning skills in values education that provide [the students] with more tools to be better democratic citizens*" [T2:13.42-43]. The staff member believes that "*just understanding that that information is weighted is probably a better tool than teaching them how to separate plastics*" [T2:14.2-3]. This quote identifies that this participant considers there is more to supporting ecological sustainability than recycling. While this participant identifies critical literacy as an important skill in enabling a more thorough understanding of concepts related to ecological sustainability, this form of thinking

can be expanded to other areas of the curriculum. Critical thinking is a crucial aspect of ESE because without it lies the potential for the education to become indoctrination (Seatter, 2011). This participant suggests that critical thinking is "*probably a better tool*" than teaching the students practices that can be understood as pro-environmental actions, This supports ESE by promoting critical thinking *in conjunction* with pro-environmental actions and "involves conscious, committed, and *competent* action and not simply doing *something* [italics in original]" (Seatter, 2011, p. 29). Therefore, pro-environmental action can be understood as a conscious and thoughtful act to minimise one's negative effect on the planet (Kollmuss & Agyeman, 2002; Seatter, 2011). This action may be direct or indirect, and can be individual or collective and is based on knowledge that is action-oriented (Jensen, 2002). Similarly, Giroux (2003) advocates a democratic education through a concomitance of critical thinking and active engagement in important social problems such as the environmental problems associated with ecological sustainability.

Reflecting on the whole staff at Acacia Primary, one staff member proffered that if they "*asked everybody what your belief is, how sustainability's taught, the range of answers would be incredibly different. People's engagement with it as a concept would be incredibly different*" [T2:21.19-21]. This comment is indicative of the diversity of worldviews and values that can exist within one community of staff members, and part of the challenge of generating and sustaining a focus on ESE is managing and negotiating this diversity. It is suggested, "*not everybody values the same thing*" [T2:21.30] and that some people "*would see themselves as value neutral*" [T2:21.32]. However, it could be argued that although some of the staff may say that they are "*not here to teach about values*" [T2:21.31] no educational values are politically neutral and "*you're actually playing with a whole range of values*" [T2:21.34-35] within the school. This, and the following comments, suggest that as a teacher there is a level of autonomy with what they teach in the classroom regardless of the school values, and when referring to ecological sustainability T7 states:

> T7: Well I'm gonna do it anyway, I wouldn't care what school I was at, I would do it anyway, even if they didn't particularly value it, I'd do it anyway with the kids. [17.22-24]

Overall, while values are discussed by many of the participants a consistency within the interviews and the literature is that the "value bases of sustainable development and sustainability are variable, unstable, and questionable" (Jickling & Wals, 2008, p. 13). Nevertheless, while the green radicalism discourse did not prevail, there was still an understanding amongst the participants that supporting ecological sustainability and pro-environmental behaviour is the right thing to do.

6.4.2 Doing the right thing: A discourse of common sense

Ecological sustainability and pro-environmental behaviour are largely understood by the research participants as "*something that's good*" [T3:8.35] and working particular manifestations of ecological sustainability into the curriculum is seen as the right thing to do. Perceiving ESE as "*the right thing to do*" may work as a regulator of whether this form of education is embraced or not as those with a "*different headset*" who "*don't value it*" [T2:11.20-22] may not consider it to be "*the right thing to do*". In many cases within the interviews, practices categorised within the individualisation of responsibility (Maniates, 2001) are represented as "*the right thing to do*". This sort of discourse was voiced by many participants who believe that supporting ecological sustainability "*just makes sense*" [T3:9.35], "*like why would you not*" [T2:11.20] do it? This sensibility highlights a divergence between pro-environmental behaviours and green political agency. Behaviours characterised within the individualisation of responsibility are generally "*small*" behaviours that are more readily accepted or tolerated than radical political action and a critique of broader production and exploitation systems. In addition, many comments reflect an individualised approach rather than a broadening of collective action. This discourse of ecological sustainability as individualised common sense is interesting, particularly considering the earlier comments on sustainability definitions highlighted numerous discourses and understandings of ecological sustainability, its inherent values and ethics and its concomitant pro-environmental behaviours. Nevertheless, there is a discursive inclination towards a common sense approach to supporting ecological sustainability. This rhetoric of a common sense approach to sustainability abounds beyond the school and into other realms, such as the corporate world with publications such as the Woolworths, *Doing the right thing – Sustainability Strategy 2007–2015* (Woolworths Ltd, 2007).

To interrogate the concept that doing the right thing is common sense it is useful to refer to Gramsci's (1971) notion of cultural hegemony where the dominant group guides the accepted norms. Therefore, what is deemed common sense may not be the same for everyone, nor may it have any clear coherence. Rather, *common* sense can be understood as "fragmentary, incoherent and inconsequential" but with coherence, it can be realised as *good* sense (Kenis & Mathijs, 2012, p. 58).

Doing the right thing that "*just makes sense*" is also linked to doing the wrong thing. A consequence of the school encouraging responsible resource management is that some of the students "*will get quite anxious if someone's put something in the wrong bin*" [T5:10.21-22]. The students learn the consequences of doing the wrong thing, such as: "*if you put a bit of plastic or something in [the paper bin], they know you've contaminated that batch of paper and it has to go into landfill which isn't good*" [T5:10-26-28].

Doing "*the right thing*" also connects with "*educating for a better future*" [T2:4.21]. One staff member has conversations with her class about their responsibility for "*global resources*" [T2:13.26] and at other times when she noticed a student wasting resources she would point out their wastefulness or ask what is "*the right thing to do in our society*" [T2:13.29]? Although she acknowledges that the "*right thing is, is huge*", she suggests that it is "*within everybody's capacity and interest area*" [T2:5.19]. This is because this staff member suggests that the "*right thing*" is about riding a bike, having solar panels, being a member of the Greens Party, growing your own vegetables and being a vegetarian. She says that "*everybody chooses a different range of, of things to do to make things better*" and you cannot actually say, "*these are the right things to do*", you just have to "*encourage people to look at what's within their capacity and what's within their interests and to do it*" [T2.5.29-35]. However, what is within someone's capacity and within someone's interests is not always the same thing and "*the right things to do*" may be contested because what is deemed as being right is socially constructed.

As found with the individualisation of responsibility, looking at the common sense of ecological sustainability highlights a dominant discourse of individualism. While practices associated with the individualisation of responsibility are highlighted and

encouraged within the school there is also an undertone of resistance bolstered by individualisation.

6.4.3   Whole school focus? An undertone of resistance

Staff members felt that by the time students were in middle primary having a "*whole school emphasis*" [T2:12.38] on ecological sustainability, in conjunction with its presence in "*the media*" [T2:12.39], meant that students had "*already been exposed to a lot of that [sustainability] stuff*" [T2:12.41]. These comments indicate an understanding that sustainability is "*stuff*" out there rather than day-to-day, inherent matter. Although, daily routines "*like recycling and monitors to turn off lights when you leave the room. … collecting rainwater and using that, things like that*" were discussed in comparison to "*actually physically setting aside a time*" [T5:3.26-30]. T5 remarks that incorporating these things is:

> *T5: great but as long as they know why they're doing it. You don't just put that in the red bin because it's supposed to go in the red bin, to know the philosophy and the reason behind that is probably the best sort of education as well.* [15.26-30]

Therefore, the philosophy behind the practices should be explicit. This comment is aligned with supporting Dryzek's (2013) green consciousness discourse. This was further articulated in the staff's encouragement in their students actively supporting ecological sustainability and emphasising the importance in having a good understanding of those actions because "*if they can't identify what they're doing and why they're doing it, then they're not empowered to go and make those choices, A) in the first instance through their families*" [T2:12.14-17]. At Acacia Primary a focus on the environment is a key school policy, therefore, having a whole school emphasis on ecological sustainability is a step in encouraging a green consciousness discourse with potential to spread throughout families, albeit limited to lifestyle.

However, within the interviews is the sense that not all the staff at Acacia Primary School are supportive of the school's environmental focus. This is something the principal herself acknowledges about the staff and that, "*half would be quite dedicated and the other half, um moderately interested*" [T4:23.17-18]. While there are "*some pretty strong common values*" amongst staff at the school, "*there are people who roll their eyes every time {the principal} talks about climate change and environmental sustainability*" [T2:22.4-8]. This response has an undertone of silent

resistance or reluctant acceptance. This may be due to an excessive repetition by the principal, or due to the staff member's belief or lack of care in ecological sustainability, or in the strategies being pursued by the school to achieve ecological sustainability.

In educating the staff members about ecological sustainability, one staff member indicated they "*were inundated with information, saturated with information*" [T5:8.15-16], supposedly having had as much information as could be absorbed. Of further interest is this same staff member discussed his personal fear of "*disengaging [his students] by bombarding them with too much information*": [T5:14.24-25]. Another staff member's comments reflect a similar idea that the staff were "*saturated*" with information when she spoke of seeing "*yet another film*":

> *T1: My comment to [the principal] was, 'it's with the wrong people, {principal}'. … she's taking* us*, and she should be taking – it should be other adults, really who are quite happy to go along with the little perspective on things.* [7.20-25]

This highlights a discontent that the principal is preaching to the converted, and should rather be educating other people in the community who only have a "*little perspective on things*". Furthermore, the deputy principal also refers to staff members' passion around sustainability and that "*the passion just diminished, a little bit*" [T8:8.31]; however, she claims it is because staff "*are doing it automatically like embedding it or building that perspective into their teaching*" [T8:8.34-35].

A dissonant undercurrent within the school staff is also evident in an interview where one staff member was discussing some of the small things she does in the classroom to help teach the value of resources. When highlighting how small some actions can be, this staff member acknowledged, "*people mock me*" [T2:6.36], signalling that others may not believe that what she is doing is the right thing to do.

The inconvenience of nude foods

One method many schools, including Acacia Primary, use to reduce litter is the idea of *nude foods*, that is, food without wrappers. Aimed towards children bringing food to school without excess packaging, thus reducing the amount of waste sent to landfill, the "*nude foods*" [T5:12.14] program was encouraged, though not mandated, nor a policy, through the whole school. The staff members speak about actively

modelling this practice to their students, as well as making explicit the reasons for the various practices. Consistent with supporting the green consciousness discourse, constant questioning reinforces and encourages individual sustainable practices; why are you doing this, and what is going to happen in the future? This encouragement of critical reflection is supported by Seatter (2011) who argues that to facilitate ESE, justification of actions should be articulated.

Even though the practices associated with nude foods were encouraged across the school, they were not supported by all. Some of the participants blamed other staff members' and parents' attitudes as being a barrier to supporting ESE. Although it could "*be very confrontational*" [T7:17.33], T7 modelled and tried to educate others the reasons behind nude food, including a staff member who does not support the program:

> *T7: So I say, 'Well then, you can put on more plastic wrap all the time but that's going to stay around for their grandchildren.' 'I don't care, at least the sandwich is going to be, is going to be moist'. (Laughing) I think 'okay that's a price'. [17-18.41-3]*

While the other staff member sees the inconvenience of nude foods, T7 sees that the environment is paying the price for a moist sandwich, and while she admitted that "*those little barriers, I mean I can't make a change for that, that's an individual personal change*" [T7:18.7-8] she asserted that "*I can model it and I can be as obnoxious as, as is required*" [T7:18.10].

The students also note the downside of this initiative:

> *S1b: I got all excited as a little kid about don't have wrappers in your lunch so then – but then I got all annoyed at my mum coz I didn't like the stuff she was putting in without wrappers ... [23.31-33]*

This highlights that nude foods may not be considered by some people as being as nice as processed/packaged food. Consumer habits are further articulated by T7 in discussing her promotion of nude foods with her students that are new to Australia and how she makes comments to students on the amount of wrapping they have in their lunch containers. T7 identifies the tension involved with the school's focus on nude foods and the growth of consumer mentalities. She admits that:

> *T7: parents hate it, but – usually they come starting off with really sustainable containers, I mean my kids, the Chinese kids have this huge*

> *system where's there no plastic, it's all washed, they have their own chopsticks ... Then gradually they'll start asking for plastic spoons, and I'm thinking, 'no I don't want to give you a plastic spoon, because you're going to use it once and then you're going to throw it away. And it's going to be around for thousands and thousands of years'. And so it happens, like all the time.* [9.15-22]

The fact that some staff and "*parents hate*" the emphasis placed by the school on nude foods demonstrates a reluctance to participate in that particular practice. By T7 reiterating that the encroachment of consumer habits "*happens, like all the time*" highlights that this is not an isolated occurrence. Rather, this conversion to a consuming individual happens frequently and generally within a short space of time, that is, "*all over the course of a year*" [T7:10.4].

The tension between what is largely understood as the right thing to do and the growth of individualised, consumer mentalities as well as the resistance in supporting pro-environmental actions is considered by some participants as being lazy.

Ecological awareness or being cool and lazy

Partaking in practices that do not support ecological sustainability is considered lazy by many of the participants. One parent confesses that she "*used to be lazy*" [C4:7.36], but the effort of Acacia Primary in supporting ecological sustainability prompted her: "*I got my act together too so it forced me to be more ecologically aware and less lazy*" [C4:7.41-42]. Considering actions that do not support ecological sustainability are regarded as just being lazy suggests an alignment with pro-environmental actions as the right thing to do.

A challenge the participants, particularly students, feel strongly about is littering, and when asked, "*What is the number one thing you would change if you could about how this school cares for the environment?*" many voice similar desires:

> *S1a: Make children less lazy coz they just chuck their rubbish wherever.* [19-20.33-3]

A recurring frustration by the focus group members who are in the school's environmental group is the belief that other students are taking advantage of them. The environmental group members exhibit a collective concern for the environment and actively pick up rubbish in an effort to care for their environment. Other students, particularly the older ones with more of an individual focus, do not

"*bother*" [S5a:22.18-21] to recycle or put their rubbish in the appropriate bin because there is the belief that someone from the environmental group will do it.

> *S1b: I think also it's good having [the environmental group] because before you go to high school, when you get to high school people often just think 'I'm gonna be really cool and just leave my rubbish lying around, someone else can pick it up, I'm gonna do what I want' [S2b: Yeah and get lazy.] 'and forget about everything else everyone else and just other people can do it for me, whatever'. And here the [environmental] group, we're trying to encourage everyone else to not do that but to pick up your rubbish, put it in the bin not just leave everything and get someone else to do it for you because if everyone does that then there's gonna be no one to do it for you because everyone's doing that so. [20.14-23]*

Again, the focus on the individual over collective concerns is present when this student spoke about high school students who are lazy and think it is "*cool*" to litter. While the environmental group "*educate the little kids a lot*" [S2b:26.5] the students appear keen to educate the older students because they are also old enough to know what they are doing and make an informed choice. The students also believe that it is the older students who are the main culprits with littering and reiterate that they think these culprits are "*just lazy*" [S2b: 26.42] and "*trying to be cool*" [S1b:27.2]. It seems that it is "*fun*" [S1b:26.26] and "*cool*" to litter, which makes looking after the environment not a cool thing to do. Whitehouse, et al. (2014) also found that "environmental action is still not seen as a 'cool' social practice in some adolescent peer groups" (p. 106). Therefore, doing the right or wrong thing is inherently linked to individual choice and social (non)conformity.

The recycling system at Acacia Primary also appeared as a significant aspect within the school that is linked to doing the right or wrong thing.

Recycling system

The school's recycling system consists of a number of different bins in each classroom:

> *T7: Ah, there's paper, paper there's reusing paper, so there's another one for reusing paper, there's a black bin for – I never knew what the black bins were until last year – for 10 cent recyclables. There's a red bin for landfill, there's a green compost bin that we put in just food, scraps to go in. So that's five I think there's one more too, no that's it, yeah … so two paper ones. [16.21-25]*

One staff member suggests that the school "*could do a lot more*" [T7:16.16] to support ESE; however, "*sometimes people's attitudes about smelly rubbish bins. Sometimes ... I might be one of the only people that uses five of them or so many*" [T7:16.17-19]. It is pointed out that "*things frustrate people with the bins*" [T5:4.19]. One staff member who was glad she did not have the full recycling system in her room rejoices, "*I've only got the two, yeah, yeah, which is really great because that would be a really nightmare, that would be terrible, that would be terrible*" [T6:10.32-35]. The main points of frustration are that "*the green bins don't always get emptied on time and you get flies and bugs and things like that*" [T5:4.21-22], therefore, "*some people won't use it*" [T7:16.36-37]. However, one staff member sees the flies and mice and "*other bits and pieces*" associated with the various bins as "*the* only *disadvantage*" [T7:8.31-37] of working ecological sustainability into the curriculum.

The disadvantage in using the full recycling system seems to be in its maintenance. Not all staff members use the full system because of the vermin they attract and in one staff member's case, this means that she manages some of the bins from three classes. Although the students are educated about what each bin is for the "*retrain[ing]*" is constant and "*has to go on all year long*" [T7:16.29-34]. The particular staff member who does this constant retraining indicates that she has "*to be pretty, pretty stubborn to keep them going*" [T7:17.2]. This is because:

> *T7: nobody wants to empty out that green bin, but I make sure everyone gets a turn of doing it, you* will *have a turn to actually go and open that lid with all the flies and throw all the stuff in and you will, you will do it, because it will help.* [17.4-7]

Therefore, while emptying out the compost bin was something that no one wanted to do T7 persistently made sure everyone had a turn and emphasised that in doing so "*it will help*". The students also signalled issues with using the compost bin:

> *S1b: With the compost bin ... some people don't like to use it because some people feel like 'I don't wanna eat my sandwich today but if I put it in there the teacher will tell me off for just chucking out my food'. So then people* don't *put it into there, they go and just put it into a normal bin.* [22.39-43]

Here the student highlights that some people do not do the right thing for fear of being reprimanded.

Space was also raised as an issue: "*oh the buildings are frustrating, there's not enough space*" [T1:15.12-13] – this is particularly pertinent in relation to the recycling system: "*in storage when you've got four bins in one space that's, yeah, that's a lot of bins*" [T5:4.35-36]. One staff member proposed a solution for this issue: "*we'd just like to have one bin for everything (laughing)*" [T5:4.30]. Therefore, successful implementation of the recycling system appears too inconvenient for many people at the school. This again highlights preference in individualised choice as a detriment to the common good.

Across many of the interviews, in spite of a tension between doing the right or wrong thing, overall participating in pro-environmental actions is deemed as essential. Furthermore, in reference to the future there are many comments about "*change*" and working towards a "*better*" future. These comments align with contrasting discourses, one connected to doom and gloom and another that is more optimistic.

6.5 Future thinking: Educating for a better future?

> *T8: We need to be doing something* different *to what we're currently doing. Yeah – changing our practices; changing the way that we do things around sustainability.* [15.5-6]

Amongst the interviews, there is a clear focus on the future of the students and the future of the planet. Participants clearly articulate a need for "*change*" and to make places "*better*". T7 argues that working sustainability into the curriculum is beneficial because the students:

> *T7: have to live with our issues, I mean this is their issue, their kids are going to have to pay the price of what our generations and generations before have done.* [8.20-22]

The purpose, therefore, for ESE is "*to make their, their world a better place*" [T7:8.26-27]. One staff member proposes that the school's focus on ecological sustainability makes them a "*spotlight school*":

> *T3: It's probably ahead of its times, in the fact that its thinking about the future and making this, like this is prior to them having sustainability in the national curriculum or anything like that. Something where staff were educated about the issue and then the whole school try and make a significant difference was a great idea.* [2.18-23]

This highlights a future focus of the school that was instigated before sustainability was in the curriculum.

While the participants speak positively about many aspects of Acacia Primary School and their schooling, they also appear to believe they are part of a deficit model as there is much talk of "*mak[ing] places better*" [S1b:5.10-11], particularly "*our school better*" [S4b:5.15]. This is consistent with the dominant ecological sustainability discourse: that we are living unsustainably therefore need to change and educate for change, and improving the school environmentally is a focus of the school's environmental group. Even though the environment may benefit through improvements, Almeida and Vasconcelos (2011) suggest that the emphasis on improving the school area is grounded in anthropocentric ideas since it is based on improving the quality of life for the school and its community members. While the process of changing things from a deficit to a better environment may be linked to anthropocentric tendencies, what can also be determined is what sort of change is favoured. An alternative position could be one within the green consciousness discourse that seeks to change the world by changing the way people *think* so that *people* are different. It sees people as the first thing that needs changing and through this will come an improvement to the environment and support of ecological sustainability. Therefore, the onus within "*educating for a better future*" is through green consciousness change.

In addition to "*educating for a better future*" [T2:4.21] one staff member says that the school's environmental focus means:

> *T3: ... that there's a priority there for the future of students at this school ...*
> *to at least educate children about something that I believe in quite strongly.*
> *Like I think that's definitely gonna be an issue in the future. ...* [3.31-34]

Therefore, this staff member believes that the state of the environment is going to be an issue in the *future* and in line with the school's focus, is committed to educating the students for this *future* within a sustainable development discourse. While demonstrating a commitment to ecological sustainability, this staff member reflects a form of traditional education, one that prepares students for *future* work and success rather than one that immediately engages with society and social structures. What is absent is the explicit idea of educating the students for *today*.

The future focus presented above is in terms of creating change for a better future, much in line with the sustainable development discourse. There is also a focus on the limits of the planet linked to a discourse of limits and survival and a sense of doom and gloom. However, there was also a sense of hope and optimism.

6.5.1 Doom and gloom

The limits and survival perspective on the future is evident through participants' demonstrated awareness of finite resources and "*that wasting energy could harm the environment … which needs to be sustained*" [S4b:9.12-15]. One participant favours nuclear energy "*because I guess it helps everyone in a way, maybe with technology or maybe with education*" [S4b:9.21-22]. This view is consistent with the promethean discourse that favours technological advances and where nuclear energy is created for human use.

Another student expanded the discussion on finite resources to:

> *S2b: find more ways of sustainable energy sources like wind power and*
> *hydroelectricity instead of using the fossils and the coal to you can't reuse*
> *those and then it takes something like three million years to make more. So if*
> *we run out, we run out.* [9.32-35]

This quote can also be linked to the promethean discourse as the focus is on finding alternative sources of energy to those deemed finite. In addition to the discussion of finite resources, the importance of enjoyment is articulated in terms of the sustainability of plants and animals:

> *S1b: We need animals and plants to still be really healthy because when*
> *they start to die out then a lot more things start to die out and, we kill a lot*
> *of plants and animals these days and, they're gonna run out one day and*
> *we're not going to be able to enjoy them or, they're not going to be useful to*
> *us as they are now.* [10.7-11]

Here it can be seen that it is important for "*us*" "*to be able to enjoy*" plants and animals and furthermore, that they are "*useful to us*". Consideration of nature as something that is "*useful to us*" is anthropocentric and inherent in the sustainable development discourse.

The focus on limits within the limits and survival discourse can also be identified in participant comments relating to the looming tragedy (Dryzek, 2013) of ecological sustainability. A future focused aspect is the participants' own views of the future.

T3 states that they are quite an "*advocate*" for ecological sustainability and in particular for addressing climate change. However, they are "*fairly pessimistic about what's gonna happen in the future*" [T3:4.3]. While this participant is "*aware of different arguments as well, the fact that some people may not believe science but I just have a fairly deep-down belief that something has to be going wrong*" [T3:4.17-20]. This "*deep-down belief*" may have stemmed from the length of time this participant has spent in the environment and seeing changes over time, remembering what things were like as a child.

In addition, this participant compares smoking with the environment, and that "*what we're doing with the climate, it's a gamble*" [T3:4.25], citing that "*we can't continue doing what we're doing a current way without having some type, type of side effect*" [T3:4.14-15]. Therefore, the looming tragedy of the planet is like smoking: "*it's a gamble*" whether or not the smoker will get lung cancer or some other health issue, like it is a gamble to live unsustainably without having a negative effect on the planet. T3 further articulates:

> *Within 50 years, it's gonna be a very, very different world that we live in and even the fact that there's an expectation to maintain the current way of life that we've currently got, and that's an unsustainable way of life, coz it's based around growth and consumption and pollution and all these type of things. So we gotta do something about that.* [6.15-19]

Therefore, the discourse of limits and survival, with the narrative of looming tragedy unless drastic action is taken, is evident. When referring to the benefits of ESE, one staff member proposed that much of the responsibility for averting the looming tragedy is on children. This places much onus on students, believing that if *they* do something about the state of the environment then the "*future's looking good*" but if they do not "*their world will be gone*" [T9:7.10-19]. However, the main thing T9 recommends is resource management. Again it is apparent that what is believed to be the most appropriate response to addressing the looming tragedy is through private-sphere environmentalism (Stern, 2000), individual behaviours rather than promoting collective action for social change, that Maniates (2001) argues has more potential to save the world.

Although some of the participants are "*interested in the politics of what's going on*" [T3:4.1-2] and think that ecological sustainability is a "*serious issue*" [T3:4.8], and

that with inaction the "*world will be gone*" [T9:7.17], there is little articulation of encouraging anything other than an individualisation of responsibility. The discourse of individualism can be understood as addressing ecological sustainability in a piecemeal fashion that is not adequate for significant change (Maniates, 2001). However, the extensive emphases on the individualisation of responsibility highlights that the ideological challenges of public-sphere environmentalism (Stern, 2000) or collective action for social change might be beyond the ambition of many of the participants. Alternatively, if a discourse of marginalisation is dominant, any participant who may support a more active green politics position may find themselves constrained or even powerless to enact.

The students demonstrate an awareness of the looming tragedy that could happen if global warming continues; however, they are not scared by it:

> *S1c: The weather's rising and if it gets too hot that it won't be a good thing because the arctic will melt and that'll lead to rising oceans.*
> *Rc: Yeah?*
> *S4c: And flooding.*
> *S1c: Yeah.*
> *Rc: Yeah?*
> *S1c: And the seas will be washed away and.*
> *Rc: So does that scare you?*
> *S1c: No it's not in the near future, it's over time so.*
> *Rc: Yeah.*
> *S4c: It's about a hundred million years away probably. Or less.*
> *(Laughter)* [5-6.39-10]

While the students are aware of imminent global environmental destruction they are not scared by it as they conclude that it will not be in their lifetimes, it is "*about a hundred million years away*" [S4c:6.9]. The laughter that follows this discussion leads one to speculate that although these students seem passionate about supporting ecological sustainability, the ensuing devastation is not really something they need to be concerned about as it will be a problem for *their* future generations, denoting a sustainable development discourse. The students exhibit a detachment from the future. While they are not scared of possible future environmental destruction, they do not feel positive about the future. However, they still exhibit a sense of hope, as they believe that they can do something about it.

6.5.2 Hope and optimism

Many of the student participants demonstrate a sense of hope or optimism for the future, particularly those within the school's environmental group. The environmental group, consisting of students and guided by the school's principal, is an important feature of the school and the students suggest that it makes the school special. Students are encouraged by school staff to join the group and a large number of Year 5–7 students are members: "*about 80% of them are in it*" [S1c:14.32]. However, it is troubling that there was the assumption that you would only join "*if you're really good at gardening*" [S5a:1.9-10]. The students in the focus groups who were members of the environmental group displayed a feeling of empowerment, but they were aware that not all the students had the same incentives as them. While there are a large number of people in the group, it was evident that only a small number were active. Out of a large cohort of students who have signed up to be in the environmental group, it is usually "*in between five or ten*" [S1a:22.26] students who attend. It seemed that some students' membership in the group was not linked to the environment, rather they did it to get out of classes, even though most of the work is done during break times. Others joined for the perceived popularity. Another important and unique aspect of the environmental group was that students could be voted as leaders. However, being a leader was also linked to popularity, "*and getting popular votes for leaders*" [S3a:21.18].

In spite of the large number of inactive students in the environmental group, the popularity of the group was encouraging to the students' sense of what they could achieve on a larger scale and, with firm optimism, they yearned to "*get everyone else to join*" [S2a:19.23] the group:

> *S3a: coz {Acacia} has so many kids that care about the environment, it's more likely that Australia will get better environ[ment] like have healthy environments later on in … a couple of years* [2.17-19]

This student's future focus is of interest as they are optimistic that, again, this change will take place nationally in "*a couple of years*".

The school's student environmental group is an avenue for increasing student awareness on various sustainability issues, and a significant conduit for students to participate actively in ecologically sustainable practices. Through the environmental

group, the students are empowered to educate others and take action on ecological sustainability, both within the school through recycling and conservation and beyond the school through letters to the council. T1 echoes this response:

> *T1: We don't want to educate kids with their heads in the ground ... we need them to learn to be speakers, and to have the information that they can actually stand up and say, 'this is the information', and know what they're talking about to be able to answer these people, who have this other point of view.* [11-12.41-4]

This is an aspiration to educate students with the skills and knowledge to participate actively in debates about ecological sustainability, which could also be priming students for political action.

The student participants at Acacia Primary all feel that learning about ecological sustainability at school is a good thing. This is because "*it teaches you things and so you can change*" [S2b:18.7] and many students feel empowered by this. Importantly, they seek to educate others to "*change*" what they are doing. This education for change acknowledges non-sustainable lifestyles and educates for action. A student reflects on her experience at another school where she "*pick[ed] up rubbish and that's it*" [S2b:3.11-12], whereas at Acacia Primary they feel empowered to "*change the species of flora*" [S2b:3.14-15] and they actively participate in "*encourage[ing] different species of insects to come*" [S5b:3.28]. The students could also see the potential of what they could do, as they get older:

> *S1c: So when we get older we can [S4c: We can teach other kids] [S3c: Hmm] we can teach other kids so. And, and take learn how to take action to it, don't just stand there and watch it unfold.* [11.27-29]

Students show that they feel empowered to encourage active participation, in supporting ecological sustainability, in others so that people "*don't just stand there and watch it unfold*". Students suggest they would "*start acting to what we've learnt*" [S2c:12.12] and are enthusiastic about taking charge of their knowledge and turning it into action. Furthermore, educating others helps to increase the awareness of the daily choices people make. Looking further into the future some students refer to intergenerational learning where they could pass their knowledge "*on to our kids*" [S4b and S3b:12.2-3].

Overall, although there is a discursive sense of doom and gloom, the environmental group in particular appears to be significant in producing a sense of empowerment and optimism for the students. This sort of group has the potential to build a strong foundation for collective action that counters the dominant discourse of individualisation.

