2014

An exploration of nature-based play at Australian pre-schools

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Publication details

Truscott, J 2014, 'An exploration of nature-based play at Australian pre-schools', MEd thesis, Southern Cross University, Lismore, NSW.

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An Exploration of Nature-Based Play at Australian Pre-Schools

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B.Sc. (Hons)

A thesis towards fulfilment of a Master of Education by Research

Southern Cross University
Centre for Children & Young People,
School of Education

May 2014
Declaration

I certify that the work presented in this thesis is, to the best of my knowledge and belief, original, except as acknowledged in the text, and that the material has not been submitted, either in whole or in part, for a degree at this or any other university.

I acknowledge that I have read and understood the University’s rules, requirements, procedures and policy relating to my higher degree research award and to my thesis. I certify that I have complied with the rules, requirements, procedures and policy of the University (as they may be from time to time).

Julia Truscott
1st May 2014
Abstract

Today’s children are the first generation to receive such a large proportion of their early childhood education and care (ECEC) outside of their family home. Additionally, they are being cared for in the most safety-conscious society we have ever had, variously described by scholars in terms of ‘surplus safety’ and the ‘risk averse society.’ The combined result is that contemporary Australian children are likely to spend more time playing indoors than outdoors, with a generational shift from “green time to screen time” (Ha et al., 2012, p. 6).

This study is contextually situated between these facets of contemporary childhood - an increase in institutional ECEC, the childhood risk debate, and reduced opportunities for children to play in nature. Motivated by the growing momentum to naturalise early years playgrounds, this study seeks to explore how pre-school aged children experience nature-based play within the naturalised playgrounds of ECEC centres.

The study customises the Mosaic approach to help facilitate the active participation of pre-school children (aged three to five years) in exploring their play experiences and risk perceptions. Interviews are also conducted with their educators to elucidate their beliefs, values and practices relating to nature-based play and their perceptions of the risks within the Australian pre-school context. The analysis draws upon key theoretical understandings from the interdisciplinary field of Childhood Studies, sociocultural theory and flow.

The findings illuminate a number of sociocultural factors that enhance or constrain the children’s experiences of nature-based play. In particular, educators’ pedagogy appears to significantly influence how children experience nature-based play, their enjoyment of their play, and their learning and development, including in relation to risk literacy. The central role that pedagogy plays in shaping these experiences suggests that physical changes to ECEC playgrounds alone, may not afford opportunities for children’s immersion in...
nature-based play. The findings point to the importance of ensuring any changes to the physical environment are accompanied by professional development that challenges educators’ underlying assumptions about childhood and explores the pedagogical approaches that best afford children the opportunity for active participation and flow in their play and learning.
Acknowledgements

I would like to acknowledge my supervisors Professor Anne Graham and Associate Professor Amy Cutter-Mackenzie for their support and guidance throughout this Master of Education. I have benefited enormously from their patient guidance, kindness and mentorship.

I would also like to acknowledge the Australian Endeavour Award for their generous sponsorship in allowing me to undertake this study in Australia. I have certainly developed strong international partnerships which I am sure will continue long after I return home.

I would like to show my appreciation for the pre-schools, educators, children and families who participated in this research project and welcomed me into their world. I hope my results can help, in a small way, to contribute to knowledge and bring greater recognition to the work of early childhood professionals and continue to improve the experience of childhood for children at early childhood education and care settings.

Maslow’s ‘hierarchy of needs’ highlights the importance of basic needs being met to allow for the process of higher learning. Therefore, I would also like to thank the many people who put a roof over my head during the latter six months of my study: Kate Walton and Todd Fisher, Nicola Truscott and Matt Murray, Penny Harris and Lucas Flumm, Theresa and Jason Crawford, and especially Catharine and Beverley Simmons, who shared the last frantic weeks of the journey with me and plied me with fresh vegetables, milkshakes and lemon tea.

Last of all I would like to thank my husband, Daniel White, for his love and support, and particularly his unbelievable patience in allowing me to painstakingly discuss my ideas. I thank him, and our dog, Gypsy, for accompanying me to Australia and reminding me to always take time out to have fun at the beach.
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Chapter 1: Introduction

Introduction to the Chapter

The majority of adults fondly recall the outdoors as the predominant site for their childhood play (Asah, Bengston, & Westphal, 2012; Bowden, Band, & Gray, 2011; Pyle, 2002; Skår & Krogh, 2009; Sobel, 2012). Whilst this can be dismissed as romanticism, it perhaps misses the point that these outdoor, often nature-based, memories collectively stand out (Chawla, 1990; Waite, 2007). Correspondingly, there is strong interest in offering today’s pre-school children opportunities to experience nature-based play. This is rationalised by the opportunities nature-based play offers to address many of the oft-cited crises of contemporary childhood including rising obesity, increasing diagnoses of mental health and behavioural problems, concerns about ‘eco-phobia’ (Sobel, 1996) and ‘nature-deficit disorder’ (Louv, 2008), and reflexive worries about the implications of surplus safety (Wyver et al., 2010).

In the pre-school context, these memories and concerns have contributed to the trend in naturalising the playgrounds of early childhood education and care (ECEC) centres. Connecting with the momentum of interest amongst ECEC educators, this study aims to explore nature-based play within the naturalised playgrounds of Australian pre-schools. Throughout this chapter, I will contextualise this aim further and identify the two guiding research questions I will use to investigate it. I will then explore the significance of this study, before lastly sharing my personal orientation to the topic.