6.10 Summary

From the above analysis, it is evident that various discourses are in circulation around Acacia Primary School. The dominant discourses that align with Dryzek's (2013) typology are predominantly sustainable development and green consciousness; however, moving beyond Dryzek's (2013) framework, it is apparent that an overarching discourse exists. The dominating discourse, enveloping much of the data from the interviews and focus groups and marginalising the discourses of ecological sustainability, is one of individualisation. While there are many practices undertaken and encouraged that can be connected with supporting ecological sustainability, most can be understood through Maniates' (2001) depiction of the individualisation of responsibility. In addition, there is an apparent tension between a discourse of individualisation and a discourse of responsibility. The students, in particular, recounted significant life experiences, specifically with animals. However, these were in contrast to ethical dilemmas involving other animals. Furthermore, a discourse of individualisation was inherent in the participants' articulation of values and the right, wrong or common sense things to do in support of ecological sustainability. Finally, in spite of evident doom and gloom, there is space for hope and optimism, particularly with regard to the collective action fostered through the school's environmental group. I discuss the implications of the identified dominant discourses with respect to the focus and facilitation of ESE further in Chapter 9.

Challenges for a school in a neoliberal context

> If we are entering the danger zone of so transforming the global environment, particularly its climate, as to make the earth unfit for human habitation, then further embrace of the neoliberal ethic and of neoliberalizing practices will surely prove nothing short of deadly. David Harvey, *A brief history of neoliberalism* (2005, p. 173)

School staff, students, parents and community members all partake in an ideological dance between their own desires and the institutional constraints of their school (Sonu, 2012). The intricate negotiations that enable or contest the inclusion of ecological sustainability in the curriculum are of particular interest considering the effect of neoliberalism. Neoliberalism draws value away from collective wellbeing or the social good, and instead places education's focus firmly on individual performance and economic productivity (Cranston, et al., 2010; Davies & Bansel, 2007; Jickling & Wals, 2008). This shift from the collective to the individual can be linked to globalisation, the "international manifestation" of the encroaching neoliberal agenda (Quiggin, 1999, p. 240), and the permeation of neoliberalism has accelerated the globalisation process (Kotz, 2002, p. 76). Parallel with ecological sustainability, in terms of wicked problems, Carter (2013) argues that globalisation may be "the wickedest of a wicked bunch" (p. 121) since globalisation underlies many problems distinguished as wicked, such as climate change. Consequently, taking Quiggin (1999) and Kotz's (2002) views, this could deem neoliberalisation the quintessential wicked problem.

Therefore, in an era marked by neoliberalism, with its distinct emphasis on individualism, economic productivity, choice, transparency, autonomy, excellence, competition, standards, accountability, marketisation and performativity, it is pertinent, when undertaking research, to consider the effect this political agenda may have. Guided by the premise of social constructionism that reality is socially constructed, the following analysis seeks to determine whether aspects of

neoliberalism affect how an urban primary school might facilitate and sustain a focus on ESE.

Drawing from the interviews and focus groups involving internal and external stakeholders from Acacia Primary School, this chapter examines a school's tensions and challenges in the inclusion of ESE at a time when neoliberalism is dominant. Linked to the key research question, the second sub-question that guides this study is: *What challenges are involved in the inclusion of ecological sustainability in the curriculum of an urban primary school, in an environment characterised by the demands of neoliberalism?*

To answer this question the following sub-questions were developed to explore what these challenges will likely comprise:

- What negotiations are involved in building, retaining and progressing a school's focus, in this case supporting ecological sustainability education? And what may contest this focus?
- What are the limitations of negotiating ecological sustainability education into the school?

Therefore, framed by the theme *challenges for a school in a neoliberal context*, this chapter is structured into two distinct sections of analysis regarding the inclusion of ESE: the negotiations and contestations, and the limitations. While some challenges may be considered both a negotiation and a limitation, these two classifications have been differentiated in this study as follows:

- Negotiable aspects may be worked with or around such as political beliefs or individualistic and other neoliberal ideologies.
- Limits (which may also be malleable) are more concrete, such as the leadership team in a school or the amount of money, resources and time a school and its staff have access to.

Apparent throughout much of the interview data is a prevailing discordancy, underpinned by a neoliberal preferencing–marginalising duality. Sitting under negotiations and inextricably linked to neoliberalism are themes largely connected to ideologies. These are the subversiveness/pervasiveness of politics,

compliance/autonomy and disciplinary power, the selfishness/selflessness of individualism and the common good, and the good life. The themes framed as limitations are the leadership or management of the school; the rhetoric/reality of sustainability in the curriculum; and commonly identified limitations such as money, resources and time. The following section presents the first group of challenges – the negotiations and contestations involved in a school progressing and retaining a focus on ESE.

7.1   Negotiations for an urban primary school

The power and influence of politics emerged as a dominant theme through much of the data, both within and external to Acacia Primary. These various political discussions present themselves as aspects that require a level of negotiation. As identified in previous chapters, neoliberal rhetoric favours market logic without government intervention. However, ultimately, in Australia and many other countries the government actively steers from a distance. Consequently, the school curriculum and programs supported within schools are highly influenced by governments' invested interest in them. This can be seen in the preferencing of literacy and numeracy and the marginalising of ecological sustainability. However, the influence of governments is evidently more pervasive as, through the media, political leaders espouse their beliefs to an unassuming public. Negotiating the subversiveness and pervasiveness of political beliefs is therefore a significant challenge. This challenge is even more complex considering regulations in schools that prohibit the discussion of personal political beliefs. As a result, there exists a tension between futility and hopeful futures.

7.1.1   The subversiveness/pervasiveness of politics and a discourse of marginalisation

> *S1b: Tony Abbott said he didn't care about climate change or anything coz there was nothing he could do about it* [15.5-6]
> (Student – aged 12)

Political aspects are mentioned in many of the interviews in terms of people's political beliefs and actions as well as in reference to the government, people in power and their agendas. While the subversiveness of political agendas in education

often goes unchallenged, the pervasiveness of politics in schools is something that requires constant negotiation. This includes the politics that people are exposed to through the media, as well as people's own political beliefs and the beliefs of their families, colleagues and communities. In addition, having a focus on ecological sustainability is acknowledged as a political choice.

Government steering from a distance

An aspect of politics that requires negotiation can be linked to the concept of government, and in particular, government steering from a distance (Ball, 1993; Marginson, 1997b; Robinson, 2011). Therefore, under a neoliberal government, although decentralisation and autonomy are promoted, institutions and individuals are steered through policy and governmental agendas. This concept is evident where participants highlight federal politics as a barrier to engaging with ESE. In particular, the "*needs and interests*" of federal politics are thought to have a great impact on the longevity of sustainability in the curriculum:

> *T2: My current belief about our current federal politics is that they're not going to allow [sustainability] to stay there … they'll remove it because it doesn't suit their needs and interests.* [22.31-37]

These comments highlight a belief that shows the power federal politics has over the curriculum.

In similar tones, T1 talks with contempt about former Australian Prime Minister, Tony Abbott:

> *T1: Ohh. Just mentioning Tony Abbott will make me mm <u>boil</u>, and his point of view on all of these [sustainability] issues, and the way that he keeps being the ostrich and all of that.* [7.14-18]

Supporting ecological sustainability resonates with T1, therefore she is angered by the former prime minister's way of "*being the ostrich*" and refusing to tackle sustainability issues. The principal also acknowledges the contested nature of sustainability and climate change, suggesting "*we have a federal government who will grudgingly think that it's happening and <u>maybe</u> humans, maybe have something to do with it but in terms of actually doing anything about it they're clearly whitewashing the whole issue*" [T4:5.37-40].

An inconsistency in political agendas and (in)adequacy of government was often met with cynicism or scepticism by the participants. Politicians' only publicly support the school if an environmental issue is good publicity for them [T3:22.8-14]. However, the overall portrayal of the government is one that does not take responsibility. In discussing responsibility for ecological sustainability, one staff member declares that we all need to take responsibility. In T6's view, the government does not take responsibility because it believes it "*can't change things*" [T6:5.17] and this perspective has the potential to influence other people not to take responsibility. The inadequacy of the government's response to sustainability was also highlighted through an indication of their contribution to environmental harm.

Discourse of futility: Contribution to environmental harm

The student participants exhibit a global understanding of how politics and governmental agendas are linked to the environment, particularly comparing the former US and Australian leaders:

> *S2b: I think most people are seeing now what we're doing ... to the environment so when Obama has changed his, like he wants to help it but I don't think Tony Abbot as much.* [15.2-4]

The students argue that the majority of people are aware of their contribution to environmental devastation, including high-profile people like the former US president. However, the students claim the Australian prime minister at the time of data collection, does not care, "*coz he said he didn't care about it. He said he didn't care about climate change or anything coz there was nothing he could do about it*" [S1b:15.5-6].

The negotiations around politics as a barrier to engaging with ecological sustainability is further highlighted by the student participants who connect politicians directly to environmental destruction, such as the current state of the Great Barrier Reef:

> *S2c: And the Great, near the Great Barrier Reef isn't doing very well at the moment either.*
>
> *S4c: It's slowly dying.*
>
> *S3c: Yeah because of the toxic waste being put in there by Clive, so Clive Palmer.*

S2c: Hmm, yeah people are putting, they're dumping their rubbish in the Great Barrier Reef and then [S1c: Yeah] the plants are dying in there.

S4c: Hmm.

S3c: And then it means, 'Oh yep, who cares, the factories don't care as long as they're bringing in the money they'll keep going (pumping) them out.'

S2c: Ah yes because the prime ministers aren't stopping them from doing that.

Rc: Yeah.

S3c: Yeah because they want the money too, saying, 'you do this you'll have to pay us money for that' 'sure, who cares, we're making loads of money anyway we'll just give some to you'. [19-20.33-8]

These students link the decline in the health of the Great Barrier Reef to Clive Palmer, a former prominent Australian politician and tycoon, who, they claim, is dumping toxic waste there. The students also claim "*the factories don't care as long as they're bringing in the money*" [S3c: 20.2-3] and the prime ministers don't stop them because they want the money too and whoever's being penalised, such as the factories, don't care because they're "*making loads of money anyway*" [S3c: 20.7]. The message here that the students are hearing from politicians that money and the economy are more important than the environment. However, the message that the students are getting may not reflect the actual veracity of the claims. Rather, these comments reflect a level of superficiality. It is unknown where the students received this information, but it is likely that it came from some form of mass media. Laying blame on Clive Palmer for damaging the Barrier Reef deflects blame away from every other human who advertently or inadvertently contributes to environmental destruction.

Similarly, T7 made reference to "*the government*" and the part it plays in the poor air and water quality in her home town because it has "*paid off … big oil compan[ies] to pollute the rivers*" [T7:6.21-28]. The "*government*" is again linked to favouring money over environmental destruction, and is blamed for "*the erosion of, of the public good*" [T7:6.21-28]. However, T7 says that "*recent visits have actually shown that people are starting to care, again, making some changes – which is quite incredible*" [T7:6.33-36]. But then, T7 reflects on the environmental state of Australia in general and again, the "*government*" is blamed for the environmental direction of the country which T7 feels was going well until a "*change of*

government" which sought to "*copy the bad stuff that America always does*" and therefore fell off the environmental "*wagon*" [T7:6.38-41].

When asked if the student participants thought they should or could do anything about environmental destruction, some offer that everyone needs to "*believe that climate change scientifically proven is real*" [S3c:6.15] to create positive change and:

> *S2c: I guess if our politicians believed then it would we would have more*
> *action.* [6. 20]

The students demonstrate an awareness of the detrimental effect politicians' beliefs can have on students' sense of optimism or futility for a sustainable future. Politicians' beliefs were also connected to people's beliefs and their capacity to critique others' ideas, however although political activism was encouraged at Acacia Primary, this evidently was only for the students.

Political beliefs and actions

In discussing ecological sustainability, one participant says, "*there's a notion that, the person is political*" [T2:5.5-6]. This "*notion*" is with regard to the choices people make which may or may not support ecological sustainability. Furthermore, in terms of "*making things better*" [T2:5.39] T2 believes that, as a teacher, it is "*really important that kids know that they can be politically active, so that they can as they grow, participate in democracy*" [T2:5.39-41]. This political action links to the discussion in Chapter 6 on small actions growing to bigger actions and can begin with enacting environmentally friendly ideals where students "*can actually initiate stuff at home if they're not living in a family who value these*" [T2:5.42-45] ideals.

Political activism is understood as something that, for children, can stem from school and feed into home life, beginning with small actions. This sentiment is supported by literature on children's participation where schools are put forward as the ideal venue for nurturing children's activism by allowing authentic participation in real-world problem solving. These experiences then help to develop children's social competence, social responsibility, community development and self-determination of political beliefs, which supports the democratisation of society (Hart, 1997). The principal referred to political activism in terms of voting. She endeavours to present

"*facts about our impact on, on the planet*" [T4:7.24] so that not only can the students grow up making informed choices about their lifestyles, she wants "*them to vote sensibly ... I don't want them to get their information about the environment and this planet through Andrew Bolt*" [T4:7.26-30]. Andrew Bolt is a renowned controversial Australian political commentator, blogger, columnist and climate change denier. In preference, the principal wants the students "*to have much more informed means of keeping abreast with what is the, what's really happening in this world*" [T4:7.30-31]. She wants them to "*feel powerful, to feel knowledgeable, to take a lead and to take this on for the rest of their lives*" [T4:12.42-43] and therefore she feels that the school can "*influence them before the, the wacky dacks get hold of them, like Andrew Bolt*" [T4:12.44-45]. Although the principal acknowledges that she is "*picking on*" Andrew Bolt she proposes that "*it could be any number of people who are very poorly informed yet have a really high profile and a high voice*" [T4:13.1-3] and have a considerable amount of influence on what the general population believe. Through encouraging critical thinking and pro-environmental behaviour, the participants are engaging with the green consciousness discourse (Dryzek, 2013).

Although the foundations for informed political activism are important at Acacia Primary School, there seems to be a disjuncture between what is and what is not acceptable within schools. In terms of personal political beliefs, there is a subversive discourse of marginalisation that renders activists as powerless and their beliefs off limits. This discourse of marginalisation stems from departmental policy and the "fundamental principle of political neutrality in the public sector" (DECD, 2017b, p. 1). Alternative views are marginalised within the school because "*there's rules that say I can't talk about my political beliefs on the school grounds*" [T2:22.14-15]. Ecological sustainability is understood as a political issue, therefore it can be problematic in a school that supports ecological sustainability when staff must be silent about their political beliefs:

> *T2: And so there are people here that – I'm really careful – there's rules that say I can't talk about my political beliefs on the school grounds and I certainly wouldn't talk about the fact that on election day I spent 12 hours in the blazing sun handing out – you know that sort of stuff.*
>
> *R: Yeah.*
>
> *T2: And they would go, 'you're an idiot' and so you come here you have to – there are all the constraints with any values and issues stuff.* [22.13-20]

T2 displays a green radicalism discourse more aligned with green politics, but is constrained by the regulations of a public school, where the staff are "*not there to teach about values*". Subsequently, because supporting ecological sustainability can be understood as a political position, any agency in this support is compromised. This indicates a certain power play revealing an apparent dominant discourse where the participants who support the green politics discourse have to be "*really careful*" about what they say thus highlighting a repression of freedom and agency. If the green radicalism discourse were dominant, it is presumed the participants could be more liberal with their views. As they cannot, it is evident that the dominant discourse is one of marginalisation that silences free speech and denounces the committed, political activist as powerless and "*an idiot*" [T2:22.19]. Whitehouse et al (2014) had similar findings when researching discourses of environmental activism in a school context. They suggest that, "despite the heartfelt rhetoric of environmental education, assuming an environmental identity at school can be problematic and difficult to enact … [In addition] environmental action [is not] positioned as central to the 'legitimate' practices of schooling in some communities" (Whitehouse, 2014, p. 106).

T2 also refers to being a "*greenie*" and that "*whether you call yourself that or not*" the environmental things you do mean "*you're actually a greenie*" [T2:5-6]. These comments about being a "*greenie*" build on Whitehouse et al.'s (2014; 2010) research. They found the repellent nature of the radicalised view of a greenie meant the participants actively resisted the characterisation of being a greenie (Whitehouse, 2014; Whitehouse & Evans, 2010). Although T2 aligns with the Greens, because of regulatory frameworks there is restraint with her comments and in the reluctance to talk about her political beliefs. This corroborates the idea that people who align with green politics are "not 'greenies' at school" (Whitehouse, 2014). This again highlights the apparent discourse that marginalises and renders greenies and activists as constrained, restricted and somewhat powerless.

The tension between the external pervasiveness of politicians' beliefs in a school that simultaneously seeks to encourage activism in its students, but is constrained to voice their own views, is paradoxical. Society is bombarded by stories about the beliefs and affiliations of people in power through the media. Yet, possibly for fear of

indoctrination, teachers are regulated to only present a balanced view (DECD, 2017b), refraining from including their own views. This paradox may be a major influence on the dominance of a discourse of futility or a discourse of hope and possibilities, considering the influence teachers potentially have on their students. However, a discourse of hope was significant amongst the student participants.

Hopeful futures?

It is evident the research participants must negotiate various political aspects of ecological sustainability. These aspects include people's own and other people's political positions, including the positions favoured by those in power, particularly politicians and the mass media. The enormity of the effect the power of the minority has over the majority is highlighted, and although many participants do not feel positive about the future, they still feel they can do something, and this largely involves convincing people in power.

This sense of hopeful futures largely comes from the student participants who determine that "*we have to get the politicians to start believing that climate change is real*" [S2c:6.35-36]. One student also discusses the idea of educating people towards a common goal or consensus so that the power of the masses may wield some control over governments:

> *S3c: Yeah, pass [our knowledge] on to our kids ... coz the more people who know about it the more action that we'll take and then – the government can't hold off everyone if they can hold off one person then that's great. If they can hold off an entire population you'll need to be a very strong government.* [12.3-6]

This emphasis on collective action for social change supports ecological sustainability. However, within a school, people's political beliefs and the pessimism that people may feel for the future needs to be negotiated. This pessimism is fuelled by the mass media and the views and actions of people in power, particularly politicians who prioritise the economy over everything else under a neoliberal agenda. Furthermore, the compliance with constraints on political advocacy restricts teachers' agency. This may ultimately affect the objective political awareness they are trying to foster with their students. This compliance with regulations connects directly to the disciplinary power currently being orchestrated that is supported by the neoliberal focus on competition, accountability and performativity.

The following section considers the tensions and negotiations involved with disciplinary power, and the competing priorities within the school and the education department.

7.1.2   Compliance/autonomy: Disciplinary power

> *T3: There's an educational crisis coz … obviously we're doing something wrong, and teachers must be doing something wrong. So yeah, that's just this renewed push for data and literacy and numeracy and get these skills to a certain place, which, I don't know, could be alright, but I think that it's gonna be at the expense of creativity and very important core values that children need to have when they leave school.*
> [17.31-37]

A key aspect that came through strongly in the interview data was a tension between compliance and autonomy. The Australian Curriculum was developed within a hegemonic global neoliberal context that focuses on national testing and building human capital, and exemplifies the dominant traditional curriculum with the competitive academic curriculum at the top of the hierarchy (Apple, 1993; Brennan, 2011; Ditchburn, 2012a, 2012b; Reid, 2009). Within the interviews, these aspects prevailed with a significant focus on literacy and numeracy. Information and communication technology (ICT) is also highlighted, corresponding with ACARA's proposal that in preparing students for work, ICT is a vital 21st century skill (ACARA, 2011b). Assessment, reporting and data are also key features within the interviews, which also match prominent components of ACARA's agenda. Having these priorities means that ecological sustainability can potentially get pushed to the fringes. The principal refers to this prioritising as "*short sighted, it's the here and now*" [T4:15.22], meaning those who do not have an environmental headset can only live for the moment and do not have a vision for the future. It is this curriculum prioritising and concurrent headsets participants speak of that require ongoing negotiation.

Assessment, reporting and data: Surveillance and compliance
NAPLAN and its results are of great importance to schools for a number of reasons. The students' literacy and numeracy results are publicly available so that people may compare 'like' schools and therefore make a judgement from the information they

see. This is evidenced by a parent participant's comments that at Acacia Primary *"they have very high standards of education here which is terrific. You can see that from our NAPLAN scores"* [C4:5.35-36]. NAPLAN also has a great influence on what staff members believe they are able to do in terms of supporting ecological sustainability. T3 recounts that previously the principal *"used to have an attitude of 'look, don't worry about it, it's not important'"* [T3:24.39-40]; however, because she:

> *T3: hadn't put a high priority on [NAPLAN] ... the score came out quite low. So any school that was below a particular bench mark, a team of experts came in to review documents and watch classroom practice to see. ... I think when we have a review like that, again, your priorities shift.* [19.11-16]

T3 states that after the review, which went for about four to six weeks, the principal said, *"'guess what, I'm sorry, personally I don't think it's important but it is important according to what we do here, so now you're gonna have to focus on these aspects of the test'"* [T3:24.41-43]. Therefore, although the tests were not a priority of the school because their results are *"based around funding"* [T3:25.4] the staff have no option but to teach to the test. The principal also refers to NAPLAN affecting what they do in school and that *"it does lock down the curriculum for a while"* [T4:9.3] because it takes:

> *T4: a couple of months of dedicated work so that [the students] know the genre of, of the tests ... you just have to help them be able to do the test and that does take time and yeah we could be doing something better with our time than that but that's the way the cookie crumbles. We are judged on our effectiveness according to the NAPLAN results* [9.5-15].

These remarks confirm the findings in the document analysis and portray NAPLAN as a vehicle for controlling or disciplining schools into pursuing particular educational strategies and ideologies where power is given to NAPLAN and ACARA.

With reference to Foucault (1977), McGregor and Mills (2014) argue that along with a common curriculum, this sort of surveillance and discipline can be considered a bureaucratic panopticon. Consequently, this collection of performance data potentially undermines the teaching profession and compromises the "freedom to teach in personally meaningful ways" (McGregor & Mills, 2014, p. 2).This can be understood as a neoliberal form of control where the government controls schools

through the collection of data, and funding is provided as an incentive to perform (Kenway, 2008; Lingard, 2011b).

Consequently, not having a focus on NAPLAN resulted in the hierarchical observation (Foucault, 1995; Youdell, 2011) of staff members, which changed staff members' priorities, altering the way they teach. The experience these participants had was an overt form of disciplinary power, whereas NAPLAN is a hidden form of disciplinary power. Therefore, while the disciplined individual is constantly visible and subject to modification (Foucault, Senellart, & Davidson, 2007), the disciplinary power, such as that embedded in programs such as NAPLAN, remains invisible and therefore dissociated from critique.

Entrenched in this discourse of disciplining, there is an increasing focus on assessment, reporting and the accrual of data at Acacia Primary:

> *T3: I think that's the new thing they want, is the collecting of data. [25.7-8]*

The result of this increase in assessment, reporting and collection of data is it takes time, which will "*make it very difficult*" [T3:21.23] for teachers and involves "*a lot of paper which isn't very sustainable*" [T5:19.10]. However, the assessment, reporting and data are largely confined to the priority areas of literacy and numeracy:

> *T3: The literacy data and the maths data goes up through the school, through the principal, district director, off to the big whatever it is, and that's where it goes. There's nothing on sustainable, sustainability in practices. [21.32-35]*

This emphasis on the assessment of literacy and numeracy highlights the importance placed on these areas in contrast to ecological sustainability, which is "*not really*" [T3:21.25] assessed. Furthermore, he points out that the collection of data "*relates directly to [teachers'] performance management and their ability to stay in the job. So they're gonna be pretty swamped*" [T3:24.18-20]. Here disciplinary power is evident, through hierarchical observation, where job security becomes dependent on the production of data. The roles of the observer undertaking surveillance and the disciplined individual (Foucault, 1995) are explicit here:

> *T3: The way the education department is, there's a seems to be a huge shift now on to data, and collecting data about kids literacy and numeracy achievement and analysing that data and putting massive amounts of paperwork together so that someone else can have a job to come and audit*

to make sure that you do that. [17.16-20]

Through hierarchical observation (Foucault, 1995) the "gaze of the state" (Youdell, 2011, p. 37) is placed firmly on the "*literacy and numeracy achievement*" of students and the concomitant achievement of the teacher.

Schools are further controlled or disciplined via the various standards to which teachers are becoming increasingly accountable. One staff member notes a restrictive change in what she was could previously do as a teacher "*because of all the national quality standards and different things that have come out, and you can do this and you can't [do that]*" [T9:1.20-28]. Due to dictating what teachers can and cannot do, T9 prefers schooling prior to the release of the various standards when she had more autonomy over her teaching.

Overall, within the interviews the emphasis on assessment, reporting and data, particularly with respect to literacy and numeracy, collectively confirm that the performance audit culture of neoliberal governance is currently dominating the Australian education system (Comber & Nixon, 2011; Lingard, 2011b). In addition, T3 suggests that this dominance is going to "*get worse*":

> *T3: It's starting now, and I can see that it's gonna get worse in the years to come, just from what you see on TV and the things you get from the department, and the fact that these things will become mandated, you're gonna have to have this information … literacy and numeracy are gonna stand right up the very, very top and everything else is gonna get pushed down, down further.* [17.22-28]

This quote encapsulates the future that many of the participants foresee. This future involves an increase in data accumulation, the further prioritising of literacy and numeracy and the marginalising of everything else. This is exemplified by the government steering or controlling from a distance, the discursiveness of discipline and compliance and a neoliberal preferencing–marginalising duality.

This tension is further demonstrated by looking at the contestedness of curriculum priorities, particularly the diversity of staff, community and the education department.

Competing priorities

Building on the discursive power of the Australian Government, this section looks more specifically at the curriculum as a contested site. In the operation of a school, this contestation is apparent within the interview data and occurs within the school as well as through external influences involving parents as consumers, as well as the education department.

School priorities

Within the school, the contestedness of the curriculum is identified through both staff and community interviews. Although the staff accepted the principal's decision for Acacia Primary to have a whole school focus on ESE, it is evident it is embraced in varying degrees because of different opinions on what is important within an educational institution:

> *T3: I think there might have been people on staff who may have, who may have thought hang on it a minute, we're an educational institution about literacy and numeracy and giving kids the skills of life, we're not necessarily gonna take on a political stance about a about an issue.* [5.20-25]

This quote demonstrates that there may be people on staff with the view that the purpose of education is a more instrumental, technically proficient mission "*about literacy and numeracy and giving kids the skills of life*", with less place for an environmental focus and in particular, taking a political stance. However, those staff members concluded that the school's environmental focus does not affect them, they can still do their job, which they view as predominantly, "*literacy and numeracy*". In addition, while sustainability is seen as political, literacy and numeracy are seen as apolitical, thus positioning them as taken-for-granted and unquestioned.

A similar perspective on what a school should prioritise comes from one of the parent interviews where the parent states that "*academic stuff comes first and then other programs*" [C4:8.24-25], thus reiterating a hierarchical traditional curriculum where what is considered academic takes precedence and "*other programs*" such as ESE do not. The parent also declares:

> *C4: School is meant to be an educational institution first and foremost ... what one considers to be education is, is an individual's choice but for me the environment ... would fall into the category about religious education. I don't believe that should belong in the school level, that's something that's up – or spiritual education, that's up to us as parents.* [9.2-7]

Therefore, education about the environment, and subsequently ESE, is relegated to the fringes and is understood as something that is not a core part of the curriculum. Instead, this parent believes literacy and numeracy should be prioritised. The increased emphasis on literacy and numeracy through NAPLAN results positions parents as informed consumers (Campbell, et al., 2009; Lingard, 2011b; Reid, 2010; Wright, 2012). This governmental tactic shifts the role of surveillance on to parents as informed consumers and further reduces the autonomy of teachers (Wright, 2012).

In terms of the prioritising of literacy and numeracy, one staff member voices her initial concerns that when her students spent time in the school's produce garden they were missing out on literacy and numeracy. She admits that some of her students "*don't work in the classroom*" and were "*dying to get out*" [T7:10-11.20-1] in the garden but she was reluctant for them to miss any traditional schooling. This highlights a tension between traditional expectations of schooling where the passive students sit behind desks and the teacher stands in front of the classroom drilling out information, and a non-traditional form of schooling, where the school's garden can be an outdoor classroom. However, this example also exhibits a negotiation of curriculum where the dominant literacy and numeracy are able to be taught in an alternative way, the students are engaging in something of interest to them, their own skills are being reinforced and ultimately "*over time they'll get*" [T7:11.1] the skills they need.

In discussing the sustainability CCP, one staff member proposes that "*it's mentioned*" but "*you tend to forget, you tend to look at the other things like the ICT and the literacy and the numeracy and you tend to look at those competencies [rather] than the sustainability one*" [T6:15.19-25]. This is because "*the key focus priority areas in our school is literacy and numeracy and ICT … [because they are] the ones that seem to be necessary for the students to focus on*" [T6:15.28-41]. Although ecological sustainability is a stated focus of the school it is just an "*expected*" [T6:15.41] focus in comparison to the school's key focus priorities of literacy, numeracy and ICT, which are more explicit. There is also an understanding that staff are accountable for literacy, numeracy, ICT and science but not sustainability, which further relegates sustainability. Furthermore, in discussions about a key science resource with links to sustainability, T3 proposes that it "*is*

actually written basically with the literacy headset on, so it's more about the literacy of science rather than the actual science" [T3:16.9-15]. Therefore, literacy is the focus rather than ecological sustainability.

Recognising the dominance of literacy and numeracy at the school, one staff member still feels a sense of "*freedom*" [T3:13.29] due to having the support of the principal who prioritises ecological sustainability. This demonstrates what MacGilchrist, Myers and Reed (2004) classify as collegial intelligence, a key factor in the *intelligent school* where there is a demonstrated "commitment to a shared purpose" (p. 133) and a level of trust resulting in the teacher having agency and control over what they can facilitate. Conversely, under a "*different leader*" [T3:13.31] with a different agenda the disjuncture between ecological sustainability and literacy/numeracy as a priority could be very different. He considered that because of the pressure of students passing NAPLAN, literacy and numeracy would undoubtedly be prioritised, "*because sustainability won't be in NAPLAN, it's not gonna be in there*" [T3:13.31-38]. In addition, T3 argues that the knowledge, understanding and skills of ecological sustainability are not valued very highly by ACARA nor industry. Guided by ACARA, the priorities of the state education department are areas highlighted by participants that necessitate negotiation as these priorities filter down to the schools.

Priorities of the education department

The principal acknowledges the push to prioritise literacy and numeracy coming from state and national levels when discussing ecological sustainability in the curriculum. She states the "*reality is that our education department isn't still very concerned about [ecological sustainability] so, I'm always pushing sand uphill with that because the, my boss and my boss's boss and my boss's' boss's boss don't care*" [T4:7-8.41-2]. In addition, within the education department, "*they're certainly not passionate and there's certainly not a head set or anything, there's no commitment, there's no passion, there's no interest*" [T4:14-15.43-1], resulting in no financial resources to support sustainability education. The principal also believes the education department hinders rather than supports ESE as "*they just haven't quite recognised the importance of the issue and they systematically dismantled any system they had for supporting [it]*" [T4:13.27-29].