1.1 Background to the research

The increase in children attending Early Childhood Education and Care (ECEC) settings is one of the most notable changes to the contemporary early childhood
experience (Adamson, 2008; Shonkoff & Phillips, 2000). In Australia, between 1993 and 2005 the number of children from birth to five years of age attending long day care centres more than doubled (Elliott, 2006). This is a direct result of both increased maternal employment and increased recognition of the importance and benefits of ECEC (Adamson, 2008; Australian Bureau of Statistics, 2010; Barnett & Ackerman, 2006). Therefore, Australia has recently come through a process of nationwide reform aiming to maximise the multiple economic, social and educational benefits of ECEC (COAG, 2009a, 2009b; DEEWR, 2009b).

The benefits of ECEC are particularly apparent for children from disadvantaged backgrounds, for whom attendance at ECEC has been shown to improve social behaviour, health and educational achievement (Barnett & Ackerman, 2006; COAG, 2009b; Currie & Thomas, 1995; Edwards, Fleer, & Nuttall, 2008; Garces, Thomas, & Currie, 2000; Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2004). Disadvantage is a particular concern within Australia, especially given the persistent inequality faced by Indigenous Australians (COAG, 2009a, 2009b). Indigenous Australians are disproportionately likely to experience social disadvantage, such as unemployment, imprisonment and homelessness, as well as poor health and reduced educational attainment (Lyons & Janca, 2012). Lyons et al (2012) show that these outcomes are cyclical, whereby social factors and poor health reduce educational achievement and, in turn, low education correlates with poorer health throughout life.

A key response by the Australian government has been to identify ECEC as a key mechanism by which to try to ‘close the gap’ in Indigenous disadvantage in Australia (COAG, 2009b). Priority emphasis has been placed upon increasing participation in pre-school programs in the year before formal schooling commences, to ensure all children are “ready for school” (DEEWR, 2009b, p. 9). Consequently, the Australian government made the commitment that by 2013 all Australian pre-school children would have access to 15 hours of pre-school education per week, delivered by a degree-level trained ECEC educator (COAG, 2009a; DEEWR, 2009b). This commitment is currently in place until the end of
2014 when, depending upon imminent budget announcements, a decision will be made over whether this will continue to be funded by the federal government (Department of Education, 2014).

Potential changes aside, the emphasis on the pre-school year has reignited longstanding debates over how best to educate children prior to school (Bodrova, 2008; Sigel, 1987). Traditionally, a focus on play has distinguished pre-school settings from school (Bodrova, 2008; Connor, 2012; Maynard & Thomas, 2009). However, recent scholarship has been reconceptualising the relationship between play and learning, resulting in new theorisations of play-based pedagogies (see Edwards, 2007b; Edwards & Cutter-Mackenzie, 2011; Fleer, 2009b, 2011; Fleer & Peers, 2012; Fleer & Raban, 2006; Reynolds, Stagnitti, & Kidd, 2011). In response, some raise concern that the recent reforms are prompting a shift away from play, and placing greater emphasis upon developmental targets that have previously been the domain of formal schooling (Fleer & Peers, 2012; Lee-Hammond, 2012; Ortlipp, Arthur, & Woodrow, 2011; Radich, 2010; Sumson et al, 2009).

A developmental emphasis does appear to be embedded in the COAG vision that pre-school attendance will help give children “the best start in life to create a better future for themselves and for the nation” (COAG, 2009a, p. 4). Whilst not mutually exclusive, the Early Years Learning Framework (EYLF), Australia’s seminal curriculum for ECEC (including pre-school), privileges sociocultural theory, with learning taking place through social interaction (DEEWR, 2009a). Such debates and tensions around optimal learning approaches in the early years create the impetus to reflect upon the experience of pre-school for contemporary children and to consider new models and opportunities, including those that may benefit Australia’s Indigenous communities.

Nature-based play is one such possibility. There has been growing interest in increasing opportunities for children to experience nature-based play at Australian ECEC settings both through the recent proliferation of bush kindergartens, as well as current momentum to naturalise ECEC playgrounds
(Facebook Group, n.d.; Fargher, 2012; Jacaranda Pre-School, 2012; Petersen, 2012; SA Dept of Education and Children's Services, 2010; Westgarth Kindergarten, 2011). These trends respond to concerns that children in Minority world countries⁠¹ are being denied outdoor play opportunities at a cost to their health and wellbeing (see Bowden et al., 2011; Gill, 2007; Ha et al., 2012; Ipsos MORI & Nairn, 2011; Layard & Dunn, 2009; Louv, 2008; Richardson & Prior, 2005; Shonkoff & Phillips, 2000). Such views about the importance of nature-based play tend to align with romantic visions of a ‘good childhood.’ However, this romanticism is readily rationalised by the opportunities to address the oft-cited crises of contemporary childhood such as rising childhood obesity and anxiety, risk-aversion and ‘bubble-wrapping’ (see Malone, 2007; Valentine & McKendrick, 1997; Wyver et al., 2010).

Beyond this, research from the nature kindergarten and Forest School models of Europe suggests that nature-based play offers children greater opportunities to experience risky play, to be creative and engage in more complex and mature play, while also enhancing their participation within inter-generational relationships (Maynard, 2007b; Murray & O'Brien, 2005; Niklasson & Sandberg, 2010; O'Brien, 2009; O'Brien & Murray, 2007; Ridgers, Knowles, & Sayers, 2012; Sandseter, 2009a). This combination of exploring nature in a kinaesthetic way, whilst strengthening relationships, may help children to connect with nature and a sense of community, offering a model for sustainable society (Department of the Environment and Heritage, 2005; Orr, 1992; Sobel, 2012).

However, little research has considered children’s experiences of nature-based play within naturalised ECEC playgrounds. It is unclear whether the experiences in these playgrounds can compare to those of nature kindergartens. It has been suggested that educators place great emphasis on safety supervision in Australian ECEC playgrounds (Bundy et al., 2009; Sandseter, Little, & Wyver, 2012; Wyver et al., 2010), something that may impact upon the extent to which children can explore, as well as educators’ ability to collaborate with children in

⁠¹ I use the term Minority world to refer to ‘Westernised’ countries with ‘developed,’ commercialised economies.
these spaces. However, despite burgeoning interest in research around risky play and risk perception, and despite Australia’s quite unique natural risks, no research appears to have specifically focused on risk perception in the context of nature-based play.

This study aims to address these gaps. It focuses on two key areas: pre-school children's experience of nature within play-based learning and the confines of their ECEC playground; and pre-school children's perceptions, and the perceptions of their educators, towards the risks of nature-based play within Australian ECEC playgrounds. These interests are articulated in the following research aim:

**Research Aim:** to explore nature-based play in naturalised Australian ECEC playgrounds.

Two guiding research questions contribute to this aim:

**Research Questions**

1. How do pre-school children experience nature-based play within naturalised ECEC playgrounds?
2. How do pre-school children and their educators perceive the risks of nature-based play within the Australian ECEC context?

Having highlighted the timeliness of this study in terms of recent ECEC reforms in Australia, together with the evident gap in research, I now turn to the significance of addressing this gap.

### 1.2 Significance

This study has a number of important benefits for the wider community, both in terms of practice and research. This has been recognised by the Australian Government through their funding of an International Endeavour Award.
Firstly, this study is significant for children – specifically the many pre-school children who now attend ECEC settings. In light of government expectations that pre-school can offer multiple economic, social and educational benefits, this study critically examines the experience of childhood within ECEC playgrounds. It takes as a starting point romanticised notions of a ‘good childhood’ and the rural idyll. It then explores whether nature-based play within ECEC playgrounds offers children the kind of opportunities for creative and risky play that reflects their rights to participation and to the scaffolded learning provided through inter-generational relationships.

As indicated in the earlier section, the benefits of ECEC are particularly well documented for disadvantaged children, including those with Indigenous backgrounds who currently have the lowest engagement with traditional pre-school (Australian Institute of Family Studies, 2012; Biddle, 2007). Hence, the Australian government policy imperative in 2009 that all Indigenous children would participate in pre-school education within five years (DEEWR, 2009b). Nature-based play may offer an approach to ECEC that better reflects the cultural heritage of Indigenous children, potentially facilitating greater engagement with pre-school education.

In addition to generating knowledge that may benefit children, this study is also significant for educators. The research will contribute knowledge to help further a professional community of practice around nature-based play in Australia and support the efforts of educators to offer opportunities for nature-based play for the children at their setting. In particular, it will help to elucidate the dynamics between the naturalised playground environment and approaches to pedagogy, helping educators to maximise the potential of nature-based play in practice.

Turning to the research community, it is envisaged that the results of this study will add to the existing evidence base and growing scholarship concerning environmental education, nature kindergartens, play-based learning and risky play.
Within the field of environmental education, contemporary children’s own understandings and perceptions of nature have been almost entirely overlooked by reports of their ‘nature-deficit disorder’ (Louv, 2008) and ‘bubble-wrapping’ (Malone, 2007). Hence the need to redress the absence of pre-school children’s own accounts (Cutter-Mackenzie, 2013), in line with children’s rights to participation (UNICEF, 1989). This study captures children’s subjective notions of their nature-based play experiences at pre-school and offers a platform from which to consider nature-based play in Australia from the child's perspective.

The majority of research relating to nature-based play stems from studies surrounding nature kindergarten and Forest School models. This study adds to this field by considering whether and how nature-based play experiences can be realised within naturalised playgrounds. In particular, it plays close attention to pedagogy, engaging with contemporary theorisations of play-based learning. In this way, this study offers a small insight into how play-based learning is being realised in practice outdoors.

Research on nature-based play commonly overlaps with the burgeoning field of risky play. However, the assumption within the latter field is that the environment should be offered in such a way that children can choose whether, and to what degree, to engage in the ‘risky’ aspect of a play activity (Greenfield, 2003; Little & Wyver, 2008; Sandseter, 2012; Sandseter & Kennair, 2011). This assumption may not be guaranteed in Australia’s natural environment, particularly when applied to the possibility that venomous snakes and spiders may be present (Morrow, 2014). Therefore, this study explores the perceptions of pre-school children and their educators towards such environmental risks. These risks add an additional layer to notions of risky play, and these have not been addressed in literature to date.