The principal reflects in the past there were some people in the education department with an understanding of ecological sustainability, whereas now "*there's nobody in the department and certainly from the leadership point of view there's nobody who thinks it's important so they really do hinder things*" [T4:13.37-39]. One of the community participants reiterates this view of the priorities of the education department, stating, "*when you look at the history of what gets priority and what doesn't ... [sustainability is] seen as a luxury and not core business. It's not literacy, it's not numeracy, it's not teaching for effective learning. Very vulnerable*" [C2:10.2-6]. Adding to these perspectives is the withdrawal of funding by the Australian Government for the AuSSI-SA program, signalling a decline in importance of ESE.

In addition, the principal claims that the things the education department is "*supposed to focus on don't include anything about sustainability*" [T4:8.17-18]. The principal further reflects, "*sustainability was in [the education department's plans] but it was the sustainability of the organisation, it wasn't about environment at all*" [T4:8.34-35]. This highlights the slipperiness of the term sustainability and that it seems to have lost its real value (Dyer, 2012; Quiggin, 1999; Rasmuson, 2012). Drawing from Derrida (2005), "this inconsistency and/or inconstancy [with the education department] is not an indetermination, but supposes a certain type of resolution and a singular exposition at the crossroads of chance and necessity" (p. 29-30). Therefore, the principal sees the issue of the education department not prioritising sustainability as "*a block that we just go around, we just ignore that*" [T4:8.2-3].

The tension involved with accommodating different priorities is complex. Although ESE is supposedly an expected priority at Acacia Primary, it is constrained by a neoliberal emphasis on competition, standards, accountability and performativity. Disciplinary power ensures compliance with an increasing reliance on assessment, reporting and data. This focuses primarily on literacy and numeracy attainment while marginalising ESE and other curriculum areas. Another aspect found to have a significant effect on the support of ESE is a dominant focus on the individual in a selfish sense, rather than the common good. This connects to the discussion in Chapter 6 on a discourse of individualisation.

7.1.3   Selfishness/selflessness: Individualism or the common good?

> *T9: We've become very self-centred, I hate to say that and*
> *society today is just about me, myself and I. I'm not saying*
> *everyone but the majority is becoming about me, myself and I.*
> *[9.23-25]*

One aspect of neoliberalisation is the emphasis on the individual. Education is seen as in the best interest of the individual with a focus on individual performance and economic productivity (Cranston, et al., 2010; Davies & Bansel, 2007; Jickling & Wals, 2008). Therefore, education is understood as part of the structures that sustain and reward selfishness rather than selflessness. As highlighted in Chapter 6, a discourse of individualisation dominated much of the interview data and is also exemplified here.

While an emphasis on the individual and self-preservation is voiced by many of the participants, it is generally not viewed positively, rather it is seen as detrimental to a sustainable world: "*it's just the way society is, you protect yourself, don't look at what's out there at the moment*" [T9:8.39-40]. This aligns with Stilwell's (2000) argument that neoliberalism appears incompatible with ecological sustainability. Furthermore, a paradoxical duality exists within this discourse of individualisation. The individualisation of responsibility delegates responsibility to the individual and away from the big players. In contrast, a focus on the self, selfishness and self-preservation, shrugs off any responsibility because (as seen in Chapter 6) someone else will do it, such as the students from the environmental group. Also, a reversal puts the responsibility on "*the big bodies*" as seen below. The danger in this is a resultant stasis where no one advocates for change.

"Me, myself and I"

When discussing working ecological sustainability into the curriculum, T3 proposes that the potential benefits to the students and the world "*will hopefully be huge in the future*" [T3:9.26-27] because currently "*we live in a very selfish world*" [T3:9.40]. Therefore, education that supports ecological sustainability is championed for the students because "*being bought up in a very consumer-based society, they don't often give any thought to where anything comes from, you know, your food or any of*

the resources that that we use, so we talk about those things" [T3:13.22-24]. T2 articulates similar sentiments:

> *T2: As a society we're incredibly self-satisfied and smug and comfortable and not enough people actually see that we're part of the world and so it's a huge thing, so every chip at it is important* [22.36-39]

This participant highlights what she sees as a disconnection of society with the world as a whole and sees it as her job to "*chip*" away at this notion.

T9 recalls a change from what society was like when she was growing up when she "*knew everyone in [her] street*" [T9:9.27-28]. Whereas now she feels a loss of collective wellbeing and a rise in individual concern and self-preservation where everyone is time-poor, including herself to some extent. She suggests, "*people are blind*" [T9:10.3] because they hear all about extreme weather occurrences, but they do not question "*why is this all happening and there's climate change happening*"? [T9:10.7-8] Instead, she proposes, "*if every little person did something to try and change or help, it would have an impact, but people, because they're me, myself and I, they don't see it. They think 'Oh the big bodies can do it'*" [T9:10.9-12].

T9 articulates her belief that people are detached from environmental issues and do not take any responsibility for what is happening elsewhere in the world. Instead, there is no thought of collective action, rather some other "*big bod[y] can do it*". This disconnection is apparent because of the mentality that "*that's over there, that's a long way away. And they can look after themselves because I've got to look after myself here, so yeah it's sad, it's a very sad society that we're growing up in now*" [T9:10.17-19]. This implies that people are detached from environmental devastation beyond themselves, but additionally, they are too busy to care:

> *T9: The world is a, going down that selfish road of me, myself and I and it's sad, I sit back and think, really it's just a busy, busy place and it's too busy and people need to stop and think and smell the roses.* [16.2-4]

The focus on the individual is also voiced by T1 when defining sustainability, which she notes is "*a big expansive thing*" because "*[some] people [think] it's there so I'll eat it or and I don't want that, I actually want this, and I don't want this, I want double that amount*" [T1:8.22-25], thus expressing that some people take whatever they want without considering that "*you can just have what's available at the*

moment, it will sustain you" [T1:8.26-27]. Although, T1 proposes that "*keep[ing] to some basics*" will require "*a big shift*" [T1:8.27-30].

Social conformity

One staff member talks of her own experience of growing up with parents who had their own vegetable garden to grow produce for the needs of the family; however, "*as you grow up and you don't maintain that yourself coz of your busy life and you want your weekends and whatever to yourself, you'll tend to take the soft option of buying almost the original items*" [T6:8.5-7]. Therefore, although this person grew up in a family that was somewhat self-sufficient and her mother keeps encouraging her "*to have at least your herb garden*" [T6:8.13], she now has a more individual focus. She has a "*busy life*" and wants time to herself so she "*takes the soft option*" of purchasing the goods she could have grown even though she would "*love*" [T6:8.12] to have her own vegetable garden. Furthermore, although T6 does not have a vegetable garden:

> *T6: [I] keep saying to my husband and the children, 'One day, when the nonni's aren't here and the papou's and that, we're going to have start doing this'. And they look at us and go, 'Yep good luck'.* [8.20-23]

This highlights a generational change in behaviour. T6's parents grew, and continue to grow, their own produce. She would "*love*" her own vegetable garden but is too busy, and her children have no interest in having their own garden. Payne's (2009, 2010) research points to similar generational changes where green parents in the 1950s and 1960s were resourceful in the post-war era, their children were respectful and positive about their parents' actions, but are less economically constrained. In in the face of increasing neoliberalism with its economic emphasis, these children encounter more social and cultural pressures and are therefore understood as "pale green" (Payne, 2009, p. 313). The participant's comments highlighted above demonstrate the actuality of Payne's (2009, 2010) reservations about the future for the children of the "pale green" children as each generation appears to become a paler version of the previous.

The notion of the individualistic consumer is also reflected by a staff member when discussing the students' process of forming their own identities, particularly students who have come to Australia from other countries. T7 has witnessed a decline in some

students' support of ecological sustainability who, out of necessity, were more resourceful and "*better at looking after the environment*" [T7:5.3-11]. However, after spending some time in Australia and seeing the habits of Australian students, change their environmentally friendly ways to "*copy other mainstream kids*" who can "*get away with throwing rubbish*" [T7:5.3-11]. These comments paint a picture of the Australian student as someone who looks "*sloppy*" and litters. Students who are new to Australia and come from "*countries [that] are more aware*" and "*have a better sense of recycling and sustainability*", but "*they get too comfortable living here*" and resulting in them changing "*their diets [and] their lifestyle[s]*" so they are "*able to fit in*" [T7:5.13-34].

Reflecting on the "*me, myself and I*", individualistic emphasis and social conformity is in stark contrast to the comments about social responsibility reflected in Chapter 6. A key difference is that primarily the discussions around social responsibility are framed around advocacy, whereas the focus on the individual is formed from current identified practices. The individualised focus also connects to people being lazy, as discussed in Chapter 6. Another aspect that connects to a discourse of individualisation is the attention paid to affluence and the good things in life.

7.1.4   The good life and the "chink, chink, chink, chink that they need"

> T2: Millions and billions and gazillions of dollars are spent every year on convincing kids to buy crap and that's not good for the planet and it's not good for sustainability, it's not good for equity of resources across the planet. [6.7-8]

Within the interviews there is an emphasis on affluence, including money, wealth and the economy, and lifestyle, and a firm belief that these things take precedence over ecological sustainability, the future and future generations.

One staff member proposes that a vast amount of money is pumped into driving consumerism that does not support ecological sustainability. In addition, in reference to "*making things better*":

> T2: It's really, really obvious that yeah it's getting better in Australia, yeah it's getting better in wealthy, rich counties but actually we just ... exported it to somewhere else, and then we import the goods back but we're not making

it better for the whole planet. [9.19-23]

This highlights an individualised view, where the "*rich countries*" may be "*getting better*" but globally, the planet is not. While T2 promotes social responsibility and doing the "*right thing*" to "*make things better*" globally:

> T2: Now it doesn't mean I'm going to throw away my beautiful house and
> my good very well paid job thank you very much, what it means for me is
> that I'm going to – I actually ... I've made some choices about what I do
> with my money and it and a percentage of my money goes to support causes.
> [10.4-8]

Therefore, instead of "*just thinking about looking after you and your immediate family and all of those riches ... you have to work out what's appropriate for you to make sure that that you're actually bettering everybody's lot*" [T2:10.13-17].

One staff member highlights a concern that the "*pressures in the economy*" [T3:7.34] cause social dysfunction because both parents are forced to work to pay the bills. Participants also link the growing economy with the environmental destruction that mining creates, believing that the wealth and profit of mining feeds the growing economy but at a huge detriment to the land and therefore the planet. Similarly, T1 relates environmental destruction to the growing wealth and profit of companies, comparing the natural fluctuations involved in nature to money, which "*apparently*" is not allowed to have ups and downs, "*money has to just keep going up*". T1 also links companies' profits to society's rising dependency on a variety of things, which "*wipes out all of the natural way things should be*" and that what matters most is the "*chink, chink, chink [money] that [companies] need*" [T1:7-8.38-15]. In addition, T1 refers to an Australian cartoonist's image that encapsulates her thoughts on resource mining and the need for money:

> T1: For me, mining resources is that classic Leunig cartoon, and you've got
> this last machine eking out the last little few crumbs of land, we're all trying
> to stand on, and they're still trying to put money into their pockets. [9.25-28]

Therefore, this staff member feels that, hypothetically, when there is nothing left of the land, mining companies will still be economically focused. Kal's cartoon (see Figure 12) exemplifies this image and many political cartoonists worldwide have produced similar, influential images.

Figure 12. Kal's cartoon depicting human overconsumption of natural resources. Sourced from *KAL's cartoon - The Economist* by Kevin Kallaugher (KAL), (2008, October 30), Retrieved 19 February 2018, from http://www.economist.com/node/12532624

Competing for privilege

Competition is a defining characteristic of neoliberalism and, in addition to the competitive aspects of high-stakes tests, a number of comments related to competing for privilege. For example, comparing other schools with Acacia Primary is prominent in reference to the school's environmental focus. While having an environmental focus is popular in many schools, especially schools that "*pick up rubbish and ... have a garden*" [S2c:1.11-14], some of the student participants argued that the environmental and future focus is particularly special about Acacia Primary. The next comment show S2's belief that other schools do not think about the future, just about the present.

> *S2b: We focus more on it than other schools. Like my old school, they didn't really talk about climate change at all. They said pick up rubbish and that's it. Here we get to be included in a lot more things than what you would do at different schools and we have sleep-overs and so we go count the flora and fauna that are here and then we change the species of flora so then we can suit it better to other animals.* [3.10-15]

Within the interviews, there are many elements of competition, particularly from the students in the focus group sessions. The students often compare themselves to other schools and what they have that other schools don't have, not only as a multicultural

school but in terms of the assets the school has which makes them better than other schools as they have what are deemed as "*necessities*" [S4b:2.4-8].

> *S1a: And we've got so many other things that other schools don't have, we've got iPads, we've got interactive whiteboards ... we've got three playgrounds [inaudible background talking] Yeah we've got a big hall. And we've got two, pretty much two halls.* [2.30-34]

The neoliberal influence ensures that the "*necessities*" are not based on basic needs, rather on a rhetoric that it is necessary to have luxury goods and keep up with global technologies. These "*necessities*" can be deconstructed in two ways. The school may feel the need to have all of these resources as a way to compete with other schools. The school may also be aiming to provide what they think is expected of a school that is meeting the needs of the 21st century student, as often called for in policy documents. Therefore, to address the curriculum demands placed on teachers, these luxury goods may be deemed as necessary. For the students the "*necessities*" the school has may be fuelling the idea that without these things the school may be substandard. This message may be coming from home as well as from school and as one student said about his family:

> *S3c: They had to be so smart coz we were a bit of a poor family so they just went on game loads of game shows got the car got the stove got the house got the couch and everything from the game shows that they went on, being so smart.* [9-10.36-2]

This student demonstrates that because his family did not have the "*necessities*" such as *the* car and *the* house, things that may be considered luxury goods in many families, they had to find ways of obtaining these things, rather than being content with what they had. The school's necessities go beyond those of this family with luxury goods such as iPads and interactive whiteboards. Focusing on these luxury items exemplifies Bryman (1995) and Giroux's (2008) depiction of the good life. Underpinned by neoliberal ideals, the good life is conceptualised through our purchases, which ultimately form our identities as consumers.

In contrast to a focus on necessities, one reason for not supporting ecological sustainability is that it is not a priority for some people. Social disadvantage and new arrivals are both identified as groups for which ecological sustainability may not be high on their list of priorities. Instead, in the hierarchy of their lives "*it can be an issue that's sometimes further down in their lives*" [T3:10.28-29]. Therefore,

although they are learning about it "*they might not take it on board because they're still in this survival state of getting through the day-to-day*" [T3:10.32-33]. This evokes the idea that environmental sensitivity may be conceptualised as a middle and upper class luxury. Consistent with this sentiment, one participant notes that the parents "*who have really taken [ecological sustainability] on board*" are the "*young professional parents*" [T5:10.38-40]. The reason for this may be linked to capacity and money. Connected to the individualised emphasis on wealth and lifestyle is a focus on education as preparation for work.

Preparation for work

In a neoliberal context, the purpose of education revolves around producing "workers and consumers to increase economic productivity within a globalized economy" (Cachelin, et al., 2015, p. 1128). Within the interviews, there are a number of examples that convey this concept. When talking about the student leaders in the environmental group, a student displays language that can be firmly linked to the business or work sector. Rather than using the term leaders the student spoke of "*executives*":

> *S2b: And then the executives get together with {the principal} and decide which ideas are best and we can do it.* [4.10-11]

Furthermore, one student likens the environmental activities done in the school to work:

> *S4c: [It's] just like getting your hands dirty. Like working.* [18.23]

This reflection on working could be that work can give people a purpose, whereas the student finds purpose in getting her hands dirty through the school's environmental group. However, another perspective is put forward by Giroux (2003) who claims that schools are becoming a training ground for the corporate workforce, strengthening the standpoint of education as preparation for work.

The following section outlines the challenges identified as limitations to supporting ESE.

7.2 What limits the uptake of ecological sustainability education?

The negotiations discussed above can predominantly be understood as ideas and ideologies that circulate throughout the school and require the participants to partake in a dance with or around. The limitations presented below are more tangible than the identified negotiations. They can also be understood as ideologies, but ultimately they are still seen as challenges that need to be worked through. This section of analysis has been guided by the key sub-question: *What are the limitations of negotiating ecological sustainability education into the school?*

The significant limitations identified are the leadership of the school, the place of sustainability in the curriculum and its appropriateness in terms of students' age, and limitations connected to money, resources and time.

7.2.1 Leadership or management?

> *T7: I like the way that the principal ... trusts the teacher to be more autonomous and gives them control of their classroom, you know, will check out to make sure that you're green, but will trust the teacher's doing the right thing.* [2.36-40]

The influence of neoliberalism has reconstructed principals as managers, with a focus on standards, performance, competition and the economy. However, through a creative negotiation with compliance (Farson, 1996), the principal at Acacia Primary moves beyond simply management and instead demonstrates effective leadership and collegial intelligence (MacGilchrist, et al., 2004).

The driving force of the leadership team is a great strength within the school, particularly the principal and, in a supporting role, the deputy principal. Leadership is something the participants spoke highly of and is a significant factor in what many of the staff thought made the school special.

> *T2: Ah the principal, because she's the best one I've worked with and I've been teaching for 34 years.* [2.12-13]

The principal and leadership are described as "*strong and effective*" [T3:2.16-17], "*open and supportive*" [T6:4.8-9] and greatly respected because of their "*beliefs*"

[T2:2.23]. The principal also treats her staff members with "*trust*", "*respect*" and "*dignity*". The deputy principal is also declared to be "*outstanding*" [T2:2.18] and staff members say that both the deputy and the principal are "*fantastic to work with*" [T2:2.33]. The principal demonstrates what can be understood as collegial intelligence (MacGilchrist, et al., 2004) and is evidenced in a number of ways, including that she took leave from her position so that the deputy could "*run the school for a year and show the talents that's she's got*" [T4:1.15-16]. This example epitomises the principal's commitment to nurturing the agency and deeper learning of her staff, in this case the deputy, fostering a shared purpose of encouraging agency and learning amongst staff and is indicative of an *intelligent school* (MacGilchrist, et al., 2004). The deputy's comments support this, stating there's "*a culture of wanting to support each other... so the collegiality around staff makes [Acacia Primary] unique*" [T8:1.24-27].

In addition to the collegiality aspect of the leadership team, it is evident that much of "*the driving force behind*" [T5:8.18] the ecological sustainability focus of the school came from the principal. While the principal is passionate about educating and impassioning her staff about sustainability issues, it came across as very respectful:

> *T3: {the principal} [would] send us along to things, I know you didn't have to go along, but she'd say 'there was a thinker in residence here in Adelaide and they're talking about climate change or sustainability, it starts at 4.30 if you want to go along'. And when you go along to places like that, they'll give you ideas and point you in the direction of agencies and resources that can help you.* [15-16.35-3]

Therefore, the principal is active in giving out information, but it is up to staff members to embrace her suggestions. The principal is also pivotal in encouraging student participation in supporting ecological sustainability:

> *T9: She wanted to form a focus group, get the children involved, get their views ... coz she wanted to get their opinions, and get them in on board with it all too.* [3.5-10]

From the interviewees' comments, the principal is seen as a great asset to the school and its environmental focus. The principal also proposes that because of her "*status in the school ... [it sends] the message to the parents and teachers that [ecological sustainability] is important stuff*" [T4:12.2-4]; however, having the principal as the driver presents a potential limitation. The school's environmental focus is "*driven*

150% driven by {the principal}" [T3:5.1] and while the teachers experience a high level of autonomy in what they do, the principal would "*every now and again give them a little bit of a kick along with things that they may or may not have learnt about*" [T4:4.37-38]. One participant broaches this issue:

> *T3: I can imagine another principal coming in here, and once {the principal's} finished her tenure, and they would probably take that big sign down.*
>
> *R: The [environmental] sign?*
>
> *T3: Yeah, yeah and they'll just put {Acacia} Primary School, because they might not see it as a relevant, because it's a fairly key feature of the school.* [3.17-23]

Therefore, although the school's environmental focus is a "*key feature of the school*", a new principal may come in and change that focus if they personally do not think it relevant. T3 points to an example of this decline in drive when the principal was on leave and the deputy principal assumed the role:

> *T3: To be 100% honest, I'd say since {the principal} left, that the drive forward has definitely ... dropped off a bit, as other priorities have come up and people have done things ... people leave, as soon as they leave, the project collapses. So that's the, that's the key to it, but I'd say that since she left, I reckon it's dropped off. Nothing to do with, {the acting principal} does a fantastic job and she still maintains the [student environmental] group and does this, but it's not always repeated, the message isn't always put out there.* [17.4-13]

The principal also acknowledges that the education department's response to her focus on ecological sustainability was that "*it just seems to be one of the quirky things that I'm interested in and a few other people are interested in. They don't respond at all really*" [T4:8.10-12], further marginalising sustainability.

An ecological sustainability discourse that appears in some of the comments presents a controversial edge:

> *T3: I think it's great that someone like {the principal} had the guts to put a big big sign out there, coz that would be quite controversial to a lot of people who would come past and even to the education department themselves, being a public school.* [3.3-6]

Demonstrating a belief that erecting a big sign exhibiting the environmental focus of the school may not be consistent with what public schools do. T3 adds:

> *T3: I'm sure there would have been people in the department who would have questioned what she's done, like the district super and said oh, 'are you sure you really want to go ahead with that?' And she's said 'yep'.* [5.11-14]

A resolute "*yep*". This act of "going against the grain" (MacGilchrist, et al., 2004, p. 142) is reflective of an intelligent school's "pedagogical intelligence" (MacGilchrist, et al., 2004, pp. 140-142) where risks are taken as a precursor to learning. The principal's confidence or sense of purpose was further demonstrated by another participant in reference to the school's environmental focus sign:

> *T7: She made it up; yeah, there is no [environmental] focus group, she actually made it up. ... We were presenting at a sustainability thing ... and she was telling the people that she just decided that it's going to be one, there is no school like that and that she just thought it would be.* [4.1-5]

This indicates the principal may have wanted the school to stand out as focussing on the environment and doing something different. While the school was not specifically an environmental focus school, the principal made a decision to promote itself as one. These examples of the principal's creativity and negotiation with compliance are prerequisites for significant change (Farson, 1996). Paradoxically, although the principal embodies leadership qualities and is a fundamental part of ESE at Acacia Primary, these qualities contradict the expectation of principals as managers in a neoliberal context. Furthermore, should the principal leave, there is a possibility the drive for ecological sustainability may leave with her. Consequently, the principal can be seen as both an inspiration and a limitation. The next limitation presented is the concept of sustainability in the Australian Curriculum.

7.2.2   Rhetoric/reality gap: Sustainability as "a big warm fuzzy thing"

> *T3: It's a big warm fuzzy thing, 'It's cool, yeah, yeah, do it, that's great', but it doesn't actually mean anything, it's not important.* [21.36-38]

While sustainability is a stand-alone concept within the Australian Curriculum and is intended to traverse the curriculum as a CCP, its profile and its endorsement varies greatly, thus appearing as a rhetoric/reality gap. The principal proposes, "*the national curriculum has given [their] work more legitimacy than anything*" [T4:16.33-34]; however, T2 states that the national curriculum is "*just ... the one we're using at the*

moment" [T2:19.28-29] and it is not "*weighted heavily enough for anything to influence beliefs and values*" [T2:20.4]. In comparison, she discusses a child protection curriculum, which is a priority in schools; however:

> *T2: because it's so strongly a values laden and it's so challenging for people, it's still not delivered by all teachers okay, so having it there yes it's nice, so say yes you must teach sustainability, but if people don't actually believe in it or value something different, then that's not what's going to make them teach it.* [20.17-21]

Therefore, although sustainability is a curriculum priority it does not guarantee it will be taught. In addition, there appears some confusion about sustainability in the Australian Curriculum, with one staff member stating that it is a key competency rather than a CCP:

> *T6: Well to tell you the truth I mean the first year we weren't aware that the key competencies were so important because no one told us. And then I went to this ACARA ... thing and said, 'Oh that's the overriding umbrella for the ACARA curriculum'. 'Oh'. And so then looked at it more closely, they're just general statements, there's no beef in there.* [13.20-27]

This is indicative of the confusion felt by many at the introduction of the new Australian Curriculum where staff members "*were tearing our hair*" [T6:17.26]. During the implementation of the Australian Curriculum the research participants claim there was no support given until the end of the year after staff had already "*mumbled [their] way through*" which results in "*teachers ... trying to navigate 1001 things and nightmares every weekend trying to work out what [they're] going to do*" [T6:17.37-39]. Furthermore:

> *T6: All the curriculum areas I mean there's eight curriculum areas with X number of minutes per week. And when you divide it up it doesn't really work out very well, so there are some things that you do one year, or half the year and then you have to alternate the following year and it's how much in-depth you want to go or you can just skim. So in our first year of the [curriculum] implementation we were just so worried that we had to get through the content that we were just rushing the students through it. And what they didn't know, it was like, 'oh well, you know, move on'* [14.26-33]

This highlights a perspective of infinite demands on finite time. The curriculum is too crowded, to the detriment of sustainability as "*it's not an in-depth area, it's a, yes, we're aware of it, I'm aware of it, and students may be aware of it, and it's skimmed over maybe throughout the year but it's not a focus unfortunately*" [T6:15.6-9]. The teacher's confusion with sustainability as a CCP in the Australian

Curriculum is further evidenced by T6 when she states, "*it is meant to be a cross curriculum general capability and I think … sometimes you tend to leave those in the cobwebs, because sometimes you think, oh not another thing I need to think about*" [T6:17.14-15].

In addition, it is the belief of this staff member that "*in the primary school it's just a focus awareness and when you get to high school it's going to be more intense*" [T6:15.12-14], therefore the commitment to ecological sustainability may be reduced. T9 states that sustainability is also found in the early learning years framework, another guiding curriculum document, but how and what to teach are not specified, it is "*just a matter of how you fit that in, there's no set way that you've got to do it*" [T9:8.3-4]. Instead, many of the staff members saw the inclusion of sustainability as just "*ticking a box*".

Due to the emphasis on assessing literacy and numeracy but not sustainability, sustainability is deemed as "*not important*" [T3:21.38]. Consequently, the priorities of the education department and ACARA render ecological sustainability as "*a big warm fuzzy thing*" [T3:21.36]. T6 also notes that the minimal emphasis by the education department on sustainability as a CCP alongside the implementation of a new and comprehensive curriculum left her to "*give up*" [T6:18.17] at times.

The low profile of sustainability is also evidenced by another staff member who points out that within the Australian Curriculum, sustainability is a "*little, little footnote on the side of it*" [T5:13.16]. Furthermore:

> *T3: The fact that it doesn't come from the department as a priority, that's a limitation too. If you looked at the education department, it's spoken about but I'm not sure how much it's actually, it's just sort of given lip service, I don't see them promoting it. … I don't look at the education department and go 'wow you guys are right into sustainability'.* [22.16-23]

Seeing ecological sustainability as "*lip service*" is also in reference to it and the other two CCPs because there is:

> *T3: no way you can do justice to all of these perspectives. I mean you can again give them lip service and say you've done this and tick the box for <u>you</u> to say that you've done that, but you actually haven't really gone into any depth of that issue.* [22.36-40]

Therefore, ticking the sustainability box is more for personal accountability. These references to "*ticking a box*" and seeing sustainability as "*not important*" and merely "*lip service*" highlights that ecological sustainability needs to have a high profile to manifest meaningful commitment. This exemplifies a pressure of infinite demands on finite time evidenced in teachers' engagement with the school's produce garden. The garden is largely maintained by a single parent volunteer who spent time with students in the garden. When asked, "*have you been able to work with the garden here?*" [R:10.29-30] T1 responds:

> T1: I just don't have the time. I used to run – it's a bit of a sad little patch there, but … we had it working pretty well, but your role changes and your time gets eaten into. [10.32-34]

One challenge within the school is managing the spectrum of commitment. Most teachers have the choice of allowing their students to participate in the garden with the parent volunteer, take their students themselves or not engage with the garden. The activities within the school garden are not embedded in the curriculum, rendering the garden to being "*a sad little patch*" [T1:10.32] that sometimes ends up as "*a dead plot anyway so we just won't worry about it*" [T6:2.1-2]. This sentiment is reflected by T7, who suggests that her "*focus is on getting [the students] to have more English skills over everything*" [T7.2.17], thus exhibiting a hierarchical view on subject importance.

Conversely, although sustainability is not a focus in the subject areas she has, T6 suggests that its inclusion is "*incidental at all levels*" [T6:9.26] and believes that because it is a focus of the school, "*the students are aware*" [T6:11.28] and "*most teachers in the classroom have some sort of focus to do with that*" [T6:11.34]. In addition, T1 proposes that at Acacia Primary there is "*a fairly natural fall into doing the [sustainability] perspective into, into everything*" [T1:6.29-30] and that:

> T1: I think we do it, we're not just talkers of it. … we actually <u>do</u> do it. It's not just a tick in a box. I think we, we actually <u>do</u> do it." [6.32-36]

This represents an alternative view to what many staff members present above that sustainability is more than "*just a tick in a box*" but something that the staff at Acacia Primary actually do. However, T6 states that although she feels that ESE is "*something that enriches the students thinking and understanding about their world*" [T6:12.23-24] she said that she "*couldn't [focus on sustainability] within the*

confines of [her] curriculum area" [T6:12.3], but on further reflection she admits that she "*could probably permeate it throughout what I'm doing*" [T6:15.31]. One staff member supports the ideal of integrating sustainability across the curriculum, stating that, "*doing a two-week unit on it is not enough*" [T7:8.3-4] and reflects that in terms of integrating it, the staff "*sort of have it as a job … and it's, I guess it's interspersed in all the curriculum that I do. How to look after the environment*" [T7:8.13-17]. One of the benefits of integrating sustainability is that it works well in a classroom with high transiency. However, although T7 states that sustainability "*sort of gets in to everything*" [T7:13.19] it appears she sees it as a stand-alone topic as she says she "*will find ways to pull in those ideas, at least, at least two times a year, maybe three times*" [T7:13.24-25].

In reference to support going into sustainability programs, T9 reflects on a community garden idea that was being explored at Acacia Primary "*that kind of went by the wayside*" [T9:12.17]. The reason is:

> *T9: I think that support did go, and then I think the curriculum changed as well, … so it shifted to a different thing, the next focus that they needed to look at … because I mean the department changes their mind at the flick of a hat. So one minute, yep you've got to do this and 'Oh let's go over here now and we've got to focus on that', so teachers are pushed to the time and to sustain that, and that's why you need volunteers to keep that up.* [12.28-38]

This portrays a negative view of the education department for its fluctuation in priorities. With curriculum change, shifts in departmental priorities and the fact that environmental action is often not seen to be a "legitimate" practice in schools (Whitehouse, 2014, p. 106), teachers find it difficult to sustain a focus on ecological sustainability. Volunteers, however, are not constrained by the curriculum, so are deemed invaluable by school staff members.