Having presented the background to this study, the gap in the current knowledge base and the significance of addressing this, I now share my own personal orientation to the research.
1.3 Personal Orientation

For many years I have worked with children in outdoor settings. I managed an Environmental Education Centre in one of the most disadvantaged areas of England. I led a small business venture called Muddy Feet in conjunction with Scotland’s Active Schools Initiative to target rising childhood obesity. Most recently I worked for Forestry Commission Scotland, through which I trained as a Forest School leader and was involved in the launch of Outdoor Learning initiatives as part of the new Curriculum for Excellence (Learning and Teaching Scotland, 2010).

On a daily basis, therefore, I had the dual responsibility for keeping children safe whilst providing educational opportunities for adventures in nature. This resulted in regular involvement in conversations – with parents, teachers, environmental educators and fellow government employees - about risk and the changing nature of childhood. Further, I worked directly with children from the city who had never walked on an uneven surface; children who sought constant direction and provision of activities by an adult leader; a child left at school because an anxious parent would not give their consent for participation; groups of ten year olds who had never built a den (cubby house) before; and even those who envisaged building a fort from a computer game and lay dejected on the ground when they could not imagine how to build it from sticks and other materials in the forest. Yet, what I found most surprising, day after day, whether the children lived in rural or urban areas, was that the forest activities seemed to be so novel and exciting for them, and clearly quite different from most other activities in their daily lives.

Forest School and nature kindergartens tap into this enthusiasm, to offer play-based learning opportunities for children in the natural environment. The focus is not specifically on environmental education but rather upon children’s holistic experience. Professionally and personally I found it fascinating to view the forest as the venue for learning rather than solely the source. By this I mean rather than fastidiously digging up the same minibeast from under a rock, the focus shifted
to holistic learning opportunities and how the forest may offer opportunities to extend literacy, numeracy, or strengthen relationships, and build a sense of community and place. Through these experiences, my interests in notions of risk, learning, playing in nature, and changing modern childhood began to coalesce. I particularly enjoyed working with pre-school groups and this enjoyment motivated my interest to undertake research exploring my intersecting interests in the context of ECEC.

The decision to undertake research in Australia was two-fold. It was inspired firstly by a working-holiday year in Australia in 2005, where I enjoyed many experiences in the Australian bush, and developed a deep interest in Indigenous Australian culture, along with an awareness of the complexity of Indigenous disadvantage. Secondly, my interest was then embedded through a chance meeting at a conference with five Australian early childhood practitioners who had travelled to Scotland to learn about nature kindergarten models. I was surprised that they had travelled so far, as my impression of Australia was of an outdoor-based culture with plenty of opportunity for children to play in natural environments. During my working-holiday, for instance, I had worked in Queensland at an unfenced after-school care centre on the edge of the mangroves, where no one but me worried about the possibility of crocodiles.

I was intrigued by what might have changed in Australia, in terms of childhood, lifestyle and a cultural attitude to risk. I wondered about the potential links between nature kindergarten models and Indigenous culture and I became fascinated by risk perception - leading a humble minibeast hunt in Australia would be a whole different ball game for me! Glesne highlights that “part of the rite of passage [for new qualitative researchers is...] to do research in cultures different from their own. Immersion in a foreign culture was a test, of sorts, of one’s ability to learn new modes of behaviour and perception” (Glesne, 1999, p. 41). Indeed, acknowledgement of my own perceptions of the risks in the Australian environment caused me to reflect upon the concerns of parents and teachers in Scottish forests, an environment I had become so comfortable with.
What I find particularly intriguing about environmental risks is that the risk itself has generally remained static over time. For instance, some risks, such as volume of traffic, have increased over the past forty years. Meanwhile, the risks from a spider bite, or from a child climbing a tree, have remained largely unchanged over this time. It seemed to me then, that any changes to risk perception may have their genesis in sociocultural rather than environmental factors. This, I feel, is what makes nature-based play and its inherent hazards, such an illuminating lens through which to consider the contemporary experience of childhood in Australia.

Summary

This chapter has introduced this research project, which aims to investigate how pre-school children experience nature-based play in naturalised ECEC playgrounds in Australia. In this chapter, I offered justification for undertaking the research, at this point in time, during a critical turning point for ECEC in Australia. I outlined key areas that give this research broader significance for practice and research. Lastly, I shared my personal orientation to this study, which stems from practical experience of working in nature kindergartens in the UK. Turning to Chapter 2, I now seek to ground this study in the relevant literature to offer deeper insight into the underlying interests of childhood, ECEC, play, nature and risk.
Chapter 2: Literature Review

Introduction

The previous chapter identified the need for research examining nature-based play in the playgrounds of Australian pre-schools. In this chapter I review the key literature underpinning this research focus. The literature encompasses five fields of scholarship, which are presented as a conceptual model in the Venn diagram in Figure 2.1 below. The outer circle represents the changing social construction, and experience, of contemporary Australian childhood. Literature pertaining to this interest is reviewed first in Section 2.1. Contributing to changing childhood experiences are a kaleidoscope of interconnected factors ingrained within Minority world, commercialised societies (see Holt & McDowell, 1998; Layard & Dunn, 2009; Palmer, 2007; Richardson & Prior, 2005). This research is located at the nexus between four of these sites of change: early childhood education and care (ECEC) (Section 2.2), play (Section 2.3), nature (Section 2.4) and risk (Section 2.5).