Another obstacle to the reality of ecological sustainability is in the content, including the appropriateness in terms of age, the scare factor and low/high level concepts.

Appropriateness of content
An obstacle to supporting ESE is the age appropriateness of much of the content. Many feel that some information is too high level for children and that only solvable problems should be presented to the students, but this is a point of contest. The principal advocated for the students, stating that, "*I think kids get it. I think they*

understand the importance of doing these sorts of things and acting sustainably ... and children get it perhaps more easily than adults do" [T4:21-22.38-5]. Accordingly, many students articulated the accumulation of knowledge and age results in a deeper understanding and the ability to make connections. The students also state that an increase in the discussion of environmental issues in the media and at school, lead to a greater understanding.

However, it is also apparent from the interviews that age is a significant factor in what can be presented to the students. When including ESE in school practices, T9 advises:

> *T9: You've got to keep the little ones enthralled. ... you might look at bugs and how they work into the environment, how are they good for the environment ... you've got to go with what they, the kids want or think about, and surprisingly, not surprisingly they actually come up with a lot of good ideas.* [7.25-32]

T9 feels that the content should be captivating for the students and they should be allowed input to what is taught. T3 states that the younger the students the more they will "*soak it up*" [T3:10.20] but the staff members have to be careful not to impart too much information which can "*scare them about the future*" [T3:11.25].

Problem/solution and the scare factor

One staff member proposes that the benefits of working sustainability into the curriculum are "*huge*" because if students are taught sustainable "*practices, at a young age. They just think that's normal*", particularly with "*younger kids, they just soak it up like anything*" [T3:9-10]. In addition, he highlights that it is "*really, really important*" to "*inspir[e] kids as well to think about, like showing them a problem and thinking about solutions*" [T3:10.5-7]. Staff members discuss the importance of presenting *problems* to students but ensuring that these problems have *solutions,* and also giving students "*ideas about sustainability and sometimes the dangers of not having sustainable practices*" [T3:10.13-14] so that students have the knowledge to encourage others to support ecological sustainability.

> *T5: If you talk about it and just say, this is the problem and this is how it's resolved and this is why it's resolved, they sort of make connections. If you just talk about the problem and don't actually make connections with the resolution, they don't even really get the problem.* [6.30-33]

Therefore, problems presented without solutions are deemed pointless. T3 suggests that a difficulty in doing this is that "*you need to be realistic*", but "*you don't want to do the scare thing too much to scare them about the future*" [T3:11.25-26]. In contrast, Kenis and Mathijs (2012) propose that problems should be presented without solutions to empower students to reflect on the problems and reach their own solutions.

The scare factor is articulated by another staff member when discussing the possibility of food shortage with her students. T6 explains being conflicted with not wanting to scare her students while heightening their respect for the environment. The potential scare factor is seen as a disadvantage to teaching ecological sustainability as it can be stressful for students. She suggests that rather than being detached from environmental disasters occurring elsewhere, potentially when students become aware of these issues they can get "*caught up in it and they can actually get really quite upset and stressed by it*" and "*transfer it onto themselves*" [T6:9.10-22], which is seen as a disadvantage.

The reason for not wanting to scare students is articulated by one staff member who does not "*think it drives the message at that age really well*" because "*they don't have that cognitive side where they can understand science, it still becomes, it becomes a horror story*" [T5:9.15-23]. Another staff member confesses:

> *T3: Maybe I've scared 'em or maybe I've been a bit pessimistic about*
> *things. But … coz they don't really connect to that, they'll come into school*
> *and talk about the latest toy that I got, so it's not too bad.* [11.33-36]

This highlights a personal struggle for T3; he has spoken about "*inspiring kids*" and "*igniting in students a realisation, like switching that light on for them*" [T3:9-10]; however he confesses to being "*a bit pessimistic*" and scaring the students, but rationalises that it is not "*too bad*" because seemingly the students are disconnected to the ills of the world and more connected to "*the latest toy that [they] got*".

In terms of addressing the scare factor involved in many issues involved in ecological sustainability, Sobel (1998) argues against exposing children to issues beyond their understanding, instead we should foster a bond with and respect for the environment.

Low/high level concepts

A disadvantage cited about working ecological sustainability into the curriculum is that there are:

> *T3: quite often not enough examples ... you can look at sustainability in short term ways, but you can't see long-term sustainability benefits. And some of the concepts related to sustainability are quite high-level concepts for kids to get their head around. I think that's one of the disadvantages of trying to teach it.* [12.22-27]

Therefore, because the "*high-level concepts*" of ecological sustainability are difficult to teach primary school students, staff members focus on resource management education like saving paper:

> *T3: Coz we don't wanna cut down more trees. And that's really low-level stuff but that would be about sustainability of just resources in the room. We'll talk about power, using power (..) in educational practices.* [13.4-7]

These practices, referred to as "*low-level*", are encouraged at different levels of the students' lives: "*the individual level and the classroom level and the community level*" [T3:13.12]. However, it is demonstrated that these "*low-level*" concepts and practices are ones to which young children can connect. One staff member discusses *Saving Hieronymus* (Australia Department of Primary Industries and Energy & Marje Prior and Associates, 1992), a film based on the greenhouse effect and saving energy. The concepts presented in the film are ones the students understand.

> *T5: They get it because there's a solution, so instead of driving around in a big big V8 car, you can drive around on something else instead of using the clothes dryer, you use the clothes line, those sorts of things. Or instead of sitting in your thongs and shorts and t-shirt and you've got two heaters on, you wear tracky dacks. So those sorts of things are in the movie and it highlights how it does change things.* [6.22-27]

These "*real small, small, small scenarios*" [T5:7.5-6] are described as "*meaty bits and pieces*" [T5:6.19-20] that students can relate to, rather than "*big picture stuff*" [T5:7.6] like the science behind clouds and the hole in the ozone layer.

Moving from small or low-level to big picture, high-level concepts is largely dependent on the age of the students. Although it is believed that high-level concepts are difficult to teach, utilising low-level problem solving with available solutions is seen as beneficial because it "*open[s] kids' eyes to a lot of stuff, you get them thinking on a different level, higher order thinking skills*" [T5:8.36-37]. In addition, it

"*keeps them mindful about long-term effects of being wasteful and not managing resources properly*" [T5:9.1-2].

Having scientific knowledge is also seen to enable the students to critique climate change and climate sceptics. However, again a staff member found that "*it's hard because the level of vocabulary and the understanding of the science, the basic science stuff, is not always there*" [T7:12.3-5] and they "*can't always get into the higher level understanding of what's going on*" [T7:12.9-10] therefore it is difficult to move beyond a basic level of understanding.

Therefore, while some staff members were keen to open the students' eyes, there is significant research recommending against the early exposure of issues beyond student capability and understanding (Chawla & Cushing, 2007).

The following section highlights limitations often regarded as barriers in education. They include money, resources and time.

7.2.3   The usual suspects: Money, resources and time

> *T7: I think it's just, people just don't have time. I mean I would've loved to ... have more time to put into that but I don't.*
> [18.26-28]

In terms of supporting ecological sustainability it is felt that everybody has the ability to influence others, including students, staff, parents and "*everybody has to be on-board for you to do this stuff*" [T2:15.35] because it is found that:

> *T9: Those [students] that don't get it, it's not reinforced at home, not talked about. Some kids have got it because you hear the parents saying it and they actively are involved in it, but yeah others, nah.* [6.19-22]

Money, resources and time are considered barriers for creating ESE at the school. In addition, but connected to these three barriers, is people's participation.

Money

Money is seen as limiting in what people are able to do to support ecological sustainability. A parent participant proposes that "*ideally if we all had the money and the means*" [C4:6.37] then we could all support ecological sustainability.

Furthermore, being in a "*socially disadvantaged community [with] not a great deal of money*" [T2:19.7] means that money is seen as a barrier for the staff members to do things they would like to do but cannot because of what some parents can afford.

The financial position of parents is not the only money barrier mentioned by participants. The lack of money the school can access is also perceived as a barrier. T9 highlights at Acacia Primary money is the only obstacle in implementing sustainability into the curriculum: "*there's no brick walls, [apart from] money, that's the brick wall*" [T9:6.35]. Money is seen as a barrier because the school has to work hard to get the money they feel they need to create sustainability education at their school. T9 notes, "*{the principal} wrote a lot of grant ... always writing for grants because that's how the money comes because no one's going to give it to you*" [T9:14.5-8]. This highlights the extra work of the principal to support sustainability education in acquiring funds. When discussing recycling the principal said it would be good to make a film about recycling at Acacia Primary so teachers could show it to the students every year. But the reason for not doing this came down to time and money and the issue that "*[they] keep getting more children each year and the budget gets less each year ... just enough to notice that there's a real shifting of sands with funding to education*" [T4:18.37-39]. Because of this, and the prioritising of the curriculum, many environmental things done at the school are done "*on a shoestring*" [T4:25.6] which, as the principal reflects, "*that's my life*" [T4:26.22].

Giroux (2003) draws attention to the issue of funds as presented above, and fuelled by neoliberalism and its emphasis on profit margins and corporatisation, teachers are drawn into a business model of sourcing additional funds and teaching larger classes. However, without grant funding or fundraising efforts, the school would be unable to undertake many practices that support ecological sustainability and its education. However, T9 notes, "*you work out how you can do the money side of it, that's the easy part, it's the participation that's the hardest part*" [T9:6.38-39]. Although money is seen as a limitation, through effort, it can be overcome, however, gaining people's participation is the hardest thing to do.

Resources

Resources considered as barriers to supporting ESE are those of the community and the school. One staff member claims the "*lack of resources*" [T7:17.10] affect the

staff's commitment to the school's recycling system, particularly the increased cost of liners in the green compost bins. While many staff members are reluctant to utilise the green bins due to the ongoing maintenance, if the school had access to more resources like green bin liners, the staff members may be more inclined to support the system. Further highlighting that sustainability has become a business, and those who cannot afford it will not support sustainable practice if it is inconvenient.

The 'inconvenience' of ill-maintained IT (information technology) equipment is perceived as a limitation to creating sustainability education. T1 comments she is, "*a little bit strapped at the moment coz my interactive whiteboard has not worked for the whole term.*" [T1:13.32-34]. T1 asserts this issue is her "*main barrier*" [T1:14.22] to creating sustainability education. Teachers seem to prefer sourcing information from the internet when planning and researching lessons, therefore, technology came through as beneficial but with limitations.

T3 also says, "*we do have IT limitations here, I have to say that quietly*" [T3:20.24-30]. The IT limitations this staff member highlights are website restrictions imposed on internet use at their school and, although explicable, these restrictions become "*a bureaucratic waste of time*" [T3:20.30] because potential sources are denied. The restrictions imposed on internet use vary between schools. While the central education department imposes some blocks on particular websites, individual schools can also impose their own restrictions. Worth mentioning is that T3 had to voice his concerns about the IT limitations "*quietly*", which suggests a particular discourse about technology that it cannot or must not be challenged.

Time and the overloaded curriculum

As well as money and resources, time and the overloaded curriculum are perceived as additional barriers to supporting ESE. The deputy principal of Acacia Primary reflects that "*time constraints*" [T8:7.36] prevented her from engaging in ecological sustainability as much as she wanted to and grudgingly confesses, "*I haven't had enough time myself to lead it any better than I have*" [T8:9.20-21]. The principal also acknowledges a lack of time for writing plans such as School Environmental Management Plans (SEMPs), "*coz we've got to write plans for everything else under the sun, I don't want to write any more plans, I just want to do it*" [T4:16.5-9].

The deputy proposes that a disadvantage in working sustainability into the school is around managing it. A large component of this is the need for "*support to actually manage the systems and the structures and the processes that you're going to put in place to ensure that things happen that you want to happen*" [T8:9.14-16]. An issue with this is that the deputy was reluctant "*to delegate things to classroom teachers when they're so busy*" [T8:9.13], indicating leadership and staff are time poor.

T2 identifies "*a whole range of limits to what you can actually do*" [T2:19. 23] such as resources, time, the overcrowded curriculum (including the child protection curriculum, parent demands and the national curriculum) and mandated assessment. These infinite demands on finite time are reiterated by many staff members and as a result:

> *T3: Teachers are probably gonna choose the things that they feel comfortable with to go into a rigorous level, and if you're not comfortable with the notion of sustainability, the environment, and how to put that into your classroom and manage that, you're gonna put that, sort of to the side.* [23.18-29]

Because teachers are time poor, they are less likely to embrace an area, like ecological sustainability, if they are not comfortable with it. To overcome this barrier, T3 suggests that "*someone come in and co-ordinate it for them*" and although he acknowledges that may "*sound terrible*", he urges "*it's a time based thing, the demands on teachers are huge, they're huge*" [T3:23-24]. Similarly T5 suggests that the school could have "*a regional curriculum leader who would come to staff meetings and work with year, year level bands*" [T5:20.4-5] and recommend good resources.

T2 offers similar sentiments:

> *T2: As a school we need to look at what we're doing for sustainability and then have the same kind of driving force that we put behind literacy and numeracy, which is hundreds of hours of training and development.* [21.8-15]

This statement highlights the priority placed on literacy and numeracy, which has involved "*hundreds of hours of training and development*".

Ultimately, particularly in reference to time and the overcrowded curriculum – which gives emphasis to literacy, numeracy, science and ICT – as well as incorporating

play, standards, special needs and social skills development, one staff member says: *you've just got to do your best* [T5:19.39].

7.3   Summary

The challenges for a school in a neoliberal context, and the negotiations and limitations involved in building, retaining and progressing the support of ESE are numerous. It is evident the current neoliberal hegemony affects the support of ESE. Along with the common barriers of money, resources and time, there are many tensions that require ongoing negotiation. Political aspects contribute to futile and hopeful discourses while the staff at Acacia Primary are involved in an intricate tension between compliance, autonomy and creativity. In addition, a discourse of individualisation that fosters a dominant sense of self over the common good underpins an emphasis on wealth and the good life. Further limitations include the curriculum and uncertainty over the appropriateness of sustainability content. While leadership is seen as both a limitation and an asset, it is an avenue for creativity, inspiration and significant change.

The following chapter includes further analysis of the interview data and is focused on place and PBE.

CHAPTER 8:

How an urban primary school connects to place

> A fundamental paradox of place … is that although we can experience it everywhere, everywhere it recedes from consciousness as we become engrossed in our routines in space and time.
> *Foundations of Place*, David A Gruenewald (2003b, p. 622)

Globalisation has been fuelled by neoliberalism, as a result, the way people live in and feel about their local places has changed (Massey & Jess, 1995) with many social and cultural aspects becoming "detached from place" (Kenway, et al., 2006, p. 45). This puts any prospect of ecological sustainability under threat. The importance, therefore, of (re)connecting with place and implementing a place-based approach to education in an effort to support ecological sustainability is espoused by many (see Blumstein & Saylan, 2007; Cole, 2007; Comber, et al., 2007; Eflin & Sheaffer, 2006; Gruenewald, 2003a; Meichtry & Smith, 2007; Smith, 2002; Smith & Sobel, 2010; Sobel, 2004; Wilbanks, 2003).

This chapter continues the analyses of the interview and focus group data. It explores a connection to place, specifically through the research site's local and global community connections, as well as PBE. The following sub-questions were developed to help shed light on how, in a neoliberal context, an urban primary school might facilitate and sustain a focus on ESE:

- In what ways does the school connect with the community, both local and global, to build, retain and progress its commitment to ecological sustainability education?

- Is there evidence of a place-based approach to ecological sustainability education at work in the school and community?

To ascertain how an urban primary school connects to place, a deductive approach utilised these sub-questions to formulate initial framing themes (Braun & Clarke,

2006; Fereday & Muir-Cochrane, 2006; Joffe, 2012). The deductive themes guiding this stage of analysis were the school's local and global community connections and evidence of PBE. Under the theme of local and global community connections, an inductive approach (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006; Joffe, 2012) identified the following themes that resided in the raw data: making connections, valuing diversity and the complexity of working with community. The themes more closely aligned with PBE are experiencing place, aesthetics and fun, and the culture of the school.

8.1 Local and global community connections

> *T2: If you don't know what's in your own backyard then you can't understand what's outside.* [17.29-30]

To build, retain and progress its commitment to ESE Acacia Primary School connects with the community, both local and global, in a number of ways. The first section looks specifically at making connections stemming from personal to global connections.

8.1.1 Making connections

There are many references to local and global community connections within the interviews. The deputy principal suggests that connecting to the community is a priority at Acacia Primary "*about reducing our carbon footprint and embracing what we can do as a community to ensure that happens*" [T8:4.9-11]. This depicts an element of moving beyond the individual emphasis that is dominant in much of the interview data to nurturing collective action. The connections discussed in the interviews involved local and global connections as well as big-picture connections.

Big picture connections

One staff member feels that helping her students make connections is her main focus and "*if kids get tired of me saying a word, it will be the word connecting*" [T1:13.15-16]. She says that connecting sustainability "*with what you're doing in your classroom, and the whole, whole thing. It's massive, but you try*" [T1:13.27-29]. Fostering these connections within students is seen as an important way of moving beyond the superficial transmission of information and "*if you connect a few that's*

great" [T1:13.29]. The principal also highlights making connections, emphasising that *"it's no use studying about the lifecycle of a frog unless you're really looking at frogs as a barometer of environmental health … and how come frogs disappear? What is it that we're doing to the environment? So … kids get the big picture … coz you can do bits and pieces of things with no connection, no connection to the <u>big issues in, in life</u>*" [T4:4.21-27]. Therefore, big picture educating that fundamentally links to a global arena is promoted and undertaken at the school.

One means of making big-picture connections is using visuals. Along with cartoons, T1 conveys her ideas to her students through various media sources, particularly the internet that she thinks is "*brilliant*" [T1:13.36] and she insists that with students:

> *T1: you need visuals … I use a lot of photographs … and old photographs, paintings … with your DVD … they get those visuals – visuals are <u>really, really</u> important.* [14.3-7]

T1 draws from this Aboriginal perspective: "*that basic knowledge of knowing that you actually can live on the land and you can live with it*" [T1:9.34-36] and compares it to "*the other extreme*" epitomised by acclaimed Australian cartoonists such as Petty and Leunig. These different perspectives help T1 to "*create [my] picture*" [T1:9.37]. T1 acknowledges that the visuals in their cartoons are influential. Cartoons can be used to provide a snapshot of significant issues such as the connection between mining and the economy, as highlighted in Chapter 7. Leunig encapsulates neoliberalism in his cartoon titled Business (see Figure 13) which highlights people as market models, supporting competition and commodification.

Figure 13. Leunig's cartoon depicting neoliberalism. Sourced from "Business," by Michael Leunig, (2014, June 6), Retrieved 6 November, 2017, from http://www.leunig.com.au/works/recent-cartoons/427-business

Visuals are an important way of exposing students to things they may never have encountered. This idea is supported by the comments of a student who discusses an image that had a major impact on her whole class at a previous school:

> *S1b: [The] teacher showed us a picture, it was two big like rainforests but they were in the shape of lungs and then there was a big road down the middle ... and in one corner of one of the rainforests half of it was just gone and it was like showing how it used to be on this side and then on this side what we're doing to it and like how it's affecting you ... coz it looked really bad and on the other side it looked really nice.* [17.18-26]

The presentation of the image, "*in the shape of lungs*", could be the reason it made such an impact as the student could relate to it. This image resulted in a change in this student and her classmates as they "*stopped throwing rubbish just away on the ground and stuff. They started trying to look after things*" [S1b: 17.34-35].

As well as using visuals, family members and a number of local organisations are accessed to bring knowledge and information about ecological sustainability into the school, creating a connection with place.

Local connections

Making connections is an important aspect of supporting ESE at Acacia Primary. These connections span from local connections like families or organisations such as the local council and the Men's Shed, or places like "*wind farms*" [T7:13.11], "*local government, the local waste management board ... the local recycling centre*" [T2:17.13-16] to more global connections like those made through re-enacting experiences of children in other countries. The principal also hoped to work more on connecting her students "*with groups like Men's Shed and Rotary where there is expertise out there and there's a need here with young people*" [T4:23.36-37] because the "*staff are just so hard pressed*" [T4:24.13-14] to do anything extra with the students.

There are many examples noted by the participants of ways Acacia Primary School connects with the local and global community. One way is through teaching students about water use and water sources "*and teaching kids how to actually use water here wisely*" [T7:13.13-14], which has a direct correlation with knowledge about the place in which the students live, both locally and globally. Another way is through the families of the students at the school, "*they've formed a P and F now, parents and friends committee, which hasn't been around for years*" [T9:15.24-25]. Of interest is that this parents and friends committee "*hasn't been around for years*", therefore it may signify a deliberate return to community that may have been missing.

Staff living in close proximity to the school is cited as a positive thing, as living locally is seen as a good way to see and connect with the community. An added bonus in living locally is that it enables a more sustainable means of transport. One of the staff members was able to "*get rid of a car*" [T2:3.23] and ride a bike. Living locally was aligned with the staff member's beliefs that are inherently supportive of ecological sustainability.

The school itself is also seen as a significant resource to connect with the local community with parental involvement, particularly in the garden, and an open-access understanding.

> *T7: The fact that this school is open all the time for other people to use, the fields, and I think that's a great idea to actually use the school as a resource instead of blocking it off. As a community resource because then there'd be*

> *more people here to look after it too, even if it's damaged it's actually looked after, it's a balance of both of those things.* [14-15.29-1]

Having an open-access school is something T7 could not understand at first, but she then realised that allowing the community into the school gave them ownership for it, which meant they also took care of it.

T1 refers to educating students about where their food comes from and connecting that to their local place. With her junior primary class, T1 "*grew some wheat*" and ground it so students could take some home:

> *T1: And parents actually came to me and they were saying, 'thanks for the wheat, {T1}. Apparently we're making it into a loaf of bread'… it can go home, and it's for them to know. So really, for junior primary level that, the bread you're eating, it came from wheat, we happen to grow a lot of it in South Australia … but it is actually putting into the kid that you don't just get bread, there's all these other things.* [11.3-22]

Although the students were only given a small amount of wheat, they were empowered with the knowledge that bread is made from wheat, and a lot of wheat is grown in our state. In addition, through the wheat growing exercise a parent "… *realised her kids didn't know that [their] grandfather was, in fact, a Waite Institute scientist, and actually headed the Waite Institute, and was a science, a soil expert*" [T1:11.26-28]. Therefore, through connections with the school some families were able to make greater connections with their own families. T1 asserts, "*it's about making links*" [T1:11.33].

A major reason for the school connecting with the local community is that "*if you don't know what's in your own backyard then you can't understand what's outside*" [T2:17.29-30]. The aim is to engender a sense of social responsibility:

> *T2: If they can do it on the school grounds, which is why it's important we have those stuff on school grounds, if we can do it within walking distance and then within our local council first, then it gives them a firm conceptual understanding that this isn't about somebody else and somewhere else, it's about me and it's about my community and it's about us and it's stuff that I can impact on.* [17.34-39]

Making a personal connection is important, as children "*need that connection*" [T2:18.14-15].

An example of a national connection the school had made was through winning a national sustainability competition. The benefits of this were not only winning solar panels – the school was able to see its place in a national arena.

The participants cited numerous information sources about ecological sustainability and what influenced their beliefs and practices. Chiefly, the sources of knowledge referred to that effected their attachment to place were family influences and external experts. Knowledge about ecological sustainability has the potential to change people's ideas and practices and foster a connection to place.

Family influences

The comments in this section revolve around the notion of household, which encapsulates the family, their house and their property and possessions, also understood as *home*. Payne (2009, 2010), views the family household as a powerful site for instilling support of ecological sustainability. He claims the home has the greatest influence on the development of our beliefs, values, understanding and emotion (2010). Therefore, knowing the home has a significant influence on students' views and beliefs, this can be incorporated into the development and commitment of the school in progressing ESE.

Many staff members speak about their own prior experiences, and in particular family, in influencing their views. Many recalled sustainable practices their parents practiced like "*recycling*", "*reusing*", "*composting*", "*permaculture*" and fostering an awareness of sustainability issues. The principal recalls her lifestyle as a child living in the country with a focus in sustainability, "*the lifestyle that country people lived, it was all about conservation and using the Earth sensibly and not throwing things away and not buying what you didn't need and if you could make it, if you could reuse it*" [T4:6.25-28]. T9 also recalls getting many ideas about sustainability, and gardening and preserving food from her parents who were farmers:

> T9: They didn't know that word [sustainability] they just did it. I don't think they knew that that's what that was … they did a lot of sharing in those days, trading. … I think in their world they knew that what they were doing was right but they just didn't have the word to go with it. [5.14-29]

Another staff member discusses the influence of her parents, and while her parents' gardening practices reflect very individualised practices, T6 likens their activity to

sustainability in terms of producing their own seasonal food, not using chemicals and looking after the land. Again, sustainability was not necessarily their focus, "*it was just something that you did, and then when we went to school it was like, 'oh what do you mean you have a garden vegetable thing in the back, fresh produce' and they couldn't understand that concept at first*" [T6:8.1-3]. While this recount is about the participant's childhood, it highlights what she believes is a disjuncture between European practices compared to Australian, where the concept of having a vegetable garden was incomprehensible.

A number of the participants have similar sentiments: "*looking back on it now [my parents] did things to save money which were quite good*" [T5:7.33-34]. T5 speaks of the influence of his parents' gardening and power-saving practices, where they collected rainwater to water the garden, grew their own vegetables and "*were really fanatical about wasting power and keeping lights off, more so to save money*" [T5:7.37-38]. This demonstrates that this staff member grew up in a household that adopted some sustainable practices, but the purpose of those practices was largely economical. However, this staff member believes that "*the long-term effects that they did create a good footprint for the environment by doing all of that*" [T5:8.1-2]. So, although the focus was on saving money, ultimately T5 believes their practices supported ecological sustainability. The principal also reflects that her parents' sustainable practices "*probably had a lot to do with money*" [T4:7.10]; however, it was fundamentally about "*sensible choices … living within your means and using your resources sensibly*" [T4:7.14-15]. Similar to the adult participants talking about their families influences, the student participants also reflect on their parents saying "*turn off your lights or else you'll waste energy and money*" [S2a:13.11-12].

Many of these discussions connect to changes in generational lifestyle choices. As mentioned in the previous chapter, in the section "me, myself and I", Payne (2009, 2010) identifies that many of the choices people make are influenced by the era in which they grew up. The frugality and resourcefulness of the parents or grandparents mentioned in the interviews likely originates as a direct result of the "scarcity conditions" (Payne, 2010) caused by the Depression and World War II. On reflection, when T9 talks, above, about her parents doing what was "*right*" it is unlikely that ecological sustainability was anywhere on their radar, rather, they lived

at a time when being frugal and individually resourceful was 'normal'; hence, doing anything other than the norm would not have felt "*right*". Many of the adult participants resemble a 'green parent' (Payne, 2009, 2010). The resourcefulness and economic constraints of their parents have shaped them, but they are also heavily influenced by the current consumer way of life that is far more affluent than that of their parents.

> *T4: I don't sew as much as my mother used to ... I don't keep, everything ...*
> *my mother does, every jar, every margarine tub. I'm a just a little bit more*
> *practical but certainly those issues around conserving electricity,*
> *conserving water, growing my own vegetables, being conscious of what I*
> *buy.* [6-7.34-3]

As evidenced, the home is an influential site for shaping people's individual practices and beliefs, and for raising awareness of other people's actions.

As a result of experiences with, and reflections from, family members, some students exhibit an awareness of the difference in the environment over time and in different places. Hearing stories about the way places used to be, environmentally, has had an effect on the students. Moreover, the inclusion of visual images is significant:

> *S3b: I guess of seeing it like I've just like I've seen like the world like when*
> *my grandpa was only a little feller and it was it looked so nice.* [13.22-23]

Seeing actual footage through books, photos and TV of how "*nice*" the environment looked in the past compared to how they see it now has changed how he feels about the environment so that now:

> *S3b: Yeah I think it's really important because without it we're all gonna*
> *(pause) die or be like a really sad place (pause) and dead.* [13.17-18]

This student comment demonstrates an emotional connection to the environment while also demonstrating the interconnection of humans and their environment, tending towards a more ecocentric view, "*without it we're all gonna die*". An aspect in the comparison of the past with the present and loss of the natural environment is the importance of engaging in dialogue with the students (Kahn, 2002). Furthermore, it is especially important to use this dialogue to envisage and shape possible futures (Kahn, 2002).

An awareness of the environment and its destruction was also "*discovered early*" by one participant who personally experienced environmental damage:

> *T2: [I] was actually a horse rider and so physically going out into the countryside, around the area, made me aware of a non-urban environment and the fact that we have to look after it and I can talk about being dive-bombed by pest crop sprayers on horseback and a whole range of things which made me go, oh shit, no you can't do that.* [8.10-14]

These significant life experiences (Chawla, 1998; Tanner, 1980) or moments of being (Tipper, 2013) are shown to be powerful in shaping a commitment to ecological sustainability. Gruenewald (2003a) warns that mainly focussing on the negative aspects of sustainability "keeps students indoors and thinking about outdoor places only in the abstract" (p. 7). Instead, ESE and significant life experiences should foster a connection with the natural world (Gruenewald, 2003a; Sobel, 1998). Predominantly, the findings in the interviews align with Chawla and Cushing's (2007) research into formative childhood experiences associated with pro-environmental behaviour. Consistently, the participants who had childhood experiences in natural settings, alongside adults who embraced an appreciation for nature, are those who exhibit a natural support for ecological sustainability. Another way of encouraging a connection to place is through connecting with experts and environmental organisations.

Experts and environmental organisations

Within the interviews, various experts and environmental organisations are identified as useful resources for instilling a connection to place and ecological sustainability. These organisations include Keep South Australia Beautiful (KESAB), Waterwatch, SA Water, CarbonKids and Natural Resources Management (NRM) Education. These organisations are accessed through coming to the school or through class excursions.

Bringing in or going to these organisations is seen as a good way for expert knowledge to be conveyed to the students while also connecting with the local community, and these experiences are seen as "*priceless*" [T3:16.33]. Rather than simply discussing things like solar cars and smart cars actually bringing people from the community into the school is "*really effective with kids*" [T7:15.15].