![Figure 2.1 A conceptual model for this literature review.](image)
2.1 Childhood

In a study centred on children and their experiences, it is appropriate to begin with an examination of childhood. The inter-disciplinary field of Childhood Studies provides the theoretical context in which to do this. In particular, three key understandings are foregrounded: that childhood is socially constructed, that it occurs in the context of inter-generational relationships with adults, and that children are active social agents (Woodhead, 2009). I begin by considering the notion that childhood is socially constructed. I then explore this in light of the images or representations of contemporary Australian childhood generated by popular culture. Finally, I contrast this latter portrayal of childhood with the children’s rights movement, which has fostered a competent child paradigm. Collectively, these explorations provide an important backdrop to understanding the role and potential of nature-based play in ECEC settings.

Social Construction of Childhood

Childhood is primarily a biological stage, during which children grow and develop physically and physiologically, whilst concurrently learning how to live in their social world. However, beyond infancy, the extent of childhood comes into dispute when considered in relation to worldwide cultures (see Maynard & Thomas, 2009; Morrow, 2011). For instance, in this study I focus on pre-school children aged between three and five years of age in Australia. In a Minority world context like Australia, these children would seem firmly situated within the boundaries of childhood. However, children of this age in other parts of the world may experience daily life quite differently, for example, helping to care for younger siblings, or displaying a range of other personal or social responsibilities that may otherwise be associated with adulthood (James & James, 2008; Maynard & Thomas, 2009; Morrow, 2011).

Consequently, the notion of childhood may more accurately be described as socially constructed (see James & James, 2008; Jenks, 2005; Woodhead, 2009). This acknowledges that childhood varies greatly for individual children in different situations and in different parts of the world. However, despite this
variation, Qvortrup (1994) suggests that the term childhood, rather than childhoods remains most appropriate as it is a period that is eventually left behind and filled by the next generation. In this way, the social construction of childhood has changed throughout history, and continues to do so generationally (Clarke, 2004; Gittens, 2009; Jenks, 2005).

**Contemporary Childhood**

Australian social commentator, Michael Grose, suggests the current generation of children “live an adult version of what a childhood should be” (2005, p. 20). In this he captures the popular opinion that children have over-structured, closely regulated, consumption-riddled and largely sedentary lives – even as preschoolers (see Füredi, 2002; Harper, 2009; Karsten, 2005; Malone, 2007; Skenazy, 2009; Skouteris, Do, Rutherford, Cutter-Mackenzie, & Edwards, 2010a; Valentine & Mckendrick, 1997; Wyver et al., 2010). Darbyshire suggests that the situation is extensive enough to warrant the application of ‘indicator behaviours’ - akin to biological indicator factors – for the presence or absence of childhood in local communities (2007). For example, he suggests walking to school independently and building cubby houses (dens) as appropriate indicators.

These ideas are clearly based upon a dominant (Anglo-European, Minority world) ideal of childhood as “an idyllic, happy time when a child is temporally set apart from the adult world” (Valentine & Mckendrick, 1997, p. 220). This ideal derives from Rousseau’s pervasive, historical image of childhood as a time of purity and innocence (Clarke, 2004; Gittens, 2009). This frames children as vulnerable and in need of protection from the harsh reality of life and the pressures of modern society. Whilst there have always been children who threaten this image of innocence, for instance children who commit crime, these children tend to be dismissed as ‘abnormal,’ or to have missed out on childhood (Jackson & Scott, 1999).

In the context of nature-based play, the carefree image of childhood is likely compounded by the nostalgia of older generations who fondly recall roaming independently around the local neighbourhood and playing freely outdoors with
friends, neighbours and siblings (see Bowden et al., 2011; Darbyshire, 2007; Hillman, Adams, & Whitelegg, 1990; Jackson & Scott, 1999; Skår & Krogh, 2009; Thompson, Aspinall, & Montarzino, 2008; Tranter & Malone, 2008). These ideas underpin societal values of a ‘good’ childhood, and provide the impetus for concern about the ‘loss of childhood’ for contemporary children (Darbyshire, 2007; Harper, 2009; Karsten, 2005; Lupton, 1999; Tranter & Malone, 2008; Valentine & McKendrick, 1997). This concern is then reinforced by reports of the childhood obesity epidemic and rising diagnoses of anxiety and mental health problems in children (AIFS, 2012; Layard & Dunn, 2009; Richardson & Prior, 2005; Sawyer et al., 2001; Skouteris, McCabe, Swinburn, & Hill, 2010b; Skouteris et al., 2011).

The conceptualisation of children as innocent, and therefore vulnerable, positions children as essentially passive and powerless in relation to these issues (Holland, Renold, Ross, & Hillman, 2010; James & James, 2008; Jenks, 2005; Woodhead, 2009). Whilst popular media can sometimes purport consternation towards children for poor behaviour or for lacking in resilience, physical capabilities or perseverance, blame is largely apportioned to their parents (Auerbach, 2012; Darbyshire, 2007; Füredi, 2002; Grose, 2005; Ha et al., 2012; Mackay, 2007; Malone, 2007). Many popular writers claim that generation X (and latterly Y), ‘helicopter-parent’ in an over-indulgent, anxious and paranoid manner (Füredi, 2002; Grose, 2005; Jenkins, 2006; Lee, Macvarish, & Bristow, 2010; Mackay, 2007; Malone, 2007; Mamen, 2006; Skenazy, 2009).