KESAB is an organisation that "*have been great*" [T3:16.29] for the school in terms of facilitating practices that support ecological sustainability. KESAB is also highlighted as an organisation connected to ecological sustainability that came to T5's primary school when he was a child; however, on reflection he concludes that the underlying principles may have changed over time. Looking back he suggests that the focus of KESAB was on having a "*nice tidy street*" [T5:7.22] rather than "*the long term effects of pollution*" [T5:7.23]. This is true of KESAB, their mission has changed from reducing litter, to being "a leader in creating sustainable communities through education, action and participation" (KESAB, 2017).

In reflecting on his primary and high school years, T5 suggests:

> *T5: [I] had some pretty amazing biology teachers coz there was all these conversations about running out of oil and not using fossil fuels and always that renewable sort of stuff.* [2.26-29]

T5 considers that because of his exposure to sustainable issues in his school years he has always carried an awareness of the issues. Subsequently, he noticed when the "*conversations were absent from public forums … for quite a significant period of time*" [T5:3.4-5] because society went from having "*a lot of conversations*" [T5:3.6] until the 90s, when "*nothing, we just continued living and doing things the way we did*" [T5:3.8-9]. This signifies an example of the fluctuations in priorities present in society. For T5, the 1980s represented a time when environmental issues were at the fore; however, the 1990s seemed like a time when the issues dropped off the agenda. This may also exemplify that his main sources of knowledge and information about ecological sustainability were the schools T5 attended, and upon graduating, T5 was no longer directly exposed to a ready source.

Along with specific environmental organisations being a resource for the facilitation of experiences in support of ecological sustainability and connecting to place, 'experts' provide additional sources of information.

The principal brings experts into the school to explain some of the "*baseline*" [T7:7.5] science behind ecological sustainability and environmental issues to educate the staff, students and community. These include people, such as leading environmental scientists from a local university, "*someone from the Bureau of Meteorology … a design student who was looking at how houses needed to be built*

sustainably and then at that time the solar taxi was travelling around the world and there was ... the world solar conference was here” [T4:4.4-8]. The point behind bringing in these experts is that “*people were being educated at the same time that the kids were learning about the issues*” [T4:4.13-14].

Bringing in experts to explain some of the issues surrounding ecological sustainability was not only educational, as T7 claims it “*really blew me away*” [T7:7.15]. Although T7 had some knowledge about environmental issues it was not until the “*baseline information*” [T7:7.14] was explained to her that it “*made a big impact*” [T7:7.17]. Additionally, viewing documentaries and science investigation programs increased staff “*baseline*” knowledge or “*background science information*” [T7:7.26], providing them with a better understanding of environmental issues.

> *T7: We watch Catalyst and David Attenborough and all those other bits and pieces that pull all those puzzle pieces together, like the effects of this, the effects of that. And the evidence is just overwhelming, just overwhelming.*
> [7.35-39]

Having this greater understanding enabled staff to “*pull all those puzzle pieces together*” to a point where they found that the evidence supporting ecological sustainability was “*just overwhelming*”. The principal endeavours to bring experts into the school for staff, students and the community to broaden the information source. She wants the students in particular to “*have accurate information so that they've got some armour against the crap that's out there*” [T4:13.6-8]. One issue the principal voices about tapping into experts is that she chooses to hire her own consultants rather than going through the education department where “*the experts are disappearing*” [T4:21.15]. She says they are “*a bit thin on the ground really, now*” [T4:14.24] and that the department does not really help because the environmental education organisations are “*not prioritised in any way. It's only committed people who just bang on about it and just keep working hard and, and just keep pushing the sand up the hill*” [T4:14.30-32].

In line with bringing experts into the school, one of the key interview questions is around the possibility of redesigning the sustainability and community connections Acacia Primary School is involved in, and when asked if there are any changes that could be made one staff member offers:

> *T6: I don't know, maybe bring the council on board, I'm sure they've got their sustainability consultant somewhere that's sitting in a little office, dying for someone to ring them up… 'I'm waiting. Oh, somebody's wants to talk to me'.* [16.31-33]

This image of a "*sustainability consultant*" is insightful. Rather than someone of great importance, they are seen as someone with little significance as they have a "*little office*" and are "*dying for someone to ring them up*" because presumably their job is not important, and they have nothing to do. This implies that this staff member's view of sustainability is worth less than an expert's, and that in terms of the school's focus they would do well to bring in an external entity to help implement change rather than adopting the notion of the school as the experts, or active agents, who can potentially create change external to the school.

Out of all the participants' sources of knowledge and information, it seems that their families had the greatest influence.

Global connections

At a more global level, an exercise some staff and students undertook was walking to a community water well. "*We walked the six kilometres there with plastic containers, we carried two litres per person of water back to replicate the life of a child in a poor country as part of it*" [T2:18.18-20]. This experience was an instrumental way for the students to make a global connection. For T2, thinking and talking globally is essential to "*make living standards for everybody … into the future generations, better*" [T2:9.10-11] because "*if we're not sustaining … [the basic needs] … not just for Australian citizens but for the global picture then we're failing on sustainability*" [T2:9.26-29]. T2 also demonstrates that while students have "*some common understandings*" [T2:13.11] about the world, they have a limited global appreciation as many students "*had no idea that in other countries children still [die] of measles*" [T2:13.12-13]. Therefore, a method of building a more global awareness and emphasising global connections with the students is using fiction and non-fiction stories (Smith & Armstrong, 2002).

Another conduit of information for many staff members is the principal at Acacia Primary, "*{the principal} has certainly provided the staff with lots of information*" [T7:6-7.44-1]. One of the main catalysts that prompted the ecological sustainability

focus at the school was when the principal read *The Weather Makers* (Flannery, 2005), a book about the impact of climate change:

> *T5: It basically changed a whole lot of stuff for her on the way she saw climate change, and the impact climate change had on our planet. She bought everyone a copy, made them read it.* [2.13-16]

Although T5 speaks about some things that are always incorporated into their teaching like "*water conservation*" and "*recycling*", suggests that "*it wasn't until we read that book that we looked at it a lot deeper and thought we could do much more than we're doing, because we weren't even touching the surface*" [T5:3.14-23]. The documentary, *An inconvenient truth* (Guggenheim, 2006), former US vice president Al Gore's campaign to raise public awareness about global warming, is another resource that made a global connection with staff members:

> *T3: They'd just released that movie, An inconvenient truth, and {the principal} got the whole entire staff, in their own time, to come along and she paid for everyone to go to the movie to see this to enlighten them about some of the issues.* [2.32-35]

This demonstrates that the principal was educating the staff about environmental issues, but the purpose was not just to "*enlighten them about some of the issues*", the principal wanted the staff "*to start actioning some of that, that philosophy into [their] everyday practice and into [their] management of the school*" [T5:2.20-21].

In addition to making connections with local and global communities, an aspect that fosters a connection to place and comes through many of the interviews, is valuing the cultural diversity of the school.

8.1.2 Valuing diversity

An integral part of supporting ecological sustainability and embracing elements of place and PBE is in valuing diversity (Comber, et al., 2007). While this includes valuing the non-human world, a strong foundation is demonstrated through the degree in which cultural diversity is valued at Acacia Primary.

"A culturally inclusive school"

"*The multicultural nature of the school*" [T2:3.24] is highlighted a number of times as something special about Acacia Primary, particularly in terms of the diversity coupled with inclusivity, tolerance and "*the willingness of people to understand*

children from different backgrounds and their cultures and their beliefs and … be sensitive to those" [T8:3.42-44]. The diversity of the school population is something that is "*integrated*" [T7:2.27], that is, all students, including the school's new arrivals program, are integrated into the fabric of the school. This is emphasised with an example of how difficult it was for the students to portray to other schools what diversity is:

> *T6: We made a movie with the students about trying to show what being in a culturally diverse school is and the children found it really hard to make a movie because they were in it. And they could not understand, what do you mean people don't understand what a culturally inclusive school means.* [3.25-29]

Because the students "*were in it*" "*they just thought that was normal*" [T6:4.4].

T9 feels the cultural diversity of the school has the potential to encourage an appreciation of what people have when they can see what people from other countries experience before coming to Australia. Therefore, the cultural diversity of the school is presented as providing insight to the wider community as it gives:

> *T9: insight to parents [and] other children about how other cultures operate and the hardships that they may have incurred in getting here. And hopefully they don't take for granted what you've got now, and they can look at and say 'wow, is that what you've come from?' So it opens their eyes.* [2.28-32]

Due to the cultural diversity of the school, some staff members draw on students as resources to make global connections, for instance some students who come from warmer climates may not have seen rain:

> *T9: So you can go out and you can talk about 'this is what rain looks like, to us this is what we do when it rains, what do you do?' And we look at the different cultures about how <u>they</u> get water.* [8.31-33]

The staff members celebrate and draw attention to the ecological sustainability skills and knowledge the students bring, particularly students who are new to Australia. In addition, many of the students who are new to Australia say, "*they want to go back home and make it better, that they want to go back home and fix things up*" [T7:15.35-36]. The students are keen to take what they learn at school back to their home countries to improve life there, thus taking their education globally.

The multicultural aspect of the school community is important to some of the students who suggest that their school is "*not just like a Christian school, it's not just*

a white school, it's everyone comes together as one" [S5a:1.14-15]. This student elaborates:

> *S5a: Coz way back ... sometimes it'd be only [a] white kids school and stuff like that but now ... in school where you get to meet different people and there are ... different types of colours and different countries and it makes it special for you like you don't just have particular friends you have like different friends like that.* [1.17-21]

The historical reference of "*way back*" when it was only "*white kids*" seems to reflect an opinion of the changing shape of the typical Australian community, and the comparison to "*a Christian school*" seems to suggest that the student views Christian schools as monocultural and that different cultures bring different religions but at Acacia "*everyone comes together as one*". This sense of a global community is seen as a good thing and in the eyes of the students that was fairly unique to this school:

> *S5b: Coz not a lot of other schools have like that many different cultures and it's good to have kids from all around the world.* [2.17-18]

Valuing diversity is a crucial part of supporting ecological sustainability as it promotes an ethical stance and acceptance of difference, where other's opinions and experiences are valued (Sauvé, 2004, p. 146). Acacia Primary demonstrates a celebration of otherness, an appreciation of other cultures and a willingness to accept, not change, difference. This high regard for diversity is reflected in the sense of community felt within the school and includes the valuing of Indigenous cultures.

"A fairly big strong Aboriginal perspective"

In addition to using texts with local and global connections, one staff member gives an example of an Indigenous story used. The story ties in Pitjantjatjara and geography with the aim to connect students to the history and geography of their place, as well as the Indigenous perspective and relates the content to the students by looking at their own lives. She shows the students "*photographs and paintings, and start to have a look at how the area has changed ... there's some beaut illustrations and paintings, and all sorts; photographs where they can see how quickly it changes*" [T1:12.34-37]. Utilising an Indigenous perspective and an Indigenous language is something connected to place not many schools offer, and it is something T1 thinks makes Acacia Primary special: "*there's very, very few schools that actually nominate – have the ability to teach Aboriginal language, there's not very many at*

all. That's really outstanding" [T1:3.32-24]. While the traditional custodians of Australia can be acknowledged through language, the adoption of Pitjantjatjara as a language at the school is not only about language teaching, it also provide insight into Australian history, particularly to those students new to Australia:

> *T1: I'm giving them insights into the Aboriginal perspective, and I think, for the new arrival kids that's a really important issue ... making sure that those kids had that perspective, not just coming in, but actually seeing ... my job was to put that into the historical perspective into their heads, and the Aboriginal perspective on things.* [5.15-23]

Embracing the language and perspective is beneficial in the many ways in which T1 celebrates, and gives her the permission to, with everything she teaches, "*push it with a fairly big strong Aboriginal perspective*" [T1:6.9].

Embracing the cultural diversity of the school is also a way to make local connections. The adoption of Pitjantjatjara as a language at the school is "*also about giving support too, in that position of giving support to Nunga families, getting relationships going. It's now moved on to a lot of, also other kids coming in, which is good*" [T1:5.5-7]. Therefore having this particular language at the school is attractive to many members of the community who can connect to that language.

While there are many positive accounts of connecting with local and global communities, there was a level of tension involved in the complexity of working with communities.

8.1.3   The complexity of working with community

A sense of community is an aspect within many of the interviews that the participants frequently comment on, particularly in terms of the staff. The principal regards her students' "*experiences [at Acacia Primary as] pretty darn good compared to anywhere*" [T4:2.26] and she contributes this to her staff members, who she speaks very highly of, and states are "*extraordinary talented teachers who make a difference*" [T4:2.11], "*amazing office staff*" [T4:2.14], "*members of the leadership team who are just so clever at what they do*" [T4:2.19], "*we've got a great librarian*" [T4:16.21] and "*leaders in ICT ... literacy leaders and leaders in mathematics*" [T4:2.23-25]. The staff are often cited as the key factor that makes Acacia Primary special.

One student considers the students and staff members at Acacia Primary as an extended support system beyond her parents and family, stating, "*everyone around the school ... can help. It's not just your parents and your family*" [S5:3.11-12].

The staff members are also seen as key drivers for the school's environmental group through their encouragement of the students to join, "*if the teachers weren't here none of this would have happened*" [S2c:15.16], and through fostering an ethos of care:

> *S3c: Coz without them we'd all be slobs ... and going, 'you know what, climate change, who cares? Throw a bit of rubbish over my shoulder, don't care'.* [15.21-22]

The environmental activities are seen as important because "*so many people want to help out and do it*" [S3a:2.13], reflecting a sense of community. The school also connects with parents by giving away produce from the school's vegetable garden. More broadly, community and school connections are enhanced through the environmental group's connections with other schools' environmental groups. Consequently, the "*shar[ing] of ideas and switch[ing] what we should do*" [S2b:5.2] is increasing within the school. While making connections and nurturing a sense of community are seen as positive attributes in the support of ecological sustainability, a level of complexity is revealed that needs to be managed and worked through.

From the interviews it is apparent that Acacia Primary has a "*very close connection*" [T6:4.13] with their local council. However, while working with the local council is seen as a "*lucky*" [T6:4.12] thing, it is all dependent on having someone to drive a focus or project which is identified as a dilemma because of time, organisation and motivation:

> *T3: So there's a connection with local council over what was happening here, and I mean that could have probably got taken further but again it's that's drive, it's who's driving that motivation to do that. If you're not interested in it, and you don't see it as a priority in your work, those sort of connections get lost over time.* [19.1-5]

This dilemma was experienced by the school as the council staff had changed over time, and the principal acknowledges, "*the council has been fairly helpful although they don't have the environmentalists that they had when I first started*" [T4:13.39-40]. Further compounding changes at the local council level is the withdrawal of the

free supply of small green bin liners for the school's classroom containers. These changes possibly reflect a shift in focus and priorities of the council away from sustainability and the environment.

T6 also suggests that a successful environmental program or ethos within a school needs to be "*not just driven by the school but also by the community*" [T6:1.6-7]. She refers to schools she has seen on television that are "*fantastic*" in terms of their environmental focus, but that "*it's not a lone thing*" [T6:1.3-4]. When discussing school community gardens she has seen, T6 says that at Acacia Primary:

> *T6: It is there, I mean there is a parent who's very dedicated and eager and she's been maintaining and she's had some students in classes involved in it.* [1.28-31]

However, what she has seen on television and what she has experienced at another school is very different to Acacia Primary. One particular school had a community garden that was central to the school and was looked after by various community members. The schools T6 spoke of exhibited a great sense of community; however, she laments, because of heightened security "*today ... everyone has to have a police check*" [T6:2.36-39], resulting in a loss of community. Furthermore, T9 recounts a time when she first came to the school and "*what I wanted to do was build up a community garden. I didn't realise how hard that is to get people on board*" [T9:11.35-36]. She speaks about how people are happy to reap the produce but are not interested in actually providing support in helping to set up the garden to grow the produce. She says that the contribution by volunteers "*comes in waves*" [T9:12.6] and currently at Acacia Primary it has "*kind of lifted again*" [T9:12.5], but she doubts that her "*dream*" of a community garden will ever happen as it "*was probably a big pie in the sky*" [T9:13.18-19] because "*it needs a big driving force*" [T9:13.21]. So "*getting the people on board and understanding the importance of all of this*" is seen as a "*big barrier*" [T9:14.10-11] because "*it comes down to the parents being time poor, but have a big group of parents, volunteers that can focus on that and run it, that's what you need. That's what you need*" [T9:14.14-17].

Closely linked to local and global community connections is PBE and while Acacia Primary does not explicitly claim to be undertaking PBE there are many examples in the interviews of aspects that closely relate to a place-based philosophy.

8.2 Place-based education

> *T4: People who come from the land <u>are</u> like that, we just <u>are</u> [environmentally conscious].* [22.34-35]

Connecting with place and PBE are beneficial in fostering and maintaining support for ecological sustainability. At Acacia Primary, this involved hands-on experiences and engagement with the beauty of nature. Having an element of fun and happiness was also contrasted to how boring life would be without nature. In addition, the culture of the school is cultivated through a two-way relationship between the school and its community in a mutually influential way. However, this symbiotic relationship may not always work for the benefit of ESE.

8.2.1 Experiencing place

Experiencing place involves actively participating in a direct and practical way to know and care for a place. The benefits of this, particularly for children, is that in forming a connection with their place they will learn to care for the environment more broadly and more instinctively (Comber, et al., 2007).

A connection with the local place is nurtured at Acacia Primary through activities like biodiversity studies where students sleepover at the school. Activities like these help students become aware of the flora and fauna at the school, and they are educated about what changes they can make to the school environment to encourage native animals to the school. This enlightens students to the historical nature of the place of the school.

Historical pictures and questioning are used to encourage *"high-order thinking"* [T6:9.28]. Looking at the past and projecting to the future helps to foster a connection to place where students can see how things have changed.

> *T6: The present, the past, the future, and what did they do in the past to help that or ... what are we doing now? And some children will say, 'oh, mum and dad ride a bike or I walk to school, we don't use the car' or ... 'oh maybe we should restrict car vehicles in the city area' ... they come up with all sorts of interesting scenarios.* [10.2-7]

Through discussion, questioning and past and future thinking students are able to relate directly to what they have done and can do to help the environment.

The changes made to the school grounds by the current principal since she came to Acacia Primary are also significant:

> *T7: The place looked very different ... very different. This was nothing. No ... so the amount of trees are more here, and the amount of, there's newer buildings, newer prefabs ... and the green areas back there, much more greenery.* [3.13-31]

These comments reflect an effort of the principal to change the place of the school by making it greener and consequently more aesthetic.

8.2.2   Aesthetics and fun

A yearning for a greater sense of community and a comparison with other schools was articulated with regard to making changes in the school. Often, this included discussions about the aesthetics of the school and the importance of fun.

Aesthetics of nature

In reference to the school's produce garden, a staff member states that she would "*like to actually see the garden bigger*" [T7:18.17]. However, primarily, one of the main reasons is for the aesthetics rather than the outcomes of having a bigger garden.

> *T7: Because it just <u>looks</u> beautiful but also it means more people are gonna be in there using it. And, it's a model for people, for their gardens. I mean, if there's a model at the school that's more visible and showy, I think that more people are attracted to that area and use it.* [18.17-33]

The benefits of a bigger garden would also enable access for more of the community who could gain knowledge and experience from the school and take that home to their own gardens and their own communities. This facilitates both education and connection with the community, as well as potentially improving the environment.

While environmental improvements to the school can be positive actions for ESE, improving the school and making environments "*better*" are also linked to increased enjoyment (both personally and for others) and the aesthetics of the school:

> *S1b: Coz we want people to know what we're doing and that we want to make places better for more people to enjoy.* [4.10-13]

> *S4b: Even though there's lots of plants and big trees – tall trees here, I think*

> *it would be lovely to have even more plants ... especially because it's the first thing that people normally see in the school, it would be nice to have a good kind of native environment when you walk in.* [24.4-13]

In connection to what is valued and necessary within the school when asked what the students would change about how the school cares for the environment, one student offers that they would "*make the school greener*" [S5a:19.11]. However, this is not in reference to the ecological sustainability practices of the school, it is in reference to the school's lawn. It seems that this student wants the school to be aesthetically pleasing and that caring for the environment equals green lawns; however, "*not too green because then animals will eat all of it*" [S5a:19.20]. They would make sure there is enough water so the environment looks nice, but not inviting to animals. This demonstrates a tension. This aesthetic aspect of the environment is important to the students:

> *S4b: As well as it being important about oxygen in trees and all that it's also very important for things like beauty of it because I guess the nature's very wonderful to look at. It's, just all green and lovely.* [16-17.38-2]

Here again *beautiful nature* is represented as "*green and lovely*" as opposed to:

> *S3a: The world would be just cold and boring and like dead.*
>
> *S4a: Nothing to see.* [17.4-5]

Furthermore:

> *S3b: So like this beautiful rainforest place with lots of trees and animals and water, instead just plain world with factories everywhere and just houses.*
>
> *S4b: Having major cities it also cuts down lots of trees, nature* [17.9-13]

The appearance and quality or the aesthetics of a school are documented as influencing children's emotions and behaviour (Moore, 1989; Titman, 1994) and convey an image of quality (Titman, 1994). Aesthetics also have an impact on adults, therefore, Moore appeals for schools to be attractive "in every sense of the word" (Moore, 1989, p. 203), not only on the way they look from the outside but also throughout. However, there needs to be a consideration into the sustainability of the aesthetics. Using native plants to increase the beauty is far more sustainable than more green lawn. Therefore, a sustainable garden may challenge some people's ideas of how a beautiful garden should look, highlighting a tension between beauty and sustainability. Fun and happiness were also highlighted in the interviews.

Fun and happiness or boredom

Having an element of enjoyment or "*fun*" was significant with regard to the environmental activities within the school. The emphasis on fun is key as Titman (1994) found in a report on children and their school environments. The importance of fun in school grounds should take precedence because the design of the school grounds can have a great influence on child behaviours. This is supported by Moore (1989) who suggests that many adults do not equate fun with a genuine education. Yet, fun has the potential to increase motivation and can have major positive ramifications on educational outcomes. Conversely, boredom can have the opposite effect. With reference to the environment in general, one student proclaims:

> *S2b: I think life would be boring without nature.* [16.37]

Arguably, life would be impossible without nature; however, this quote highlights Moore's (1989) proclamation that boredom is generated in an undeveloped environment and creates barriers to individual development, self-sufficiency and social cohesion (Moore, 1989, p. 201). In contrast, environmental diversity fosters an element of fun and positive development.

Happiness was also deemed as important. In an attempt to explain what sustainability is, one staff member says:

> *T3: I think to an extent you need to maintain a world where people can*
> *experience happiness and lifestyle and do the things that they've wanted,*
> *that they've always done.* [6.37-39]

T3 articulates a goal that would be held by many people, that is, "*happiness*". He also proposes that ecological sustainability is about a world where people do what "*they've always done*", which can imply a state of stasis, without change, or endless consumption and development. Brown and Kasser (2005) propose that to be ecologically sustainable, people (society) need to significantly change their behaviours}. Undertaking significant change will mean that people may not be able to do what "*they've wanted*" and what "*they've always done*". Furthermore, in a pursuit of happiness, research has found that people living in an ecologically responsible and simpler way are happier than those living high consumption lifestyles (Alexander & Ussher, 2012; Brown & Kasser, 2005).

8.2.3   The symbiotic culture of the school

The culture of the school is something that is continuously being formed through a symbiotic relationship involving a concerted effort of staff members and the external influence of the community. A means of connecting the community with the culture of the school is through promoting what happens at the school. Highlighting the school has an environmental focus via a promotional sign is a way of communicating school values and justifies the staff's approach to ecological sustainability, which can potentially influence the values of the community:

> *T7: I think it actually does something for the neighbourhood, I've heard people in the neighbourhood reply that they're interested in what it means. And it actually draws attention to the issues I think, and if it does nothing else at least it gets people to ask questions. What does that imply, what does that mean?* [4.17-21]

Publicly promoting the school's focus in supporting ecological sustainability therefore works as a way of disseminating an idea for the community to ponder which can potentially increase the number of people advocating and supporting ecological sustainability. In addition, it works by drawing the community in to the school.

Collegiality is another significant component of the school culture. As discussed in Chapter 7, collegial intelligence (MacGilchrist, et al., 2004) appears to be maintained by the leadership team. However, it is not just something supported between staff but, "*the teachers build that culture with the children too, of collegiality and a team and we're a community and supporting each other*" [T8:2.16-18]. In addition, there is "*a culture of high expectations [not only] of children, but also of staff, of themselves and of each other*" [T8:2.20-21], that everyone will do their best academically, professionally and with respectful and responsible behaviour.

Furthermore, the deputy reflects the expectation of parents has increased recently, and that not only do parents have high expectations of the school but also of their children. This may be due to the school's emphasis on having high expectations, or it may be a symptom of a broader societal focus on academic achievement as bolstered by the dissemination of NAPLAN results on the *MySchool* website. Mills (2015) argues that the implications of *MySchool* necessitate a culture of high expectations in contrast to common cultures of low expectations in many schools, particularly

disadvantaged schools. Accordingly, the culture portrayed by Acacia Primary is replete with collegiality, high academic and behavioural expectations, and a commitment to ecological sustainability. While a symbiotic relationship may in some ways work favourably for ESE, the influence that parents have on the culture of the school may impede this focus. As highlighted in Chapter 7, the consequence of *MySchool* has not only fuelled a culture of high *academic* expectation amongst parents, neoliberal logic has positioned parents as consumers and therefore influential on the education market, while subordinating teachers (Wright, 2012). Consequently, a school's priorities are at the mercy of the market.

8.3   Summary

It is evident that Acacia Primary connects with its local and global community in many ways that aid the facilitation of ESE. There is evidence of a place-based approach to ESE that circulates through the school and the community. Of interest is that family influences were powerful in instilling a commitment to place and ecological sustainability. Valuing the cultural diversity of the school was also significant in appreciating interconnectedness. Experiencing and appreciating place, aesthetics and fun were also noteworthy. Finally, cultivating a relationship between the school and the community is necessary in fortifying a mutual commitment to ecological sustainability. However, there are some apparent tensions in working with communities and how these complexities influence the culture of the school. The following chapter consolidates the findings of this and the previous three chapters, and directly addresses the research questions that have guided this study.

CHAPTER 9:

Discussing the tensions

> Resistance may be alienating and submission may be liberating. Such is the paradox of the dominated, and there is no way out of it. Pierre Bourdieu, *In other words: Essays towards a reflexive sociology* (1990, p. 155)

This study is underpinned by the conception that the current neoliberalisation of education is problematic and is incongruent with ESE. In response to this complexity, as set out in the introduction, this thesis investigates whether there is any space, hope and possibility in which ESE may be preferred and nourished or whether it is an exercise in futility. Therefore, utilising the word 'might' as a way of expressing (im)possibility this thesis questions: *In a neoliberal context, how might an urban primary school facilitate and sustain a focus on ecological sustainability education?*

Negotiating ecological sustainability into a school is a complex and contested task and involves the presence and activation of agency. Vincent, Ball & Braun (2008) link agency to circumstance and identify that generally people who *manage* to cope strategically exercise their agency within structural constraints whereas people who *struggle* to cope are unable to enact purposeful agency. The former tends to align with the dominant discourse whereas the latter exists on the peripheries. This resonates well with the negotiation and facilitation of ESE and the varying degrees of agency people are able to exercise over the curriculum and their lives.

As discussed earlier, key aspects, including ecological sustainability, climate change, neoliberalism and globalisation can all be construed as *wicked problems* (Rittel & Webber, 1973). Education and the curriculum, over which there is much contestation, can also be understood as *wicked*. Dewey (1916) highlights that the educational process has no end and that it is in a continual state of reorganising, reconstructing and transforming. In line with Rittel and Webber's (1973) wicked

problem characteristics, education has "no stopping rule" (p. 162). Therefore, considering the wickedness of many features in this study, solutions may not be readily available. Essentially, the tension underpinning ESE in a neoliberal context is something that may never be fully resolved; however, we must embrace this apparent conundrum in nuanced ways to create the space needed to support ESE.

Consistent with a social constructionist view and as a means with which to address the guiding research question, this research engages with a number of texts that influence and convey people's realities. Key texts identifying priorities from a national, state and local level were discussed in Chapter 5. Furthering the identification of priorities, influences and people's realities, Chapters 6, 7 and 8 present an analysis of the interview data from students, school staff and an eclectic mix of community members including parents, environmental education workers and those with links to national and state education departments and organisations. This chapter engages with the key findings of the four above-mentioned chapters and aligns with the following sub-questions that were framed and developed to help structure and focus the research, namely:

- What are the discourses of ecological sustainability that are circulated and negotiated through the school?
- What challenges are involved in the inclusion of ecological sustainability in the curriculum of an urban primary school, in an environment characterised by the demands of neoliberalism?
- In what ways does the school connect with the community, both local and global, to build, retain and progress its commitment to ecological sustainability education?
- Is there evidence of a place-based approach to ecological sustainability education at work in the school and community?

Acacia Primary is a school that, in the midst of a myriad of pressures, retains ecological sustainability education as an important focus. As a result of analysing the data collected, nine significant tensions stand out. Although the tensions are amorphous, they are presented here in three groupings that relate to the research questions: discourses, the challenges in a neoliberal context, and place. The discourse section consists of a focus on individualisation, and a spectrum of commitment. The

neoliberal challenges include navigating ecological sustainability as a marginalised discourse, compliance and autonomy, competing for privilege, leadership, and time. Finally, the tensions grouped under place are the complexities of community and finding place in a placeless world. These tensions are all elements of schooling that have to be manipulated, worked with (around or against), managed, and negotiated. Concurrently running alongside these tensions is a complex dance between compliance and creativity, to create and generate opportunity to progress a vision and simultaneously deliver systems priorities.

The following sections elucidate the findings of this study, beginning with unpacking the diversity and complexity of discourses that are created, circulated, nourished, negotiated and marginalised throughout the participating school, Acacia Primary School.

9.1   Unpacking the diversity and complexity of discourses

In a school attempting to focus on ESE it is important to discern the underlying discourses. Discourses necessitate attention as they may impede, frustrate or nourish a focus on ESE. An analysis of the data shows that the discourses of ecological sustainability are varied. Drawing from Dryzek's (2013) typology, these include discourses of administrative rationalism, promethean, limits and survival, sustainable development, ecological modernisation, green consciousness and green politics. Of significance, however, is the dominance of an overarching discourse that is more prevalent than the identified discourses of ecological sustainability; a discourse of individualisation.

The document analysis highlighted an apparent sustainable development discourse when both the state government and the state education department seemed to foster a culture of sustainability. However, rather than a collective response to ecological sustainability, the impetus is placed on the individual having "a stake in sustainable development" (Government of South Australia, 2004, p. 33). While the focus on the individual is still prevalent, the "necessity" (Government of South Australia, 2004, p. 33) of sustainability has diminished and instead, the necessity of a strong economy has taken precedence.

The prioritising of economic productivity at a state, national and global level was particularly evident. Sustainability is included in a piecemeal fashion but the dominant underlying discourse is ecological modernisation. Ecological modernisation supports the economy and although it requires political commitment, it does so with little change to the current political-economic system (Dryzek, 2013). Correspondingly, the ecological modernisation discourse is inherent in the state government and the state education department's approach to the economic benefits of a clean environment and cost savings sustainability initiatives. In addition, concentrating on *adapting* to climate change indicates that there is no need for significant change in the status quo, rather we just need to adapt to the effects that climate change brings.

At a local level, Acacia Primary's school context statements highlight an alignment with the state and national priorities of literacy and numeracy improvement. However, there is also significant inclusion of ESE. Drawing from Dryzek's (2013) framework there are a number of discourses that can be identified, including, through various sustainability initiatives, the sustainable development discourse; however the green consciousness discourse (Dryzek, 2013) also appears dominant. This discourse seeks to change people's consciousness to be more environmentally friendly and invoke a sense of agency for ecological sustainability. This is evident in the school's education about climate change. Additionally, there is evidence of a green politics discourse (Dryzek, 2013) that advocates for a collective response to ecological sustainability. This is found in the active participation of the environmental student group, as well as through the school's mission, that, "through education we all become active, responsible, global citizens" (Acacia Primary School – 2017 school context statement, p. 4). In contrast to the ecological modernisation discourse so dominant in the national and state agendas, the school context statements contain very little reference to the economy, apart from instigating sustainable procurement practices within their school. However, while these practices consider the economy and cost effectiveness, to the benefit of the school, they also take into account wider societal benefits and strive for minimal damage to the environment. This therefore aligns more closely to a sustainable development discourse.

The findings in the interview data were consistent with the document analysis. The identified discourses include those articulated by Dryzek (2013) as well as other dominant and marginalised discourses. Both sustainable development and green consciousness discourses focus on individual change and although a collective response, inherent in the green politics discourse (Dryzek, 2013), was advocated in the school context statements it appeared marginalised in the interview data. In addition, the participants who actively supported a green politics position were constrained and somewhat powerless to enact within the confines of the school and an individualised discourse was the most prevalent discourse circulating within and through Acacia Primary School.

9.1.1 Individualism versus collectivism

Ecological modernisation, sustainable development and green consciousness discourses appear across much of the interview data, however, a thorough examination finds that a discourse of individualism dominates in a more powerful way than encapsulated by Dryzek's (2013) discourses. The discourse of individualism is bolstered by the "individualization of responsibility" (Maniates, 2001), or private sphere environmentalism (Stern, 2000). Fuelled by neoliberalism, individuals are held responsible for environmental issues and consumer action is promoted in superficial ways (Maniates, 2001). This response to ecological sustainability deflects, displaces and depoliticises responsibility for environmental degradation away from the larger institutions that are liable for environmental issues. Responsibility is individualised and the productivity and effectiveness of the individual is paramount, resulting in a loss of the collective. This exemplifies what McKibben (2007) calls a powerful form of hyper-individualism. This focus on the individual with little regard for society is detrimental to ESE because rather than supporting interconnectedness, the individualisation of society alienates people from each other and the environment.

The individualised discourse subsumes the other discourses and is fortified by the permeation of neoliberalism with its distinct emphasis on individualism, economic productivity, choice, transparency, autonomy, competition, accountability, marketization and performativity. The problem with the domination of an individualised discourse and the resultant hyper-individualism (McKibben, 2007) is a

simultaneous decline in communal responsibility, societal wellbeing and ecological sustainability as described by Darlaston-Jones (2007):

> the value we place on the individual is defined by the absence of an equal commitment to the collective. Students are positioned as individuals who must be 'independent' and 'self-reliant' and can potentially isolate students within the learning environment: We become what Gergen (1999) describes as *isolated souls* doomed to enter and leave the world as *self* with everyone else defined as *other* and therefore different and separate from [italics in original] (p. 23).

This highlights that the "dark side" (Gergen, 2011, p. 112) of "isolated entities" (Gergen, 2015, p. 117) or "hyper-individualists" (McKibben, 2007, p. 96) is an alienation of each individual, their community and the environment so that "it becomes reasonable to 'take care of number one'" (Gergen, 2011, p. 112). However, this is detrimental to everyone and everything else and Gergen (2015) proposes that the consequences of the dominant discourse of individualisation is catastrophic. Therefore, because the dominant discourses in circulation do not align with ESE, it may increase the difficulty in facilitating and sustaining an ESE focus.

Despite the significant evidence of individualisation in the data, there are examples that challenge this pervasive discourse and are more aligned with a sense of community. The school is attempting to cultivate a collective culture of caring that supports the interdependence and interconnectedness of humans and their environment as well as indicating the ethical and spiritual intelligence of an *intelligent school* (MacGilchrist, et al., 2004). Although marginalised, there is also some evidence of the green politics discourse (Dryzek, 2013) that advocates for a collective response to ecological sustainability. This is significant as Hargreaves (1994) states that collaboration and collegiality are pivotal in bringing about change. The collaboration and collegiality at Acacia Primary reflect attributes of an *intelligent school* through collegial intelligence (MacGilchrist, et al., 2004) that is concurrently individual and community driven. In addition, there are many examples embracing a strong sense of place and community that are aligned with a collective discourse rather than an individualised one.

Because the market logic of neoliberalism is so ubiquitous, prioritising the economy and bolstering competition, self-marketisation and the marketisation of the school. This leaves schools with the complexity of a dominant discourse of individualisation

that destabilises education for the common good. However, this tension can also be reconfigured as a productive dynamic between individualism and collective action. McKibben (2007) claims that we do not need to get rid of individualism entirely, rather replace it with a stronger sense of community so that individualism is much less hyper. This aligns with one of Palmer's (2007) paradoxical tensions that guides education to invite both the voice of the individual and the group. Therefore, instead of individualising responsibility, a broadening of collective action for social change, or public sphere environmentalism should be promoted (Stern, 2000).

As a means of honouring both the individual and the group, another significant tension is the acknowledgement of the spectrum of commitment to ESE.

9.1.2   A spectrum of commitment

Another challenge in supporting ESE is managing the diversity and spectrum of commitment that stems from a number of different discourses. This involves paying attention to and being conscious of various levels, which, as identified from the data, varies from no commitment to a high level of commitment. Negotiating this space requires productively managing or working with the diversity and spectrum of commitment that teachers, students, parents and other community members bring. Furthermore, the commitment of people in power also enters this space as politicians and people in the education department may equally have a level of commitment that may impede or nourish a school's focus on ESE. This is particularly pertinent and complex when the overarching neoliberal philosophical and operational framing of education marginalises ESE. Therefore, supporting a marginalised position necessitates creativity.

This tension requires consideration as the spectrum of commitment has the potential to create or diminish discourses of hope or futility. The school principal is key in corralling and managing the tension between commitment and enthusiasm while managing and dealing with cynicism and at times despair and futility.

Connected to the spectrum of commitment, the navigating and nurturing of ESE as a marginalised discourse is further considered in the following section that presents significant challenges involved in the inclusion of ESE. Considering the current

context is characterised by the demands of neoliberalism this section specifically ascertains the degree in which neoliberalism contributes to these challenges.

9.2 Illuminating the challenges for a school in a neoliberal context

Considering the current hegemony of neoliberalism, it is important to appreciate a school's undertakings within this context. To ascertain the challenges a school may encounter, this research looked specifically at the negotiations and limitations involved in building, retaining and progressing the inclusion of ecological sustainability in the curriculum as these may enable or contest the support of ESE.

9.2.1 Navigating and nurturing a marginalised discourse

As argued previously, schools are fundamental to initiating and nurturing support for ecological sustainability. However, schools, as small social systems embedded within larger social systems (Eisenhart, 2001), encounter complexities, problematics and vagaries that serve to marginalise ecological sustainability. The pervasiveness of politics that includes people's own political beliefs and the beliefs of their families, colleagues and communities, as well as the politics people are exposed to through the media, is a significant contributor. Discerning the age appropriateness of curriculum content with respect to problems with or without solutions, the scare factor and low and high level concepts contributes to the complexity. Furthermore, the place of sustainability in the curriculum with regard to its status and emphasis in the curriculum and as a CCP has been marginalised to the point that it is considered an option, particularly since no accountability is connected to it. Therefore, there is an essential need to navigate and nurture the marginalisation of ESE.

It is evident the main priorities at a global, national, state and local level, are literacy and numeracy attainment, epitomised by high stakes tests such as NAPLAN. This focus, particularly at the national and state level, is essentially justified in terms of benefitting the economy. The economic emphasis prioritises many ecological sustainability initiatives, and although fostering a culture of sustainability was once a key directive in both the state and the state education department, this decree has waned. Any current directive on sustainability is either devoid of any connection to

ecology, or is fundamentally about cost effective resource management and more recently, adapting to the detrimental effects of climate change.

In negotiating space for ESE and going against the dominant discourse of the expectations of the education department, the principal at Acacia Primary reflects an *intelligent school's* pedagogical intelligence (MacGilchrist, et al., 2004). Furthermore, the strategic thinking operating within the school, particularly with regard to NAPLAN, is consistent with operational intelligence (MacGilchrist, et al., 2004). Adopting a rhizomatic (Deleuze & Guattari, 1987) view of ESE allows multiple possibilities to engage with ESE through the sustainability CCP, allowing opportunities to be identified and created to further engage staff, students and the broader community.

Going against the dominant discourse to support the marginalisation of ESE connects with both compliance and creativity.

9.2.2　Compliance and creativity

Tensions between compliance and creativity are a significant factor at Acacia Primary involving a sense of prescriptiveness and a sense of possibility. The multiple levels of compliance creates boundaries and rigidities, stemming from students' non-compliance of recycling efforts to non-compliance with NAPLAN, which resulted in auditing. The tensions involving the performance audit culture of neoliberal governance (Comber & Nixon, 2011, p. 168; Lingard, 2011b, p. 357) that connect disciplinary power to curriculum priorities, is reflected in terms of disciplinary power and surveillance. This, in turn, precipitates self-surveillance and the consequence of each individual acting in ways they feel they are supposed to act with minimal attention to the collective.

A significant component of compliance in schools involves NAPLAN. Driven by neoliberal ideas of competition, the dominant emphasis on literacy and numeracy marginalises everything else, including ESE and creativity. Part of the paradox of having an emphasis on literacy and numeracy attainment is that you cannot negotiate the dominant western culture unless you are literate and numerate in a particular way. However, neither can you meaningfully engage with society. Therefore, you

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need competency, enabled through creativity, beyond the narrow boundaries of NAPLAN.

Another area of tension underpinned by competition is a predominant focus on the individual and competing for privilege.

9.2.3 Reconfiguring the preferencing of privilege and individualism

Characteristic neoliberal emphases on competition, marketization and preparation for work were abundant across the data. Individualisation was characterised within the rhetoric of *me, myself and I* that manifests as an individualised emphasis on wealth and lifestyle and a focus on the current individualistic consumer society, both of which are nourished by neoliberal ideals. The individualistic consumer society and commitment to the self, appeared in conjunction with the laziness of people who do not support ecological sustainability while simultaneously labelling people who do support ecological sustainability are regarded as 'not cool'. Paradoxically, the discourse of individualisation deflects and delegates responsibility on the individual so that no one may take responsibility for planetary devastation. Conversely, everyone should be taking responsibility.

There was also an emphasis on ideologies on money, wealth and the economy, and lifestyle and a belief that these things take precedence over ecological sustainability and the future. In terms of competition, there was much emphasis on what were deemed as 'necessities', but could also be seen as luxury items. At the same time, money was considered a barrier to ecological sustainability, positioning ecological sustainability as a middle-upper class luxury. As we have become separated and detached from the environment it becomes commodified as distinct from centrified in terms of our wellbeing. Therefore, a reconfiguration of privilege needs to view sustainability and sustainable living as a privilege, rather than the amassing of commodities. This involves a productive dance with ecological issues and concerns and the hegemonic forces of neoliberalism and the economy.

9.2.4 Leadership as a key driver

Although ESE is considered a whole-school focus at Acacia Primary, the leadership of the school, particularly the principal, was identified as a key driver of the school's sustainability initiatives and therefore a key determinant to the continuation and

success of the school's focus. Paradoxically, having the one key driver is seen as both integral and a limitation. It is valuable to understand how and what this principal brings to the space to support ESE. Having been a teacher and principal for a number of years the principal has a repertoire of skills to draw on and this may be fundamental in her tenacity, vision, and risk taking.

The principal understands the need for resources and funding, and there are structures, processes, guidelines and templates in place. However, in comparison to engaging with education and curriculum in a compliant way she brings it together in a non-deficit engaging way whilst pushing boundaries and taking educated risks. Significantly, the principal in her role as a leader, supports the characteristics of an *intelligent school* (MacGilchrist, et al., 2004), defying the constraints imposed on managers in a neoliberal market. However, the principal, and many of the participants, identified time as a significant factor in what they were and were not able to do.

9.2.5   Infinite demands on finite time

Time can be understood as a limitation, particularly considering the identified time that should be dedicated to curriculum areas in the *Australian Curriculum,* as found in the *Guidelines for the implementation of the Australian Curriculum in DECD schools: Reception–Year 10* (DECD, 2013b) that leave little time for ESE. Consequently, the challenges faced by Acacia Primary, and arguably many schools, results in ESE being pushed further into the margins. Again, there is a sense of prescriptiveness alongside a sense of possibility.

The pressure of infinite demands on finite time is exemplified in a number of ways. If people had more time, they propose they could engage more in ESE. However, there is space for negotiating time. For many people in the school context, particularly if they do not have a lot of experience, the curriculum has a characteristic of overwhelmingness. However, ACARA propose the curriculum is a flexible framework. Furthermore, teachers have a degree of autonomy and the decision junctures they may face when working with a finite amount of time can be seen as opportunities and possibilities that require a level of creativity.

The challenges that Acacia Primary, and almost certainly primary schools in general, encounter are numerous. As exemplified, neoliberalism is a contributing factor to many of the challenges identified. Comparing the findings of this study with previous studies (see Australian Education for Sustainability Alliance (AESA), 2014; Evans, et al., 2012; Lewis, et al., 2010; Moore, 2005; Spiropoulou, et al., 2007), a number of similarities align with the identified challenges or barriers. These include leadership; confusion and contestation surrounding sustainability, its place in the curriculum and its age appropriateness; and time and money. In addition, with reference to discourses, the marginalised green politics discourse (Dryzek, 2013) is consistent with Evans, Whitehouse, & Gooch's (2012) "greenie" barrier and their staff resilience barrier links to the agency that the participants are able to enact. However, although there are obvious similarities, what *this* study found is the context of neoliberalism in which the school operates is an overarching contributing factor in the ability of an urban primary school to facilitate and sustain a focus on ESE. Neoliberalism and its concomitant discourse of individualisation subsumes all the identified barriers, including Moore's (2005) disciplinary and competitive barriers. However, in an effort to overcome these barriers MacGilchrist, Myers and Reed's (2004) conceptualisation of an *intelligent school* can be harnessed. The nine intelligences or characteristics of an *intelligent school* can potentially help to increase agency. Strategically exercising this increased agency may then enable the participants to *manage* to cope (Vincent, et al., 2008) by being able to deal with the constraints of the identified challenges.

The next section focuses on how an urban primary school might connect to place and its local and global community to build, retain and progress its commitment to ESE.

9.3   Cultivating a global sense of place

The premise that a philosophy of place and PBE supports ESE is an integral aspect of this thesis. (Re)connecting with place and implementing a place-based approach to education in an effort to support ecological sustainability is advocated by many (see Blumstein & Saylan, 2007; Cole, 2007; Comber, et al., 2007; Eflin & Sheaffer, 2006; Gruenewald, 2003a; Meichtry & Smith, 2007; Smith, 2002; Smith & Sobel, 2010; Sobel, 2004; Wilbanks, 2003). Recent studies into primary schools in an Australian context also acknowledge the importance of place (Lewis, et al., 2010; Rafferty &

Laird, 2013). Therefore, while the research site does not claim specifically to be undertaking PBE, the interview data was analysed with a view to ascertain how and if the school actively connects to place and its local and global community as a means to build, retain and progress its commitment to ESE.

9.3.1   Embracing the complexity of community

A strong community connection is reflected in the interview data and making community connections, both local and global, is nurtured and prioritised in and by the school. Valuing diversity and otherness, an integral element of place and PBE (Comber, et al., 2007), is also regarded highly, particularly with respect to cultural diversity, and the rich diversity of the staff and students at Acacia Primary is ideal for connecting not only locally but also globally. A sense of community and cultivating communal environmental activities is a positive attribute in the support of ecological sustainability demonstrated at Acacia Primary. It is also acknowledged that a level of complexity in working with communities exists and needs to be managed and worked through. In some ways, this complexity relates to limitations in time and money but also stringent education departmental regulations constraining the organic nature of community involvement have resulted in a loss of community. Families and homes are identified as primary shapers of people's commitment to ecological sustainability, which may work for or against ESE.

Acacia Primary presents as an *intelligent school* (MacGilchrist, et al., 2004) and the interdependent characteristics or intelligences of such a school challenge the dominant discourse of individualisation. An *intelligent school* (MacGilchrist, et al., 2004) has the potential to produce agency within its community, and although the dominant discourses circulating through the school are incongruent with ESE, rather than *struggling* to cope, the participants can potentially *manage* to cope (Vincent, et al., 2008) by strategically exercising their agency within the constraints of the dominant discourses. However, this agency is currently marginalised and would require a concerted effort to build capacity so that more of the community can enact purposeful agency.

9.3.2   Connecting to place in a placeless world

Neoliberalism, global capitalism and mobile technologies contribute to the erosion of place and a subsequent placeless world (Foucault & Miskowiec, 1986; Louv, 2010;

Relph, 1976). Therefore, for the sake of the planet, connecting to place is becoming increasingly important (Miller, 2005; Schultz, 2000). PBE is grounded in the local and extends to the global; and is fundamentally about connections and the interdependence and interconnectedness between humans and their environment (Comber, et al., 2007; Gruenewald, 2003a, 2005; Meichtry & Smith, 2007; Smith, 2002). In contrast to neoliberalism, the discourse of individualisation and subsequent (dis)placement, connecting with place inherently supports ESE. Acacia Primary affords many examples that align with philosophies of place. Although a connection with the environment is not mentioned explicitly on the school's profile on the *My School* website, the profile characterises a school with a strong connection to place, portraying a sense of pride in the school and its identity, inclusive of the community, the staff and the students.

Although intertwined with the above notions of place, looking more specifically at PBE, it is clear the students and staff have many opportunities to engage in and experience place, participating in environmental activities as well as reflecting on the past, present and future of their local environment and community. This reflection acknowledges and includes Indigenous cultures both embedded within the place of Acacia Primary and further afield. A culmination of these aspects is manifested in a celebration of the culture of the school. The school culture is actively nurtured and built on at Acacia Primary and involves collegiality between staff and students as well as a culture of high expectations in everyone doing their best both personally and socially amongst all involved in the school.

This study sought to ascertain any evidence of a place-based approach to ESE at Acacia Primary School. As identified in the analysis and discussion in the previous chapters, it appears that Acacia Primary *is* implementing a place-based approach to ESE. This approach is largely exemplified through a concerted effort to create connections between staff, students and the school community, as well as with the local environment. As PBE is primarily structured around students' own places, people and cultures (Comber, et al., 2007) the richness in the cultural diversity at Acacia Primary allows this to easily extend beyond the boundaries of the school and local community, helping to strengthen connections to others both locally and globally (Smith, 2002). However, bringing the focus back to the local, the school

community is afforded many opportunities to participate actively in caring for the environment, which is foundational in cultivating a long-term connection with the environment (Comber, et al., 2007). Student agency, ownership and engagement are also crucial aspects of PBE (Smith, 2002) and is exemplified in the environmental student group at Acacia Primary.

Furthermore, many of the aspects at Acacia Primary School that connect to a philosophy of place also represent characteristics of an *intelligent school* (MacGilchrist, et al., 2004) (see Table 3). The ethical and spiritual intelligences (MacGilchrist, et al., 2004) are firmly embedded in the school's vision and permeate throughout the school's operations. The ethical and spiritual intelligences (MacGilchrist, et al., 2004) are also foundational in philosophies of place. By putting vision into action, the contextual and emotional intelligences (MacGilchrist, et al., 2004) that support a connection to place are prevalent at Acacia Primary. Therefore, the broader characteristics of an *intelligent school* (MacGilchrist, et al., 2004) appear to be significant enablers at Acacia Primary to foster a connection to place.

9.4   Summary

Given the neoliberal agenda that drives education policy, a gap between the rhetoric and philosophy of environmental education, and arguably its counterpart, ESE, and its practice in schools should be expected. This gap is well documented and has come to be known as *Stevenson's gap* (Barratt Hacking, Scott, & Barratt, 2007). Twenty years after the gap was identified, in a special edition of *Environmental Education Research* (Stevenson, 2007b), this gap was revisited and was still deemed to be significant with education for sustainability, specifically, failing to gain much traction in public discourse. However, Stevenson (2007a) proposed there had been some progress in creating space and possibilities for environmental, or indeed, ESE. Now, three decades since Stevenson's gap was formulated, this "philosophy–practice gap is as wide as ever" (Barratt Hacking, et al., 2007, p. 235), highlighting the need to investigate this disconnection.

From an analysis of relevant texts, including key documents and interview transcripts, it is clear that neoliberalism is pervasive and, correspondingly, so is the dominant discourse of individualisation. The focus on the individual and a shift

towards hyper-individualism (McKibben, 2007) is resulting in a simultaneous loss in communal responsibility, societal wellbeing and ecological sustainability. Moreover, positioning individuals as consumers rather than citizens and favouring the individualization of responsibility (Maniates, 2001), or private sphere environmentalism (Stern, 2000), deflects, displaces and depoliticises environmental degradation and instead of supporting political action, consumer action is promoted which does little to save the world (Maniates, 2001). Simultaneously with an increased focus on performativity, teachers are forced to teach to the test, prioritising literacy and numeracy while sidelining ESE.

Barrett (2007) proposes that even teachers who are passionate and motivated and prioritise ecological sustainability are constrained by the dominant discourses, making it "almost impossible" (Barrett, 2007, p. 209) to facilitate and sustain a focus on ESE. Likewise, Stevenson (2007a) states that, "only a few individual highly committed, energetic and creative educators have been able to overcome the considerable barriers" (p. 133), such as those identified above, to invoke the agency needed to support ESE. It has been advocated that what is needed is a more transformative educational approach to support ecological sustainability which involves a whole system shift where education moves beyond the status quo and is re-thought and re-designed (Sterling, 2001, 2005; UNESCO, 2005b). However, this may prove to be near impossible considering the pervasiveness of neoliberalism and the dominant discourse of individualisation. The articles in the 2007 special edition of *Environmental Education Research* (Stevenson, 2007b) offer some suggestions to close Stevenson's gap, including embracing PBE (Smith, 2007), building on a discourse of professional development or locating ESE within a discourse of community (Stevenson, 2007a).

Going against the dominant discourses may result in a *struggle* to cope and enact purposeful agency (Vincent, et al., 2008). Gruenewald and Manteaw (2007) suggest that for teachers to survive under the pressure of the dominant discourses that are at odds with ESE, they may have to participate in playing the achievement game which involves accommodating to the discourse of standards and testing. This aligns with Vincent, Ball & Braun's (2008) suggestion of *managing* to cope, therefore, rather than continuing to *struggle* to create change it may be more advantageous to *manage*

to cope (Vincent, et al., 2008) by strategically exercising agency within the constraints of neoliberalism and individualisation. However, while playing the game is a form of resistance that can create space for ESE, there is danger in doing so. Institutionalising ESE may work against its goals of social and ecological transformation (Gruenewald, 2004) that are proposed by many authors (see Bowers, 2004; Orr, 2004; Sterling, 2001, 2005; United Nations Educational, 2005b). Consequently, this form of education may become "muted, distorted and absorbed by the culture of schooling" (Gruenewald & Manteaw, 2007, p. 176).

Acacia Primary provides insights into the question of how a school, in a neoliberal context, might facilitate and sustain a focus on ESE. More than just playing the game, the staff at Acacia Primary strategically finds space for ESE. In some respects, they have been given little choice but to play the game under the current dominant neoliberalised discourse of accountability and achievement. However, the school also epitomises an *intelligent school* (MacGilchrist, et al., 2004) and embodies all nine intelligences characteristic of an *intelligent school*. Through the school's vision and action the staff, students and community are engaging with place, although not explicitly. Furthermore, they are afforded many opportunities to be involved in the culture of the school and in many practices that are supportive of ecological sustainability. Although many of these practices may not save the world and can be understood as the individualisation of responsibility (Maniates, 2001) or private sphere environmentalism (Stern, 2000), the power of the aggregate cannot be discounted, nor can the sense of hope or possibility that comes through individual actions (Giroux, 2003). Acacia Primary fosters opportunities for significant life experiences (Chawla, 1998; Tanner, 1980) or moments of being (Tipper, 2013) that have the potential to change people's beliefs and behaviours, although more could be done incorporating animals into the programs, considering the substantial effect animals had on many of the participants. The Principal at Acacia Primary appears to be the main driver of ESE at the school, evidenced by her agency, with examples of her going against the dominant discourse and exhibiting an element of resistance. However, she is still constrained therefore may simply be *managing* to cope. Furthermore, the other staff members have varying degrees of agency illustrating that many are *struggling* to cope with supporting ecological education, however, some

are *managing* to cope and create space for ESE within the dominant discourse that is so incompatible with ESE.

The consolidation of the research in this study is presented in the following chapter. This final chapter concludes this thesis by formulating significant implications for practice and policy. These contributions are proposed as a means to support and create space for ESE. Finally, some directions for future research are recommended.

CHAPTER 10:

Conclusion - Dancing with compliance, creativity and possibility

> It is not a choice between compliance and resistance ... It is in our own existence, the terms of our existence, that we need to begin the work, together, of decomposing those elements of our world that make us, and our students, vulnerable to the latest discourse and that inhibit conscience and limit consciousness. (Davies, 2005, p. 13)

While doing the analysis part of my research it struck me how easy it is to perceive schools as deficit models. Schools and teachers are often portrayed negatively in the media, particularly evident during the 2007/08 Australian *education revolution*. However, while my study identified many struggles it also elicits hope and possibilities in the support of ESE.

The paradox of ESE in a neoliberal context is manifold. The finiteness of the ecology is full of vulnerabilities and fragilities, yet it is central to life – it *is* life. In spite of this centrality, neoliberal ideals encourage rampant capitalism and individualisation that severely compromises ecological sustainability. Similarly, while ESE should be a core part of education, neoliberal ideals marginalise it. Dealing with paradoxes like these requires creativity because looking forward even to just 2050 with a global population of between nine and ten billion, the need for ESE will not diminish.

Based upon the overall evidence from the various data sources, facilitating and sustaining a focus on ESE *can* be done. Confronted with a preferencing-marginalising duality it *is* possible to negotiate and navigate neoliberal policy framings and expectations and create places, programs and relationships which preference, prioritise and nourish ecological sustainability. This chapter addresses the challenge of ESE and concludes the thesis by outlining the key findings, insights and implications derived from an extended engagement with Acacia Primary.

10.1 Navigating the complexities

Acacia Primary School was chosen for this study, not because it is an exemplar of how a school is facilitating and sustaining a focus on ecological sustainability, but because it is a typical school, dealing with all the intricacies a school must deal with daily. It is not located in an affluent, leafy-green area where a school could easily *look* sustainable, nor did it come with an extremely low level of disadvantage. Nevertheless, surrounded by complexity, this school is doing above average things in the field of ESE. Therefore, to generate space for ESE in a neoliberal, preferencing/marginalising context, Acacia Primary offers hope and possibilities.

In the midst of ecological crises and curriculum reform, fuelled by neoliberal ideals, this study adds to our understanding of how a school might manage to negotiate ecological sustainability into its curriculum and its raison d'etre. ACARA's agenda of testing, reporting and administering the *Australian Curriculum* is a powerful and pervasive framing of what happens in schools, however, teachers do have a certain amount of agency. Implementing ESE can influence the commitment to ecological sustainability of young people, staff, parents and other community members.

As stated in Chapter 3, the Australian Government recently commissioned a report into the barriers and enablers for ESE: *Education for Sustainability and the Australian Curriculum project* (Australian Education for Sustainability Alliance (AESA), 2014). The report found that over 90% of 5000 survey participants agreed with the importance of ESE. In addition, 80% of those teachers were not confident teaching sustainability. It therefore predominantly recommended resources, professional development and networking to help engage teachers and schools in supporting and delivering ESE and the sustainability CCP. I argue that while these recommendations may improve teachers' confidence in teaching ESE, they are not enough to counter the marginalising effect of the current neoliberal hegemony on ESE.

As determined through engaging with Acacia Primary, there is a complex set of tensions between prescriptiveness and flexibility. Many of the participants in this study were passionate and knowledgeable about ecological sustainability and had been "*inundated with information*". However, in spite of their passion or aptitude

with ESE many of them still struggled to negotiate sustainability into their curriculum. Therefore, I propose that extra resources, professional development and networking will not shift the dominant focus on literacy and numeracy attainment, as well as the incessant discourse of individualisation and are limited in their capacity to create significant change. Instead, the contextual constraints need to be considered, negotiated and managed. This fundamentally means acknowledging the effect neoliberalism has on the context and devising ways to work with, against or around this dominant hegemony.

From the previous chapter, nine significant tensions have been identified:

- Individualism versus collectivism
- A spectrum of commitment
- Navigating and nurturing the marginalised discourse of ecological sustainability
- Compliance and creativity
- Reconfiguring the preferencing of privilege and individualism
- Leadership as a key driver
- Infinite demands on finite time
- Embracing the complexity of community
- Connecting to place in a placeless world.

To address these tensions and to build on the enabling strategies proposed in the previous chapter, Bernstein's (1971) message systems are utilised as a productive framework.

10.2 Implications for practice and policy

Rizvi and Lingard (2010) stress that effective education policies are those that consider issues of practice. Issues of practice are succinctly encapsulated in the three message systems conceptualised by Bernstein (1971) which symbiotically constitute the structures and processes of formal educational knowledge, transmission and practice. They are curriculum, evaluation and pedagogy. Bernstein (1971) argues, "curriculum defines what counts as valid knowledge, pedagogy defines what counts as a valid transmission of knowledge, and evaluation defines what counts as a valid

realization of this knowledge on the part of the taught" (p. 245). In addition, Bates (1992) and Ball (1990) identified a fourth message system, organisation. These message systems are the areas of schooling that have the most effect on framing what and how students learn and link schools to the broader society and culture. Utilising message systems is a fertile and productive way of informing education policy and practice. The following implications for practice and policy are therefore framed by the four message systems of curriculum, pedagogy, evaluation and organisation.