It has been suggested this shift in the experience and expectations of parenthood is indistinguishable from the evolution of Anglicised commercial societies towards excessive individualism (Füredi, 2002; Layard & Dunn, 2009). Australia is recorded as one of the most individualistic cultures in the world scoring 90 on Hofstede’s dimension of individualism, compared with 46 for Japan, 60-70 for European nations such as Spain, Finland and Germany, and 76 for New Zealand (Hofstede, n.d.; Hofstede, Hofstede, & Minkov, 2010). This individualism may be seen to violate the old adage, ‘it takes a village to raise a child,’ resulting in children being more tightly supervised, less visible in their community and
leaving other community members uncomfortable to interact with children (Darbyshire, 2007; Derbyshire, 2007; Gill, 2007; Valentine & McKendrick, 1997).

Individualism may also account for why the same adults who malign the loss of childhood, can be quick to complain about local children who are afforded freedom, such as playing outdoors unsupervised. In a contradiction of the dominant childhood ideal, it is indicated that the ‘indoor child’ is now deemed ‘good,’ whilst the ‘outdoor child’ is demonised as wild, to be treated with suspicion, and a likely source of anti-social behaviour (Darbyshire, 2007; Jenkins, 2006; Malone, 2007; Valentine & McKendrick, 1997). It is unclear whether the latter would apply to pre-school children directly, although they may provoke panic, with passing adults assuming they have wandered off or are at risk from poor parenting (Gill, 2007; Jenkins, 2006; Skenazy, 2009; Valentine & McKendrick, 1997).

These characterisations of children as good or bad are not new. Throughout history, children have been variously framed across a spectrum from wild savages in need of taming, to Rousseau’s previously mentioned romantic notions of purity and innocence (see Clarke, 2004; Gittens, 2009; Jenks, 2005). Nowadays perhaps the duality seems more extreme, creating a paradoxical contemporary image of cotton-wool kids capable of social menace. However, these stereotypes are constructed by adults, outside of childhood, with little acknowledgement that “social life for children often appears differently from how it Looks from an adult perspective” (Prout, 2002, p. 68). Whilst in many respects the construction of childhood does rely upon its differentiation from adulthood (Jackson & Scott, 1999; Woodhead, 2009), noticeably absent from the popularised conceptualisation of childhood is the prevailing discourse surrounding children’s agency.

**Competent Child Paradigm**

Childhood Studies recognises children as social agents, who are actively involved in co-constructing the social worlds in which they live (Freeman, 1998; Morrow, 2011; Smith, 2007; Woodhead, 2009). Children are also understood as making
meaning of these social worlds and as such to have insight and views to contribute about their lives (Lowe, 2012; Mayall, 2000, 2002; Powell & Smith, 2009; Smith, Taylor, & Gollop, 2000; Smith, 2007). Therefore, in addition to advocating for children's rights relating to protection and provision, the United Nations Convention on the Rights of the Child (UNCRC) (UNICEF, 1989) advocates for children's rights to participate in matters affecting their lives (Morrow, 2011). These rights are extended to children in the early childhood years, with General Comment No. 7 (UNCRC Committee, 2005) stating “children, including the very youngest children, be respected as persons in their own right” (p.3) and recognising “that early childhood is a critical period for the realization of these rights” (p.1).

Providing opportunities for children to participate in this way, whilst not without debate, has resulted in the development of the competent child paradigm (Beazley, Bessell, Ennew, & Waterson, 2009; Clark, 2005b; Graham & Fitzgerald, 2010; Morrow & Richards, 1996). Acknowledging the different social and cultural experiences of childhood, this paradigm challenges assumptions that children's capabilities can be solely related to various ages and stages (Fleer, 2005; James & James, 2008; Smith, 2013). This requires a shift in mindset to view children not by their current inabilities but by their capacity for competency and capability (Edwards, 2003, 2005c, 2006; Fleer & Robbins, 2007; Smith, 2007; Woodhead, 2009). Straddling tensions between children's vulnerability and capabilities, this relies upon adults willing to support, scaffold and attune to children effectively to support their participation (Bae, 2010; Clark, 2005a; Theobald, Danby, & Ailwood, 2011).

These ideas are particularly evident in contemporary early childhood education and care (ECEC), largely inspired by the influential work of Malaguzzi at Reggio Emilia (Edwards, Gandini, & Forman, 1993/1998). His ideas around shared dialogues, relationships and the competent child have encouraged educators to facilitate children’s participation and encourage their sense of agency by co-constructing learning (Bae, 2010; Fenech, Sumsion, & Shepherd, 2010; Maynard & Thomas, 2009; Theobald et al., 2011; Waller & Swann, 2005). This repositions
the educator from an instructor to a co-constructor of knowledge and raises the status of children (Bae, 2010; Fleer & Raban, 2006; Ortlipp et al., 2011; Pramling Samuelsson & Johansson, 2009). However, Avgitidou and colleagues (2013) have shown that amongst pre-service educators, dominant age-related views of children's capabilities pervade. Similarly, Edwards' work (2005c, 2006, 2007a, 2007b) has shown that such age-dominated understandings of development persist in experienced educators and are very difficult to change, limiting the extent to which children can participate on the basis of their agency. Yet, notions of the competent child and children's participation have had a strong influence in the development of recent Australian ECEC policy (Theobald et al., 2011). Therefore, these tensions are explored further in the next section of the literature review, which focuses specifically on ECEC in Australia.