10.3 Curriculum: Bringing ESE to the centre

There is overwhelming evidence of the detrimental effect humans have had on the environment and this planetary trauma continues, in some cases accelerating. Therefore, ESE is essential for survival of *all* life on a finite planet. Given this criticality, ESE needs to be brought in from the margins of education to the centre. The findings show that rather than ESE being a core part of the curriculum it is marginalised in a number of ways. Principally this marginalisation comes from not being considered essential to the 'knowledge economy'. A concurrent emphasis on literacy and numeracy has added to this marginalisation. Furthermore, ESE is not core in the traditional curriculum hierarchy and its conceptualisation as an optional CCP has been problematic. Exacerbating this marginalisation is the spectrum of commitment that people have in support of ESE. Encouraging an embrace of ESE can be facilitated in the provision of significant experiences.

10.3.1 Facilitating a connection to ecological sustainability

Providing opportunities for the community to engage in caring for the environment in support of ecological sustainability is invaluable for the potential to engender a connection to place as well as each other. These opportunities can be offered in many ways, from biodiversity studies to gardening. As identified earlier, although many of these experiences could be interpreted as activities that support individualisation of responsibility these *small things* can nurture a sense of hope and possibility that may lead to bigger, more fertile experiences relating to the significance and centrality of ecological sustainability. Drawing on the knowledge of community members, as well as 'experts' in the environmental and sustainability education fields is instrumental in fostering a connection to place and ecological sustainability. It is also essential that

schools provide grounds and facilities with the explicit intention to provide a space that is conducive for a connection with ecological sustainability.

10.3.2 Viewing animals as 'the fourth educator'

A significant finding of this research is the considerable effect that animals have on the participants' affiliation with nature and ecological sustainability. On many occasions, the participants spoke about significant life experiences they had with animals. Above all other experiences, those involving animals changed the way the students felt about the environment. As advocated by Bone (2013) who builds on the Reggio Emilia perspective of two teachers and the environment as the first three educators, viewing animals as 'the fourth educator' (Bone, 2013) is an influential strategy to connect people to ecological sustainability. In addition to the potential connection with ecological sustainability that experiences with animals can instigate, time with animals can also directly influence the formation of people's identities and sense of self (Myers, 2007). This is beneficial as experiences with animals can provoke an appreciation and responsibility outside of the self. This form of social responsibility counters the dominant individual emphasis in a neoliberal context so that people are, instead, encouraged to think beyond *me, myself and I*.

Another means of countering the dominant discourse of individualisation is through a pedagogy of collaboration.

10.4 Pedagogy: Collaboration

Pedagogy is an important message system that relates to the transmission of knowledge. In line with ESE, Bates declares:

> A pedagogy which relates the personal to the global, simultaneously addressing the issues of personal choice and collective dilemmas over cultural identity, environment, biological reproduction and the continuing degradation of the third world for instance, is a pedagogy which carries a new vision of character and virtue more suited to the condition of late modernity. The construction of such a pedagogy is an appropriate task of educational leadership (Bates, 1992, p. 15).

This highlights a number of the aspects that have arisen through the tensions. A significant area of influence is in cultivating a collective culture that involves inclusivity and collegiality and extends from the personal to the global.

10.4.1 Cultivating a collective culture

The research participants overwhelmingly saw Acacia Primary as a special place, primarily because of its staff, students and community members. The multicultural nature of the community at Acacia Primary provided fertile ground for valuing diversity and fostering a connection to place both locally and globally. However, Acacia Primary is more than just a melting pot of different nationalities and cultures and nurturing diversity and inclusivity encapsulates more than just cultures. People's diverse or alternative views can also be included rather than marginalised, particularly those who characterise themselves as 'greenies' and align with the green politics discourse. This aspect is particularly salient as it disturbs, disrupts and challenges the dominant discourse of individualisation under the hegemony of neoliberalism, while supporting the fundamental aspect of interconnectedness that underpins an attachment to place. Countering individualisation and cultivating collective wellbeing and social good contributes to creating and sustaining a space for ecological sustainability in education.

In an increasingly individualised world, it is important to nourish collective concerns over individual and support ESE – "a wise act is a deliberate one that concerns the common good; it serves interests greater than the self" (Hays, 2013, p. 138). It is essential to develop a collaborative culture between schools, their communities and policy makers as a way to move productively forward, towards ecological sustainability, together. Consequently, schools should be directly involved in the development of policy. Put another way, a symbiotic relationship between schools, their communities, the education department and other relevant organisations is needed.

10.4.2 Maintaining a whole-school environmental group

A broadening of collective action and practices in support of ecological sustainability can be done through a school's environmental student group. This group is an instrumental platform that has the potential for encouraging and nurturing student engagement, ownership and agency, as well as fostering "a sense of collective competence" (Chawla & Cushing, 2007, p. 446). While such a group offers many experiences to connect with and care for the environment, it also has the capacity to empower the students to educate and encourage others and to take action on

ecological sustainability. Involvement in the environmental group was also a key influence in the students' sense of hope and optimism about the future. This futures perspective is vital in ESE, fundamentally for its capacity in empowering people to visualise and potentially create more positive, sustainable futures (Gidley & Inayatullah, 2002; Gidley, 1998; Hicks, 2014; Tilbury, 1995). Furthermore, when the wider society is taken into account and real-world problem solving is encouraged, which can nurture activism, social competence and social responsibility ensue. This is indicative of a green politics discourse (Dryzek, 2013) that advocates for a collective response to ecological sustainability. Participation in an environmental group is an avenue for cultivating engagement, ownership, student agency, political action and collective concern.

As exemplified at Acacia Primary, an environmental group provides a significant space for ESE. However, confining ESE to a small student group has the potential of marginalising ESE, particularly if the emphasis is on 'nature' and gardening. Instead, making it part of the whole school, that is, everybody is part of the environmental group, has the capacity to foster an even greater collective alliance; in other words, a space where everyone can support ESE together.

10.5 Evaluation: Aligning priorities

Evaluation is a message system that, as well as measuring achievement against standards, can be understood as a means of surveillance and classification. Evaluation has the potential to subordinate both teachers and students through compliance. Furthermore, there are a number of layers of evaluation involved in education and schooling. The areas of most significance in this study are evaluation from the education department and from parents.

10.5.1 Avoiding the gaze

Given the great emphasis placed on standards and testing, many teachers feel they have no option but to teach to the test. As Gruenewald and Manteaw (2007) suggest, within the constraints of the dominant neoliberalised discourse of accountability and achievement, schools have to 'play the achievement game'. Effectively, this 'game' is an intentional strategy for avoiding the gaze of the education department and involves accommodating the concurrent discourses of standards and testing. As

shown in the previous chapters, Acacia Primary is operating within the constraints of a neoliberal agenda and a highly individualised discourse. Acacia Primary had been given little choice but to exercise agency strategically whilst 'playing the game'. Although 'playing the game' may compromise the goals of ESE (Gruenewald & Manteaw, 2007), by doing so, Acacia Primary effectively reduces the hierarchical observation and gaze (Foucault, 1995) of the education department. As demonstrated, when Acacia Primary did not 'play the game', they were subjected to disciplinary action by the education department. While schools may never entirely avoid the surveillance of the department, 'playing the game' is a form of resistance that may evade the discipline for not conforming. 'Playing the game' is a form of avoidance strategy. Another way of putting that is by appearing to be compliant the school is not disturbing or disrupting the priorities of the system. Subsequently, space and possibilities for doing other things are created. Strategically 'avoiding the gaze' facilitates the space for engagement with ESE, which can enable schools to *manage* to cope (Vincent, et al., 2008). This idea is encapsulated by Bourdieu's (1990) account of the paradox of the dominated, namely "resistance may be alienating and submission may be liberating" (p. 155).

10.5.2 Popularising ESE

Similarly, the 'gaze' may also come from parents as informed consumers and choosers of education. Influenced by the dominant emphasis on literacy and numeracy, parents may see attainment in these areas as the main priority of schooling. Therefore, as stated earlier, NAPLAN in particular, has shifted surveillance on to parents, which subordinates teachers. One way of reconfiguring the parents gaze is through the encouragement and establishment of a parent-based grassroots advocacy group for ESE. In turn, this raises the importance of ESE in the community. Subsequently, under an orchestrated community demand schools may have to comply with ESE. A grassroots advocacy group also has the potential to address the tensions regarding individualism, commitment, marginalisation, the complexity of community and connecting to place.

Furthermore, another means to help position ESE more centrally and align school and departmental priorities would be for the South Australian Government (in this instance) to make the education department a lead or contributing agency to more

priorities pertaining to ecological sustainability in the State's Strategic Plan (SASP). This will help to increase the legitimacy of ESE, while satisfying any requirement for it to be a top-down directive. Should a new tension arise regarding the imposition of sustainability in an already crowded curriculum, the fourth message system, organisation, is a means to broadly address the tensions, facilitation and sustainability of ESE.

10.6 Organisation: Emergence and intelligence

As with the above message systems, organisation is a complex mix of administration, discipline, collegiality and management. The findings highlight the prominence of leadership in the capacity to support ESE. Primarily, the principal at Acacia Primary epitomises a catalytic energiser who creates the space and gives people the courage to support ESE. However, focussing on organisation to create space and legitimacy for ESE affords a departure from the emphasis on one individual. Reconfiguring a focus on the economy to one on the ecology and from individualism to collectivism, while concurrently focusing on green futures rather than crisis management, can potentially be facilitated through organisation. A means of doing this is by engendering an ethos of emergence.

10.6.1 An ethos for emergence

As identified earlier, ESE in a neoliberal context is a wicked problem. Therefore, to foster ESE requires creativity. This creativity can be cultivated through emergence. Emergence is at the heart of complexity. Rather than a top-down directive, it involves bottom-up change through the connection of individuals from a local to a more global level. Initially this is through local networks of people working for their own interests and then through communities of practice for wider benefit, beyond the group. Emergence, while unpredictable, results when the communities of practice progress into global systems of influence whose ideals eventually become the new norm (Wheatley & Frieze, 2006). Generating a context and an ethos that allows for emergence in a complicated paradox is a finding that in many ways connects to place-based pedagogies and counters the dominance of individualism. Emergence is invaluable because it "always results in a powerful system that has many more capacities than could ever be predicted by analyzing the individual parts" (Wheatley & Frieze, 2006, p. 4). Emergence cannot be controlled but learning environments can

be designed and facilitated to allow for emergence (Sterling, 2001). Furthermore, emergence is ideal under the pressures of an over-crowded curriculum and the tension of infinite demands on finite time. Based on mutual knowledge, interests, and hope, through emergence the emphasis is on what *arises* (Sterling, 2009). The analysis of the data found that Acacia Primary has the basis for emergence as it provides a range of experiences for its staff, students and community that support ESE, place, and a collective culture.

Within the context of education, Palmer's (2007) six paradoxical tensions offer possibilities in the teaching and learning environment to facilitate emergence:

> the space should be bounded and open, ... [it] should be hospitable and 'charged', ... [it] should invite the voice of the individual and the voice of the group, ... [it] should honour the 'little' stories of the individual and the 'big' stories of the disciplines and tradition, ... [it] should support solitude and surround it with the resources of community, ... [and it] should welcome both silence and speech (p. 76-77).

Wheatley (Wheatley & Frieze) argues that emergence is the *only* way to create significant change for a hopeful future. Therefore, crucially, it is a key consideration for schools and other organisations in the support of ecological sustainability. Another way of embracing the tensions explored above and further cultivating space for ESE is through the concept of the *intelligent school*.

10.6.2 Being an *intelligent school*

The *intelligent school* is a concept proposed by MacGilchrist, Myers and Reed (2004). Characteristically the *intelligent school* embodies nine interdependent intelligences (see Table 3). When used the intelligences can empower a school to achieve its goals holistically, particularly with regard to learning, teaching, effectiveness and improvement. As illustrated in the previous chapters, Acacia Primary exhibits many of the intelligences that characterise an *intelligent school* (see MacGilchrist, et al., 2004). In addition to the highlighted intelligences, I argue Acacia Primary exhibits all nine intelligences. As presented in Chapter 3, the attributes of the *intelligent school* support place-based pedagogies and challenge many elements of neoliberalism, particularly the emphasis on individualisation. Therefore, in the face of competing discourses, implementing the intelligences of the *intelligent school* can enable a school to facilitate and sustain a focus on ESE.

Under the influence of neoliberalism, the purpose of education is predominantly preparation for work to support the economy. Consequently, the curriculum is designed and tuned to focus on attainment as epitomised by the relentless profiling of high achievement for all in literacy and numeracy. In the current climate of standards and testing, this essentially compels schools to adopt a 'teach to the test' orientation and curriculum areas other than literacy and numeracy are marginalised. This preferencing-marginalising duality poses a significant threat to ESE; however, the ongoing decimation of the planet necessitates education that supports ecological sustainability. The implications discussed above, and framed under the four message systems, are ways to negotiate, navigate and facilitate ESE, as well as giving ESE greater recognition and prominence. However, under the current neoliberal hegemony, many teachers may still struggle to negotiate the above recommendations unless there is a significant shift of emphasis from the education department and the government.

To give ecological sustainability greater status and legitimacy in the curriculum it is crucial that ACARA, state education departments, and federal and state governments value ESE as a *core* part of the curriculum. Doing this would create the legitimacy and space required for many teachers to engage in ESE and productively adopt the above recommendations. A potentially fertile way of doing this is to utilise the growing emphasis on STEM in a mutualistic, symbiotic relationship with ecology.

10.7 Putting STEEM into STEM

STEM is currently being supported and heavily funded for its believed benefit and importance to current and future productivity and the global competitive economy (Australian Government, 2018). I argue that ecological sustainability is a fundamental aspect that is missing from this group of disciplines. While science, technology, engineering and mathematics are all essential parts of our lives, without ecology their impact and contribution is essentially bounded and constrained by the key tenets of neoliberalism.

A means of recognising the importance of ESE, not diluting it but retaining its integrity, is through a reconceptualisation of STEM to STEEM: science, technology, **ecology**, engineering and mathematics. This amalgamation can be understood as a

mutualistic, symbiotic relationship where both STEM and ecological sustainability benefit from the connection. Sterling (2009) proposes ecology is not only a field of study; it is an holistic worldview with the potential to elicit responsibility for the planet and stimulate deep cultural change. Locating ESE in the folds of STEM raises the status and legitimacy of ESE and places the other curriculum areas into context, that is, science, technology, engineering and mathematics become richer, more pertinent and inextricably connected to the global imperative of sustainability when coupled with ecology.

Embracing STEEM adds value and relevance to each individual discipline areas and, symbiotically, this assemblage has the potential for emergence. STEEM also has the capacity to not only create space for ESE and increase the importance of STEM, but, of upmost significance, it forms a conduit for addressing the destructive dimensions of human behaviour and generating a hopeful, more sustainable future.

10.8 Directions for future research

In response to the findings of this study, the directions for future research are to increase the scope by investigating other education contexts.

10.8.1 Increase the scope

Further research could be to investigate the tensions involved in early years, secondary schools and tertiary settings. Early years education sites often include a significant emphasis on the 'natural' environment. Ascertaining the dominant discourses in the early years' field would elucidate the influences during these formative years. Determining the effect neoliberalism has on these contexts may also illuminate the degree of agency these teachers have. Furthermore, eliciting the apparent tensions in this context can add depth to our understanding of the negotiations involved in supporting ESE. This would add insight into the knowledges, understandings and commitment to ESE that are garnered from an early years' education. Similarly, undertaking research in the secondary and tertiary settings may also add depth to this research and identify whether the tensions are similar or different, and whether there are more or less, enabling a comparison across the different settings.

Other ways of increasing the scope of this research could be through the use of surveys and regional studies to gauge how representative the research site is. In addition, the data could be analysed again using a few different perspectives.

A longitudinal study could also be undertaken with the participants of this study to see whether their experience at Acacia Primary had a long-term effect on their support of ecological sustainability. Ascertaining significant ecological enablers and disablers in their education journey would also be productive.

10.8.2 Implement the recommendations

Notwithstanding the adoption of STEEM in education, future research could include a case study of one or more schools implementation of the identified recommendations. This research would ascertain the effectiveness of the recommendations and determine any further challenges. This research could involve all of the recommendations being rolled out as a program, or focussing on one recommendation at a time. For instance, it would be valuable to research a school's transition to become an *intelligent school*. Developing an ethos for emergence would also be a fruitful study in determining the strength of connections and the depth of change and significance.

Furthermore, research could also assess the value of STEEM in creating space for ESE. Undertaking research into STEEM could also evaluate the effect the cluster may have on compliance, creativity and possibility.

10.9 Concluding statement

As a newlywed, I honeymooned with my husband on Fiji's Treasure Island. This is an idyllic location in the South Pacific where the standard answer to the question, "Where is the treasure?" is, "The people are the treasure".

Acacia Primary School is not dissimilar. When asked, "*What makes this school special?*" the common answer revolves around "*the people*". At the pinnacle of this *place* are the people, including staff, students and community members. An attachment to Acacia Primary was not exhibited as an attachment to the space that they occupied, that is devoid of the intricacies of life, rather, the *place*, a space filled with things, meanings and values. The space has been nurtured by the principal

through a selective process of staff, structures and a continuous and ethically opportunistic process of advocating ESE. The people, or the treasure, in this *place* are people from various countries and cultures. What makes this school special are people from all over the globe; a nexus of multiculturalism that engenders a global richness to the context.

This thesis, though, is concerned with more than simply what makes a school special. In the current climate of ecological uncertainty, education supporting ecological sustainability is crucial. We are also currently living under the influence of a hegemonic neoliberal agenda, which, with its emphasis on production, consumption and economic growth, is largely incompatible with ecological sustainability. The effect of neoliberalism on education results in a paradoxical duality that preferences attainment, epitomised by the relentless focus on literacy and numeracy, which tends to marginalise all else, including ESE.

The implications of this study's findings are that while neoliberalism prevails schools may struggle to build, retain and progress a commitment to ESE. Nevertheless, space and opportunities to progress ESE *can* and *are* found and nurtured. Put another way, this research offers hope and possibility in the negotiation and navigation of neoliberal framings. A productive way of creatively generating space for ESE is embracing the paradox of ESE in a neoliberal context and recognising it as a wicked problem; a problem with no easy solution but ongoing possibilities.

Appendix A: Neoliberalism, ecological sustainability and education timeline

	The golden era of the post-war West	The dawning awareness of social and environmental issues of the 1960s-1970s	Neoliberalism taking root during the 1980s-1990s	The permeation of neoliberalism from the mid-1990s onward
Ecological/environmental influences and provocations	1946-1964 Baby boom 1947-1991 Cold War 1948 the term 'environmental education' first used internationally at the International Union for the Conservation of Nature and Natural Resources (IUCN) in Paris 1960 World human population reaches 3 billion	1962 Rachel Carson publishes *Silent Spring* 1962 The Cuban Missile Crisis brings the world to the brink of nuclear war 1968 Apollo 8 picture of *Earthrise* 1968 Club of Rome, a non-profit, non-governmental organisation founded to raise awareness about the predicament of humankind 1968 Paul R Ehrlich publishes *The Population Bomb* 1970 First Earth Day; US Environmental Protection Agency (EPA) established; IUCN defines 'environmental education' 1971 Greenpeace founded 1972 Club of Rome's *Limits to Growth* published, introduces concept of 'sustainability' 1972 Declaration of the UN Conference on the Human Environment: the *Stockholm Charter* – first global environmental summit 1975 *Belgrade Charter* – global framework for environmental education 1978 *Tbilisi Declaration* – blueprint for environmental education 1979 Three mile Island nuclear accident ends nuclear development, turning instead to rely on coal for energy	1980 *World Conservation Strategy* 1985 Scientists discover a "hole" in the Earth's ozone layer 1987 The U.N.'s Brundtland Report *Our Common Future* advocates for sustainable development 1980s Green Marketing – presumably environmentally safe products swarm the market 1980s Greenwashing – misleading claims on eco-friendliness of products 1992 The Rio Earth Summit focusses on sustainability issues and produces *Agenda 21*, a blueprint for sustainable development 1994 John Elkington coins the phrase 'triple bottom line' (TBL) 1995 TBL also conceptualised as 'people, planet, profit'	1995 The Intergovernmental Panel on Climate Change (IPCC), a group of hundreds of prominent climate scientists assembled by the UN in 1988, releases a report concluding, "the balance of evidence suggests that there is a discernible human influence on global climate". 1997 The Kyoto Protocol is adopted by most countries, aiming to globally limit greenhouse gas emissions 2001 U.S. President George W. Bush announces that the United States will not ratify the Kyoto Protocol, saying that the country cannot afford to reduce carbon dioxide emissions 2002 coral bleaching at Australia's Great Barrier Reef affecting up to 60 percent of reefs 2002 European Union ratifies the Kyoto Protocol – ratified by Australia in 2007 2002 World Summit on Sustainable Development shaped by 9/11 – 3 new pillars: Trade, Poverty reduction, environmental protection 2005 UN proclaims the UN Decade of Education for Sustainable Development, 2005-2014 2005 European Union Emission Trading Scheme 2006 *An Inconvenient Truth* documentary raises public awareness of climate change 2015 Global climate agreement was agreed under the United Nations Framework Convention on Climate Change (UNFCCC) at the 21st Conference of the Parties (COP21) in Paris (Paris Agreement) 2017 Climate change sceptic, US President Trump, declares the US will withdrawal from the Paris Agreement as it undermines the US economy 2018 World human population surpasses 7.6 billion and is estimated to reach 9.8 billion in 2050
Neoliberal transformation 1929-1939 Great Depression 1939-1945 World War II	1944 Bretton Woods: World Bank, International Monetary Fund (IMF), General agreement on Tariffs and Trade, New Gold Standard 1945 United Nations founded 1945-1970s Keynesianism is the dominant economic paradigm 1950-1973 "Golden Age" of Capitalism 1955-1975 Vietnam War 1957 Sputnik launched	1961 OECD founded 1970 Milton Friedman argues that the main social responsibility of business is to increase profit – for its shareholders (stockholders) 1973 OPEC Oil crisis 1973 Post-war prosperity ends 1973 Chilean neoliberal experiment Nobel Prize in economics awarded to Friedrich von Hayek in 1974 and Milton Friedman in 1976 1979 Volcker Shock 1979 UK Prime Minister Margaret Thatcher initiates neoliberal economic policies: slogan - There is no alternative (TINA)	1980 American President Ronald Reagan supports neoliberalism 1983 Mass reforms in UK and US, followed by other nations 1983 'Globalisation' popularised by Theodore Levitt to describe market changes in global economics affecting production, consumption and investment 1990s IT revolution leading to investment boom 1993 World Trade Organisation (WTO) 1994 North American Free Trade Agreement	1994-1999 Financial bubble Global comparison of educational attainment 1995 Trends in International Mathematics and Science Study (TIMSS) 1997 Programme for International Student Assessment (PISA) 1997-2000 Consumer spending boom 9/11: September 11, 2001 2001 Progress in International Reading Literacy Study (PIRLS) 2008 Global Financial Crisis (GFC) 2009 Rudd simultaneously denounces and supports neoliberalism Global inequality - Rich-poor gap greater than ever
Australian education (including education in South Australia)	Prior to the 1960s Australian States and Territories largely operated autonomously with centralised administration and state-based curriculum	1963 Australian Government begins funding schools 1964 Martin Report investment in human capital Education *in* the environment – nature studies; fieldwork 1972-1975 Whitlam Labor Government 1975-1983 Fraser Liberal Government 1971 South Australian enquiry into education, Karmel Report – highlights need to address social justice 1973 Commonwealth Schools Commission established to advise	1983-1996 Hawke/Keating Labor Government – focus on education for social efficiency 1980 Core Curriculum for Australian Schools published by Curriculum Development Centre 1981 Curriculum Development Centre absorbed into Commonwealth Department of Education 1981 The Senate Standing Committee on Education and the Arts publishes its report *Preparation for the Workforce* 1982 Keeves Report proposes monitoring schools' performances and	1996-2007 Howard Liberal Government – focus on education for social efficiency and social mobility 1996 Disadvantaged Schools Program abolished for Commonwealth Literacy Program (CLP) 1999 *Adelaide Declaration - National Goals for Schooling in the Twenty-First Century* Education *for* sustainability; education *for* the environment, *for* sustainable development, or education *for* a sustainable future 2000 *Environmental Education for a Sustainable Future* – National

The golden era of the post-war West	The dawning awareness of social and environmental issues of the 1960s-1970s	Neoliberalism taking root during the 1980s-1990s	The permeation of neoliberalism from the mid-1990s onward
	Government on education policy – publishes national *Schools in Australia* (Karmel Report)	streaming students; also gave technology a profile	action plan
	1974 Disadvantaged Schools Program initiated	1986 Schools Commission developed the Participation and Equity Program (PEP) to increase retention rates.	2001 Statements and Profiles replaced by the South Australian Curriculum Standards and Assessment (SACSA) Framework
	1979-1984 Choice and Diversity in Government Schools Project	1982 Educational Research and Development Committee published the report *National Assessment in Australia: An Evaluation of the Australian Studies in the Student Performance Program*	2003 Australian Sustainable Schools Initiative (AuSSI)
	1974 Curriculum Development Centre established as an independent statutory body		2004 AuSSI-SA
	Education *in* or *about* the environment – outdoor education, conservation education, urban studies	1985 *Quality of Education in Australia: Report of the Review Committee* (Karmel Report) published	2005 Australian Institute for Teaching and School Leadership (AITSL)
	Education for the preparation of life and participation in society	1985 Commonwealth Schools Commission publishes *Quality and Equity: Commonwealth specific purpose programs for Australian schools.*	2005 *Educating for a Sustainable Future – a National Environmental Education Statement for Australian Schools*
		1987 Commonwealth Schools Commission abolished for National Board of Employment, Education and Training	2007 *Caring for Our Future: The Australian Government Strategy for the United Nations Decade of Education for Sustainable Development, 2005-2014*
		1989 *Hobart Declaration on National Goals for Schooling in Australia*	2007-2013 Labor Government
		Development of a national curriculum from 1988 to 1993	2007 *The Australian economy needs an education revolution*
		1989 Curriculum Corporation established	2008 Labor Govt. declares the need for an 'Education Revolution': *Quality Education: The case for an Education Revolution in our Schools*
		1990 First annual *National Report on Australian Schooling* published by the Australian Education Council	2008 *Melbourne Declaration on the Educational Goals for Young Australians*
		1990 SA charter *Educating for the 21st century*	2008 National Curriculum Board (NCB) established
		1991 Finn Report introduces core competencies	2008 ACARA Act
		1992 Mayer Report introduces key competencies linked to workplace attributes and skills	2008 Schools Assistance Bill
		1993 National Statements and Profiles - national curriculum and assessment framework released but only adopted by SA	2008 National Assessment Program – Literacy and Numeracy (NAPLAN) introduced
		Education *about* the environment - global education; development education; values education; action research	2009 NCB renamed Australian Curriculum, Assessment and Reporting Authority (ACARA)
		Education as preparation for work	2009 *Living Sustainably: the Australian Government's National Action Plan for Education for Sustainability*
			2010 AGPPA commissions report on the public purposes of education
			2010 Gonski Report
			2010 *Sustainability Curriculum Framework: A guide for curriculum developers and policy makers*
			2011 the *Australian Curriculum* initial phase released
			2012 *National School Improvement Tool* released
			2013 Liberal Government

Appendix B: Letters of Introduction

Letter of introduction: Principal

Prof. Kay Whitehead

Faculty of Education, Humanities and Law

School of Education

GPO Box 2100
Adelaide SA 5001

Tel: 08 8201 3339
Fax: 08 8201 3184
Kay.Whitehead@flinders.edu.au

http://www.flinders.edu.au/people/kay.whitehead

CRICOS Provider No. 00114A

LETTER OF INTRODUCTION - Principal

Dear

This letter is to introduce Debra Bradley who is a PhD student in the School of Education at Flinders University. She will produce her student card, which carries a photograph, as proof of identity. Debra is undertaking research leading to the production of a thesis or other publications on the subject of education towards ecological sustainability. Her research aims to identify how a philosophy of place-based education can be used in an urban school to facilitate sustainability education.

Debra would be most grateful if you would volunteer to assist in this study, by agreeing to the observation of school based activities, providing access to documents generated and/or used by the school that are publicly accessible to staff, eg reports, memos and policy documents, allowing focus groups with students and granting an interview, which will all cover certain aspects of this topic. The interview would require no more than an hour on one to two occasions. Observation will be conducted between August 2013 and December 2014. There will be no observation or recording of events where confidential issues will be raised. Where possible, to give Debra a holistic understanding of the school's approach to ecological sustainability, she will seek to gain first hand experience. This may include assisting staff and community members, and joining with groups of students. Up to five focus groups, with no more than 5 students will be undertaken with students identified through consultation with yourself and other staff members.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Since Debra intends to make a tape recording of the interview(s), she will seek your consent, on the attached form, to record the interview(s), to use the recording(s) or transcription(s) in preparing the thesis, report or other publications, on condition that your name or identity is not revealed, and to make the recording(s) available to other researchers on the same conditions. It may be necessary to make the recording(s) available to secretarial assistants for transcription, in which case you may be assured that such persons will be advised of the requirement that your name or identity not be revealed and that the confidentiality of the material is respected and maintained.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on 8201 3339, fax 8201 3184 or e-mail Kay.Whitehead@flinders.edu.au. Thank you for your attention and assistance.

Yours sincerely

Prof Kay Whitehead
Deputy Dean
School of Education
Faculty of Education, Humanities and Law

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number 4327). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au.

Letter of introduction: Staff

Prof. Kay Whitehead

Faculty of Education, Humanities and Law

School of Education

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Kay.Whitehead@flinders.edu.au

http://www.flinders.edu.au/people/kay.whitehead

CRICOS Provider No. 00114A

LETTER OF INTRODUCTION

Dear Staff Member

This letter is to introduce Debra Bradley who is a PhD student in the School of Education at Flinders University. She will produce her student card, which carries a photograph, as proof of identity. Debra is undertaking research leading to the production of a thesis or other publications on the subject of education towards ecological sustainability. Her research aims to identify how a philosophy of place-based education can be used in an urban school to facilitate sustainability education.