**Section Summary**

This section has explored the social construction of childhood and summarised the contrasting views embedded in popular and academic discourses surrounding children today. The media-popularised view of contemporary childhood reflects one of deficit, encapsulated in the label the ‘bubble-wrapped generation.’ On the other hand, the children’s rights movement has generated a competent-child paradigm, which is particularly influential in exemplary ECEC. Both of these seemingly contrasting viewpoints have strong relevance for this study. Indeed, it is at the junction between the two that the opportunity for this study arises. Therefore, ECEC is the focus of the next section, which will explore the changes taking place in Australian ECEC and their influence upon the social construction of childhood.

### 2.2 Early Childhood Education and Care

In 2008, UNICEF’s Innocenti Research Centre published an international report with the opening statement:
A great change is coming over childhood in the world’s richest countries. Today’s rising generation is the first in which a majority are spending a large part of early childhood in some form of out-of-home child care (Adamson, 2008, p. 1).

Whilst this is largely related to changes in adulthood, particularly women’s increased participation in the workplace (Australian Bureau of Statistics, 2010; Brennan, 2007a), momentum has also been driven by the reported benefits of ECEC education, particularly in the years immediately prior to school (Currie & Thomas, 1995; Edwards et al., 2008; Elliott, 2006; Garces et al., 2000; Heckman & Masterov, 2007; Linke & Fleer, 2002; Maynard & Thomas, 2009; Sylva et al., 2004). Therefore, government policies relating to ECEC teaching and learning, regulation and funding, and parental leave, have an increasingly direct impact upon young children’s experience of childhood (Barnett & Ackerman, 2006; Bittman, 1999; Bruer, 1999). To understand this more fully, this section explores the current ECEC reforms in Australia, which make this study of nature-based play at ECEC so timely. In particular, this section focuses upon Australia’s seminal Early Years Learning Framework.

**Current Australian ECEC Reform**

In 2006, the Organisation for Economic Cooperation and Development (OECD) released the report, ‘Starting strong II: Early childhood education and care’ in which Australia was ranked poorly for ECEC public policy compared to other countries (OECD, 2006). Then again, in 2008, Australia was ranked 23rd out of 25 countries in ‘UNICEF’s Report card 8: The child care transition’ (Adamson, 2008). This was by virtue of having met only two out of the selected ten international benchmarks – “a set of minimum standards for protecting the rights of children in their most vulnerable and formative years” (Adamson, 2008, p. 2). As a result, in addition to the widely reported benefits of ECEC (Sylva et al., 2004), these comparative reports seem to have provided the additional impetus for Australian ECEC reform.
The Council of Australian Governments (COAG) responded by producing, ‘Investing in the early years - A national development Strategy’ on 2nd July 2009 (COAG, 2009a). This was soon followed by Australia’s seminal national Early Years Learning Framework (EYLF), aimed at enriching “children’s learning from birth to five years” (DEEWR, 2009, p.5). Then, in January 2012, Australia’s first National Quality Standard (NQS) came into effect (ACECQA, 2013). This assesses the education and care of all ECEC settings including long day care, family day care and pre-schools, by rating seven quality areas.

Ensuring high quality delivery of early childhood education across the diversity of ECEC settings was considered particularly pertinent in the final, pre-school year to ensure all children would be “ready for school” (DEEWR, 2009b, p. 9). Therefore, a further reform was developed specifically for this age group. From 2013, there has been the commitment to ‘universal access,’ entitling all Australian children in their pre-school year to 15 hours per week of ECEC across 40 weeks of the year and delivered by a specialist degree-level trained educator (DEEWR, 2009b). The longevity of this initiative is a little uncertain following a change in government and upcoming budget announcements, however it currently remains centrally funded by the federal government until the end of 2014 (Department of Education, 2014). This pre-school education is delivered through a range of settings, including existing child care centres, to facilitate the needs of families juggling work and child care (DEEWR, 2009b). Alternatively, it may be accessed through pre-prep / pre-kindergarten classes based at primary schools.

Given the view that childhood is socially constructed, the reforms outlined above suggest a changing arena for the early childhood experience. The lives of older children have long-since had the collective influence of the institution of school (James & James, 2008; Maynard & Thomas, 2009). However, the current generation of young children are the first Australians for whom the majority will spend a large proportion of their waking hours in group, ECEC settings (Adamson, 2008). As such, ECEC institutions and educational policy-makers will have an increasing role in engineering young children’s childhood experiences.
In many respects, Australia’s first national Early Years Learning Framework (EYLF) architects this and it is therefore critical in considering children’s experiences of nature-based play at pre-school.

**The Early Years Learning Framework**

The Australian Early Years Learning Framework (EYLF) is entitled, ‘Belonging, being and becoming’ (DEEWR, 2009a). It is a seminal document, built upon current understandings of early childhood development, longitudinal research into ECEC practice, and contemporary discourses surrounding children’s rights and participation (Edwards et al., 2008; Sumson et al., 2009).

Figure 2.2 The elements of the Early Years Learning Framework (reproduced from DEEWR, 2010, p.5).

The framework is based around three key components as shown in Figure 2.2. It incorporates ‘Learning Outcomes’ for the children as well as ‘Principles and Practice’ for the educators. Therefore, the EYLF is specifically a framework for
learning, not a curriculum; there are no pre-defined areas of knowledge or skills that young children must learn. Instead, the learning content is created within the daily routines, play and relationships of the ECEC centre (DEEWR, 2009a). This points towards the strong sociocultural underpinnings of the document, whereby it is through social participation that children learn to navigate and negotiate their world (Rogoff, 2003).