Debra would be most grateful if you would volunteer to assist in this study, by agreeing to observation of normal day to day activities, and granting an interview, which will cover certain aspects of this topic. The interview would require no more than an hour on one to two occasions. Observation will be conducted between August 2013 and December 2014. There will be no observation or recording of events where confidential issues will be raised. Where possible, to give Debra a holistic understanding of the school's approach to ecological sustainability, she will seek to gain first hand experience. This may include assisting staff and community members, and joining with groups of students.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Since Debra intends to make a tape recording of the interview(s), she will seek your consent, on the attached form, to record the interview(s), to use the recording(s) or transcription(s) in preparing the thesis, report or other publications, on condition that your name or identity is not revealed, and to make the recording(s) available to other researchers on the same conditions. It may be necessary to make the recording(s) available to secretarial assistants for transcription, in which case you may be assured that such persons will be advised of the requirement that your name or identity not be revealed and that the confidentiality of the material is respected and maintained.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on 8201 3339, fax 8201 3184 or e-mail Kay.Whitehead@flinders.edu.au. Thank you for your attention and assistance.

Yours sincerely

Prof Kay Whitehead
Deputy Dean
School of Education
Faculty of Education, Humanities and Law

Letter of introduction: Student

Prof. Kay Whitehead

Faculty of Education, Humanities and Law

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CRICOS Provider No. 00114A

LETTER OF INTRODUCTION

Dear Student

You are invited to voluntarily participate in a study about education towards ecological sustainability and connections with the community. The research project is being done by Ms Debra Bradley as part of her PhD in the School of Education at Flinders University.

Debra would like to have a group discussion with students about ecological sustainability. The discussion will be with other students and will take no more than an hour on one to two occasions. Any information you give will be kept private and we will not use your names. You don't have to answer every question if you don't want to and you can stop taking part in the project at any time. Attached is an information sheet with some questions you may ask, with answers about the project.

If you choose to participate please complete, with your parent/caregiver, the attached consent form and return it to your school. Thank you for considering this request.

Any questions you may have concerning this project should be directed to me at the address given above or by telephone on 8201 3339, fax 8201 3184 or e-mail Kay.Whitehead@flinders.edu.au.

Thank you for your attention and assistance.

Yours sincerely

Prof Kay Whitehead
Deputy Dean
School of Education
Faculty of Education, Humanities and Law

inspiring
achievement

Letter of introduction: Parent/caregiver

Prof. Kay Whitehead

Faculty of Education, Humanities and Law

School of Education

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http://www.flinders.edu.au/people/kay.whitehead

CRICOS Provider No. 00114A

LETTER OF INTRODUCTION

Dear Parent/Caregiver

This letter is to introduce Debra Bradley who is a PhD student in the School of Education at Flinders University. Debra is undertaking research leading to the production of a thesis or other publications on the subject of education towards ecological sustainability. Her research aims to identify how a philosophy of place-based education can be used in an urban school to facilitate sustainability education.

As your child is a student at the school involved in this research project, Debra would be most grateful if you would volunteer to assist in this study by consenting to your child taking part in a focus group discussion which will cover certain aspects of this topic, such as their understandings of and commitment to ecological sustainability. The group discussion would require no more than an hour on one to two occasions.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. Your child is, of course, entirely free to discontinue their participation at any time or to decline to answer particular questions.

Since Debra intends to make a tape recording of the discussion(s), she will seek your consent, on the attached form, to record your child's discussion(s), to use the recording(s) or transcription(s) in preparing the thesis, report or other publications, on condition that your child's name or identity is not revealed, and to make the recording(s) available to other researchers on the same conditions. It may be necessary to make the recording(s) available to secretarial assistants for transcription, in which case you may be assured that such persons will be advised of the requirement that your child's name or identity not be revealed and that the confidentiality of the material is respected and maintained.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on 8201 3339, fax 8201 3184 or e-mail Kay.Whitehead@flinders.edu.au.

Thank you for your attention and assistance.

Yours sincerely

Prof Kay Whitehead
Deputy Dean
School of Education
Faculty of Education, Humanities and Law

Letter of introduction: Community

Prof. Kay Whitehead

Faculty of Education, Humanities and Law

School of Education

GPO Box 2100
Adelaide SA 5001

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Kay.Whitehead@flinders.edu.au

http://www.flinders.edu.au/people/kay.whitehead

CRICOS Provider No. 00114A

LETTER OF INTRODUCTION

Dear Community Member

This letter is to introduce Debra Bradley who is a PhD student in the School of Education at Flinders University. She will produce her student card, which carries a photograph, as proof of identity. Debra is undertaking research leading to the production of a thesis or other publications on the subject of education towards ecological sustainability. Her research aims to identify how a philosophy of place-based education can be used in an urban school to facilitate sustainability education.

Debra would be most grateful if you would volunteer to assist in this project, by agreeing to observation of normal day to day activities, providing access to documents used by the school, and/or granting an interview, which will all cover certain aspects of this topic. The interview would require no more than an hour on one to two occasions. Observation will be conducted between August 2013 and December 2014. There will be no observation or recording of events where confidential issues will be raised. Where possible, to give Debra a holistic understanding of the school's approach to ecological sustainability, she will seek to gain first hand experience. This may include assisting staff and community members, and joining with groups of students.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Since Debra intends to make a tape recording of the interview(s), she will seek your consent, on the attached form, to record the interview(s), to use the recording(s) or transcription(s) in preparing the thesis, report or other publications, on condition that your name or identity is not revealed, and to make the recording(s) available to other researchers on the same conditions. It may be necessary to make the recording(s) available to secretarial assistants for transcription, in which case you may be assured that such persons will be advised of the requirement that your name or identity not be revealed and that the confidentiality of the material is respected and maintained.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on 8201 3339, fax 8201 3184 or e-mail Kay.Whitehead@flinders.edu.au. Thank you for your attention and assistance.

Yours sincerely

Prof Kay Whitehead
Deputy Dean
School of Education
Faculty of Education, Humanities and Law

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number 4327). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au.

Appendix C: Information Sheets

Information sheet: Staff

INFORMATION SHEET FOR PROPOSED RESEARCH

(staff member interview)

Hello, my name is Debra Bradley and I am undertaking a research project on ecological sustainability and community connections. I'm interested in hearing some perspectives from staff members which is why I would like you to assist me with my research.

Below is a series of questions you may ask, with answers, about the project.

Q. If you decide to participate in the project, what will you be asked to do?
A. You will participate in one or two interviews about how ecological sustainability is negotiated within and around the school.

Q. Where will the project be held?
A. The interviews will be held at a mutually agreed location, eg classroom or other suitable room within the school.

Q. How long will the interviews take?
A. The interviews should run for no more than an hour each.

Q. Will the information from the interview be recorded?
A. The interview will be recorded on audio tape and then typed up into transcripts.

Q. If you do participate in the project, how will it benefit you?
A. You will not directly benefit from taking part in this research.

Q. What if you decide to withdraw from the project?
A. You are free to withdraw from the project at any time without disadvantage.

Q. Do you have to answer every question in the interview?
A. You are free to decline to answer any particular questions.

Q. Will you be identified in the resulting thesis?
A. While the information gained will be published, you will not be identified in the thesis or any reports or other publications, and all your information will remain confidential.

Q. If you do participate or not, or if you withdraw from the project, how will your dealings with the school be effected?
A. Non-participation or withdrawal from the project will have no effect on your current or future dealings with the school.

Q. Can you ask to stop the interview?
A. You can ask to stop the recording of the interview at any time.

Q. What will happen to the information on the tapes and transcripts?
A. If you agree on the consent form, the information will be available to other researchers but your name and identity will not be revealed.

Page 1 of 2

Q. What should you do now?

A. Discuss the project with a family member or friend and if you have any questions at all please contact me and ask.

If you do have any questions about this project please feel free to contact me by telephone on 8201 5670, or e-mail Debra.Bradley@flinders.edu.au.

I look forward to speaking with you soon.

Regards,

Researcher's name…Debra Bradley…………….…………………...................

Researcher's signature… … **Date**…25 July 2013…

Information sheet: Student

INFORMATION SHEET FOR PROPOSED RESEARCH
(student focus group)

Hello, my name is Debra Bradley and I am undertaking a research project on ecological sustainability and community connections. I'm interested in hearing some students' perspectives which is why I would like you to assist me with my research.

Below is a series of questions you may ask, with answers, about the project.

Q. If you decide to take part in the project, what will you be asked to do?
A. You will be part of one or two discussions about your ideas about ecological sustainability and any sustainable activities you do.

Q. Where will the project be held?
A. The focus group discussions will be held at the school.

Q. Who will be in the focus groups and how large will they be?
A. The focus groups will consist of myself, you and no more than five of your classmates.

Q. How many focus group discussions will there be and how long will they take?
A. You will be asked to attend one to two focus group discussions. They should run for no more than an hour each.

Q. Will the information from the focus group discussions be recorded?
A. The focus group discussions will be recorded on audio tape and then typed up into transcripts.

Q. If you do participate in the project, how will it benefit you?
A. You will not directly benefit from taking part in this research.

Q. What if you decide to withdraw from the project?
A. You are free to withdraw from the project at any time without disadvantage.

Q. Do you have to answer every question in the focus group discussions?
A. You are free to decline to answer any particular questions.

Q. Will you be identified in the resulting thesis?
A. While the information gained will be published, you will not be identified in the thesis or any reports or other publications, and all your information will remain confidential.

Q. If you do participate or not, or if you withdraw from the project, how will your schooling be affected?
A. Non-participation or withdrawal from the project will have no effect on your progress in your schooling, or results gained.

Q. Can you ask to stop the focus group discussion?
A. You can ask to stop the recording of the focus group discussion at any time.

Page 1 of 2

Q. What will happen to the information on the tapes and transcripts?

A. If you agree on the consent form, the information will be available to other researchers but your name and identity will not be revealed.

Q. What should you do now?

A. Discuss the project with a family member or friend and if you have any questions at all please contact me and ask.

If you do have any questions about this project please feel free to contact me by telephone on 8201 5670, or e-mail Debra.Bradley@flinders.edu.au.

I look forward to speaking with you soon.

Regards,

Researcher's name…Debra Bradley…………….………………….................

Researcher's signature… … **Date…**25 July 2013…

Information sheet: Community

INFORMATION SHEET FOR PROPOSED RESEARCH
(community interview)

Hello, my name is Debra Bradley and I am undertaking a research project on ecological sustainability and community connections. I'm interested in hearing some perspectives from relevant community members which is why I would like you to assist me with my research.

Below is a series of questions you may ask, with answers, about the project.

Q. If you decide to participate in the project, what will you be asked to do?
A. You will participate in one or two interviews about how ecological sustainability is negotiated within and around the school.

Q. Where will the project be held?
A. The interviews will be held at a mutually agreed location, either within the school, or if more convenient, at your office.

Q. How long will the interviews take?
A. The interviews should run for no more than an hour each.

Q. Will the information from the interview be recorded?
A. The interview will be recorded on audio tape and then typed up into transcripts.

Q. If you do participate in the project, how will it benefit you?
A. You will not directly benefit from taking part in this research.

Q. What if you decide to withdraw from the project?
A. You are free to withdraw from the project at any time without disadvantage.

Q. Do you have to answer every question in the interview?
A. You are free to decline to answer any particular questions.

Q. Will you be identified in the resulting thesis?
A. While the information gained will be published, you will not be identified in the thesis or any reports or other publications, and all your information will remain confidential.

Q. If you do participate or not, or if you withdraw from the project, how will your dealings with the school be effected?
A. Non-participation or withdrawal from the project will have no effect on your current or future dealings with the school.

Q. Can you ask to stop the interview?
A. You can ask to stop the recording of the interview at any time.

Q. What will happen to the information on the tapes and transcripts?
A. If you agree on the consent form, the information will be available to other researchers but your name and identity will not be revealed.

Page 1 of 2

Q. What should you do now?

A. Discuss the project with a family member or friend and if you have any questions at all please contact me and ask.

If you do have any questions about this project please feel free to contact me by telephone on 8201 5670, or e-mail Debra.Bradley@flinders.edu.au.

I look forward to speaking with you soon.

Regards,

Researcher's name…Debra Bradley…………….…………………..................

Researcher's signature… … **Date**…25 July 2013…

Appendix D: Consent forms

Consent form: Interview

CONSENT FORM FOR PARTICIPATION IN RESEARCH
(by interview)

I ....

being over the age of 18 years hereby consent to participate as requested in the Letter of Introduction and Information Sheet in the research project on education towards ecological sustainability.

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that:
   - I may not directly benefit from taking part in this research.
   - I am free to withdraw from the project at any time and am free to decline to answer particular questions.
   - While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential.
   - Whether I participate or not, or withdraw after participating, will have no effect on any treatment or service that is being provided to me.
   - Whether I participate or not, or withdraw after participating, will have no effect on my current or future dealings with the school.
   - I may ask that the recording/observation be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.
6. I agree/do not agree* to the tape/transcript* being made available to other researchers who are not members of this research team, but who are judged by the research team to be doing related research, on condition that my identity is not revealed.   * delete as appropriate
7. I have had the opportunity to discuss taking part in this research with a family member or friend.

Participant's signature...Date.......................

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher's name..

Researcher's signature...Date........................

NB: Two signed copies should be obtained.

Consent form: Focus Group/Parental consent

PARENTAL CONSENT FORM FOR CHILD PARTICIPATION IN RESEARCH

CONSENT FORM FOR PARTICIPATION IN RESEARCH

(by focus group)

I …..

being over the age of 18 years hereby consent to my child ….....................................

participating, as requested, in the Letter of Introduction and Information Sheet for the

research project on education towards ecological sustainability.

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my child's information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that:
   - My child may not directly benefit from taking part in this research.
   - My child is free to withdraw from the project at any time and is free to decline to answer particular questions.
   - While the information gained in this study will be published as explained, my child will not be identified, and individual information will remain confidential.
   - Whether my child participates or not, or withdraws after participating, will have no effect on any treatment or service that is being provided to him/her.
   - Whether my child participates or not, or withdraws after participating, will have no effect on his/her progress in his/her course of study, or results gained.
   - My child may ask that the recording/observation be stopped at any time, and he/she may withdraw at any time from the session or the research without disadvantage.
6. I agree/do not agree* to the tape/transcript* being made available to other researchers who are not members of this research team, but who are judged by the research team to be doing related research, on condition that my identity is not revealed.   * delete as appropriate

Parent/Caregiver's signature…...Date…....................

Student's signature…...….Date…....................

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher's name….....................................…..

Researcher's signature…...…..Date…......................
NB: Two signed copies should be obtained.

Consent form: Observation

CONSENT FORM FOR OBSERVATION OF PROFESSIONAL ACTIVITY

I hereby give my consent to Debra Bradley, a PhD student in the School of Education, Faculty of Education, Humanities, and Law at Flinders University and whose signature appears below, to record my work activities as part of a study of professional activities and roles.

I give permission for the use of these data, and other information which I have agreed may be obtained or requested, in the writing up of the study, subject to the following conditions:

My participation in this study is voluntary, and I understand that I may withdraw from the study at any time.

SIGNATURES

Participant..Date...........................…..

Researcher...Date...............................

Appendix E: Guiding questions for interviews and focus groups

Key questions for use in the Leadership interviews

Biographical Details

- *Name?*

- *How long have you been at this Primary School?*

- *What makes this school special?*

Understandings (Attitudes, Beliefs and Origins)

- *Tell me about the {environmental} sign on the front of the school.*

  - *What does the sign mean to you?*

  - *Why is that sign there? Who made the decision? How long has the sign been there?*

  - *Why {...} and not something else (eg Sustainable School)?*

- *From your own perspective what is your definition of 'sustainability'?*

- *Where did you get your ideas about ecological sustainability from?*

  - *Friends, family and neighbours*

  - *School, colleagues, leadership, students*

  - *Written information*

  - *Media messages (TV, Radio, Internet)*

- *What are the benefits or disadvantages of working sustainability into your school?*

Practices

- *How do you include and encourage sustainability education in your school?*

- *What are some of the major institutional structures and dynamics that aid or hinder the development of sustainability education at this school?*

- *What resources do you use and promote to staff to help you connect sustainability into your school?*

  - *eg AuSSI's 'Education for Sustainability – A guide to becoming a sustainable school'? 'Primary Connections', environmental education agencies (eg NRM, CSIRO) or 'Sustainability officers' from the education department?*

  - *Which are the most and least useful and why?*

- *In what ways does the school connect with the community, both local and global, in order to become more sustainable?*

  - *What could be done better?*

- *What kinds of steps towards sustainability education are being envisioned for the immediate future?*

Challenges

- *What are some of the barriers and limitations to creating sustainability education at this school?*

  - *What possibilities for overcoming these barriers can you think of?*

- *What are the main successes or failures you and the school have had in including sustainability education? And why did they succeed/fail?*

- *What is the education department's position on your school's focus on sustainability and climate change?*

  - *What about your school community's position?*

  - *What about your staff's position?*

- *If you could redesign the sustainability and community connections this school is involved in, what advice would you give other staff or community members?*

  - *What changes would you make?*

- *Is there anything else you'd like to add?*

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Key questions for use in the Staff interviews

Biographical Details

- *Name?*
- *How long have you been at this Primary School and what is your role?*

- *What do you think makes this school special?*

Understandings (Attitudes, Beliefs and Origins)

- *Tell me about the {Environmental} sign on the front of the school.*
  - *What does the sign mean to you?*
  - *Why is that sign there?*
- *From your own perspective what is your definition of 'sustainability'?*
- *Where did you get your ideas about sustainability from?*
  - *Friends, family and neighbours*
  - *School, colleagues, leadership, students*
  - *Written information*
  - *Media messages (TV, Radio, Internet)*
- *What are the benefits or disadvantages of working sustainability into your curriculum?*

Practices

- *How do you include sustainability education in your own school practices?*
  - *What facilitates this ability?*
- *What resources or support systems do you use to help you connect sustainability into your curriculum?*
  - *eg AuSSI's 'Education for Sustainability – A guide to becoming a sustainable school'? 'Primary Connections', environmental education agencies (eg NRM, CSIRO) or 'Sustainability officers' from the education department?*
  - *Which are the most and least useful and why?*
- *In what ways does the school connect with the community, both local and global, in order to become more sustainable?*

Challenges

- *What are some of the barriers and limitations to creating sustainability education at this school?*
  - *What possibilities for overcoming these barriers can you think of?*
- *If you could redesign the sustainability and community connections this school is involved in, what advice would you give other staff or community members?*
  - *What changes would you make?*

- *Anything else you'd like to add?*

Page 1 of 1

Key questions for use in the Student focus groups

NB: I will have no control over the respect of confidentiality and anonymity of the participants in the focus groups. For this reason, I will remind focus group members of this limitation and gain verbal recorded agreement between all participants that they will maintain the anonymity of other members and the confidentiality of the discussion.

Biographical Details (students to write on place cards)

- *Name?*

- *How long have you been coming to this Primary School?*

- *What makes this school special?*

Understandings (Attitudes, Beliefs and Origins)

- *There's a sign on the front of the school that says {Environmental} School. What does that sign mean?*
    - *Why is that sign there?*
    - *Do you talk about that sign in your classroom?*
    - *What kinds of things do you talk about?*
    - *Have you done anything at school to learn more about that? What have you done?*

- *What do you think 'sustainability' means? Draw a mind map of everything you know about sustainability.*

- *Where did you get your ideas about sustainability from?*
    - *Friends, family and neighbours*
    - *School (from where in particular?)*
    - *Written information*
    - *Media messages (TV, Radio, Internet)*

- *Have you changed the way you feel about the environment? If so, how have you changed?*
    - *What was it that made you change?*
    - *How important is the environment?*

- *Do you think doing stuff on sustainability at school is a good or a bad thing? Why do you think that?*
    - *Do you think what you've learned from school will change what you do for the environment? If yes, what do you think you will do?*

Practices

- *Can you tell me about the {Environmental} Student Group?*
    - *What is it for?*
    - *Who runs it and how is it run?*
    - *Is it popular among students*
    - *Are teachers positive about it?*

Challenges

- *What is the number one thing you would change if you could about how this school cares for the environment? Imagine you had a magic wand.*

- *Is there anything else you'd like to add?*

Page 1 of 1

Key questions for use in the Community interviews (1)

Biographical Details

- *Name?*
- *For how long and in what capacity have you been connected to this Primary School?*
- *What do you think makes this school special?*

Understandings (Attitudes, Beliefs and Origins)

- *Tell me about the {Environmental} sign on the front of the school.*
  - *What does the sign mean to you?*
- *From your own perspective what is your definition of 'sustainability'?*
- *Where did you get your ideas about sustainability from?*
  - *Friends, family and neighbours*
  - *School (from where in particular?)*
  - *Written information*
  - *Media messages (TV, Radio, Internet)*
- *What are the benefits or disadvantages of working towards sustainability?*

Practices

- *Describe any exceptionally good or bad sustainability and community experiences you have been involved in with this school?*

Challenges

- *What do you see as the main challenges this Primary school is currently facing? How might they be affecting the inclusion of sustainability education?*
- *If you could redesign the sustainability and community connections the school is involved in, what advice would you give Principal and other staff or community members?*
  - *What changes would you make?*

(Additional question for Education Dept and Environmental organisation staff)

- *What are some of the major institutional structures and dynamics that aid or hinder the development of sustainability education at this school?*
- *Anything else you'd like to add?*

Page 1 of 1

Key questions for use in the Community interview (2)

Biographical Details

- *Name?*

Understandings (Attitudes, Beliefs and Origins)

- *From your own perspective what is your definition of 'sustainability'?*
- *Where did you get your ideas about sustainability from?*
  - *Friends, family and neighbours*
  - *School (from where in particular?)*
  - *Written information*
  - *Media messages (TV, Radio, Internet)*
- *What are the benefits or disadvantages of working towards sustainability?*

Practices

- *For how long and in what capacity have you been involved with {your organisation}?*
- *Tell me about your involvement in the new {...} curriculum.*
  - *Can you discuss the process, including consultation, ... and how this informed the writing of the {...} curriculum?*
- *How has sustainability, as a cross-curriculum priority and as a key concept, been conceptualised in the creation of the {...} curriculum?*

Challenges

- *What do you see as the main challenges for schools using the new curriculum? How might these be affecting the inclusion of sustainability education?*
- *If you could redesign the new curriculum, what changes would you make and what advice would you give schools?*

- *Is there anything else you would like to add?*

Appendix F: Student Focus Group Characteristics

Focus Group A

Table 9.
Each Student's Characteristics from Focus Group A

Gender	Age (in years)	Year Level
Female	11	6
Female	10	5
Male	12	7
Female	10	5
Female	12	6

Focus Group B

Table 10.
Each Student's Characteristics from Focus Group B

Gender	Age (in years)	Year Level
Female	12	6
Female	12	7
Male	12	6
Male	10	5
Female	12	7

Focus Group C

Table 11.
Each Student's Characteristics from Focus Group C

Gender	Age (in years)	Year Level
Male	12	7
Female	11	6
Male	10	5
Male	11	5

Appendix G: Various schools' priorities

Table 12.
Primary schools' priorities sourced from various 2010 School Context Statements

School	Priorities/ Policies	Curriculum	Special Curriculum Features	Other Curriculum	Co-Curricular	Other
Acacia	Literacy	SACSA	LOTE		Multicultural festivals	
	e-Learning		ESL		Our Patch	
	Social Education/ Wellbeing		RBL			
	Science		PE			
	Mathematics		Special Ed			
	Climate Change		Aboriginal Education			
			e-Learning			
School 1	Literacy	Science	Environmental Education	LOTE	Music	Quality
	Mathematics	Mathematics	ICT	PE	Choir	
	Science	Literacy		RBL		
	Wellbeing			ICT		
				Environmental Education		
School 2	Democratic		Literacy		Choir	
	IT		Numeracy		Swimming Pool	
	Mathematics		Science			
	Literacy		Global Studies			
	Numeracy		Sustainability			
	Science					
School 3	Relationships	SACSA			Music	Quality
	Access	Literacy			Chess	Excellence
	Supportive Culture	Numeracy				
		Music				
		LOTE				
		PE				
		Environmental Education				
		IT				
		Road Safety				
School 4	Environmental Awareness	SACSA	Environmental Education		Community recycling	Community based environmental programs

School				
	Sustainable Living			Music
	Celebrate diversity and individuality			Jump rope
	Mathematics			
	English			
	Environmentally sustainable practices			
School 5		Joint program - "Climate change" cluster provided important focus for science teaching and proactive measures to address climate change		Harmony day
		Literacy		Dance
		Multi-media		Art
		balanced and comprehensive education		Music
School 6	Inquiry	SACSA		Dance
	grammatical skills	IBMYP		Choir
	number skills	Music		Jump rope
	physical environment	Special Ed		Gardening
		ESL		
School 7	Student Learning	IB	Computer room	
	ICT		Interactive White Boards	
	Environmental Education		Science/Technology room	
	Wellbeing		Science/environmental program	
	IB		Arts - choir, music, dance	
	Sustainable School			

School 8	Value difference	SACSA	Enterprise education Music	Tree planting Recycling
	Science			
	Numeracy		Oz-moon lantern festival	Fund Raising
	Literacy		Concert	Supporting Charities
	ESL		Swimming	Book week
				Harmony Day
School 9	Quality teaching	SACSA		Music
	Literacy			Choir
	Mathematics			Christian Options
	e-Learning			German fitness program
	Learner Wellbeing			
School 10	Sustainable Environment (Global Climate Change)	SACSA		Music
	Numeracy	ESL		Choir
	Literacy			
	Science			
	Wellbeing			

Appendix H: Student Mind Map Summary

Table 13 comprises all the terms used in the students' mind maps. The terms have been categorised into similar groupings.

Table 13.
Summary of Students' Mind Maps

Sustainability									
energy	energy use	climate	healthy environment	human race	biodiversity	respect	recycling	gobal issues	economical
energy (power)	no carbon dioxide	heat waves	healthy enviroment	lifecicles	biodiversity	respect	recycling	growing faster and xspanding	
Save	reduce CO2	heat waves	healthy enviroment	human bodies	biodeversity	respect the plants and enviroment	recycling	the sustainability is growing too fast while some is being lost too fast	
saving energy	reduce CO2	heat waves	plant	looking after yourself	biodivercity studys	carring about the nature	use recyclabe bags - not plastic	there are more than two diffrent sides to the sustainability argument	
usage of power	no coal and oil power	heat waves	helthy plants	keeping fit	helthy animals	caring for the enviorment and looking after plants	stop using rubbish	sustainability is also a lot like neccesities	
reusable	the sustainability of diffrent places is to much in the coal area and giving off to many green house gases	heat waves start encreasing	healthy plants	do exercise	animal extingtion	keeping the environment equal	no rubbish	there is a big problem at the moment where people in poorer countrys are not getting what they need	
reusable	no coal	incrising heat level	healthy animals/plants	health bodies from good and health food	introduced animals spreading viruses and desease	sustaining what we have	putting rubbish in the right bin	population	
less use electrisity	pollution	greenhouse gases	keep plants healthy	food that are better for your helth	introduced animals kill native	using what we already have: brains, tech, bodies	bins to put thing is not the ground		
saving electricity and putting solar panels	stop dirving cars to stop pulution	greenhouse gases	keep trees	eat healthy	extingtion by humans	look after what we already have	putting rubbish in the bin		
solar power	avoid using cars or just wasting petrol	weather	more trees	eat vegis and fruit	avoid making animals extinct	smart			
hydro electricity	petrol and deisel vehicles	weather	no logging	don't eat palm oil	keep the environment the same to protect animals from extinction	looking after the world			
nuculear power	factories	weather	not cutting down trees	carbon footprint	only native animals	looking after animals			
wind turbines	riding a bike or a scooter	climate change	increase oxygen by keeping trees and planting them, too		keeping animals alive				
wind power	drive half way and walk or ride the other half	climate change	we need higher oxygen levels		animals alive				
wind power		gardening	increase oxygen		keeping all wildlife the same				
electric cars			environment		kill less animals				
eletric cars			environment in the future						
plastic cars			future environment						
			gardening						
			gardening						
			when old plants rot we go to bunnings and we get new plants						
			thriving ecosystem						
			no pollution						
			reusable						
			usage of water						

Appendix I: Transcription Symbols

Table 14.
Transcription Symbols

[	R: So are you talking about the students have got [S5: Yeah] different talents?	Square brackets indicate the point at which a current speaker's talk is overlapped by another's talk.
[	S3c: Yeah, pass [our knowledge] on to our kids	Square brackets indicate when words have been added or replaced for clarification
	T7: paid off ...… big oil compan[ies] to pollute the rivers	and when words have been amended
=	S5: Yep = R: = Yeah great.	Equal signs, one at the end of a line and one at the beginning, indicate no gap between the two lines.
(.)	talents like drama (.) um climate change	A dot in parentheses indicates a small pause in speech.
(..)	S5: Because like you (..) coz way back	A series of dots, whose length depends on the amount of time elapsed, indicate longer pauses.
(pause) (long pause)		Even longer pauses are denoted by the word "pause" in parentheses (for 2-3 second breaks) or "long pause" (for 4 or more seconds).
(?)	what they can (?) show	A question mark in parentheses indicates an inaudible word.
___	R: So are you talking about the <u>students</u> have	Underscoring indicates some form of stress, via pitch and / or amplitude.
(word)	Would you see (there) anything positive	Parenthesised words are possible hearings.
(laughing) (coughs)	we'd just like to have one bin for everything (laughing)	Indicate in parentheses (laughing) to denote one person; (laughter) to denote several laughing. Indicate in parentheses, for example, (coughs), (sigh), (sneeze).
{Word}	I think {Acacia} is a good school	A word in curly brackets indicates a pseudonym used to protect confidentiality.
WORD	I've got ENOUGH TO WORRY ABOUT	Capitals, except at the beginnings of lines, indicate especially loud sounds relative to the surrounding talk.

: :	O:kay?	Colons indicate prolongation of the immediate prior sound. The length of the row of colons indicates the length of the prolongation.
(( ))	they don't choose to die. ((background chatter))	Double parentheses contain author's descriptions rather than transcriptions.
.hhhh	I feel that .hh	A row of h's prefixed by a dot indicates an inbreath; without a dot, an outbreath. The length of the row of h's indicates the length of the in or outbreath.
'Paraphrasing others'	S5: Yeah they'd see that 'oh they're a focus group on climate'	When interviewees assume a voice that indicates they are parodying what someone else said or an inner voice in their heads, use single quotation marks and/or indicate with (mimicking voice) in parentheses.
. , ?	R: = Yeah great. What does everybody else think?	Indicate speaker's intonation.
–	there's a black bin for – I never knew what the black bins were	Indicates change in tone or direction of speech.

SOURCE: Adapted from Silverman (2011, pp. 465-466) and Poland (1995, pp. 301-303)

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