This acknowledgement of the predominance of sociocultural theory in the elements of EYLF may appear contradictory to the social constructivist approach to childhood mentioned in the earlier section. These two perspectives are often situated on either side of a paradigmatic divide (Edwards, 2005b, 2005c; Moss, 2007) with Packer and Goicoechea highlighting that “there is something of a controversy taking place over how best to theorize human learning” (2000, p. 227). However, so far, social constructivism has referred to the conceptualisation of childhood, whilst sociocultural theory is being applied to the learning taking place within that childhood (and indeed beyond it). These tensions will be explored more fully in Chapter 3 (Theoretical Framework). Therefore, in considering the EYLF more closely, I will now briefly focus upon how the different elements of the framework come together to facilitate the vision of belonging, being and becoming.

**Belonging**

‘Belonging’ is at the root of the vision. The EYLF begins by prefacing that a strong sense of connection to family is considered “vital for children’s security and identity” (Connor, 2012, p. 11). It also reflects Bronfenbrenner’s sociological view that family are the strongest influence in children’s learning (1986) and draws upon his ecological systems theory to position human development as nested within interconnected systems (1979). Therefore, in defining belonging, the EYLF states, “Belonging acknowledges children’s interdependence with others and the basis of relationships in defining identities” (p.7). This echoes General Comment No. 7 from the UNCRC Committee in which it is noted that young children are “best understood as social actors whose survival, well-being and
development are dependent on and built around close relationships” (2005, p. 4).

With these ideas in mind, the educators’ guide to the EYLF advocates the importance of helping children to make meaningful connections between their family, community and ECEC centre (DEEWR, 2010). It states, “When children experience disjuncture between their worlds or even the collision of their worlds, their opportunities to grow in belonging, being and becoming are limited” (p.17). Therefore, as several of the EYLF Principles reiterate, building respectful and reciprocal partnerships with families is a core component of the framework.

Involving parents in their children’s education has long been understood as important to children’s education (see, for example, Adams et al, 2009; Elicker et al, 1997; Fleer, 2004; Hughes & MacNaughton, 2001; Kikas et al, 2011). Alasuutari (2010) draws attention to the fact that parental involvement has increasingly been referred to as partnership, representing a shift towards the collaborative approach required by these relationships. In Australia, the term family rather than parent partnership is favoured to include Indigenous Australian family values (Fleer, 2004) as well as those children for whom parents may not be their primary caregivers. Through these family partnerships the ECEC centre takes on a ‘collective personality,’ becoming a cultural and community focal point (Bloom, Sheerer, & Britz, 2005), and providing an important opportunity for children, their families and their educators to experience a sense of belonging in a physically fragmented contemporary society (DEEWR, 2009a; Sumson & Wong, 2011).

However, the literature acknowledges that building effective, collaborative relationships with families is a difficult process, fraught with emotion, power relations, and tension around conceptualisations of the child (Adams et al, 2009; Hedges & Gibbs, 2005; Hedges & Lee, 2010; Hughes & MacNaughton, 2001; Knopf & Swick, 2007; Souto-Manning & Swick, 2006). These partnerships require acceptance of being put in the vulnerable position of depending upon the other person’s expectations, goals and behaviours towards the child (Dirks &
Ferrin, 2001; Eicker, Noppe, Noppe, & Fortner-Wood, 1997; Kikas et al., 2011). With respect to this, studies investigating family partnerships consistently highlight that parents are the more trusting party than educators (Adams & Christenson, 1998; Dallat, 2009; Kikas et al, 2011; Rentzou, 2011). However, the notion of collaboration attempts to frame both parties as experts, keepers of complementary information that they can share with one another to build a fuller picture of the child (Alasuutari, 2010). Putting this into practice requires educators to have the ability to reflectively adapt, and to acknowledge that each family partnership will be uniquely constructed (Billman, Geddes, & Hedges, 2005; Hedges & Gibbs, 2005; McGrath, 2007; Souto-Manning & Swick, 2006; Sumsion, 1999; Woodrow, 2012). Therefore, as Adams et al (2009) note, “conceptualising a relational utopia is quite different from bringing one into existence” (p.6).

Of particular note to the focus of this study, is the added dimension that nature-based play can add to these relationships. Correlating with reports from British Forest Schools (Murray & O’Brien, 2005; O’Brien, 2009; O’Brien & Murray, 2006), a distinct shift in relationships was apparent in the first evaluative report to emerge from an Australian bush kindergarten:

Parents particularly described trusting relationships with the teachers, these appeared to be essential as there was heightened awareness of risk and essentially the boundaries of early childhood program provision were being challenged. Beyond diversity and trust, one teacher described a different intensity of relationships when one is removed from a typical early childhood setting. ‘It’s all about relationships, belonging and community ... the difference is there is no stuff, so the relationships are intensified, your role as a teacher is freed and you become stronger without clutter, it is really quite empowering’ (Elliott & Chancellor, 2012, p.14).

**Being and Becoming**

The ‘being’ component is perhaps the most radical aim of the EYLF. Its presence may be an example of the developers’ attempts to speak “in code” to practitioners, whilst avoiding political risk detectors (Sumsion et al., 2009, p. 8).
Although the Australian Government purports the importance of ensuring all pre-school children are “ready for school” (DEEWR, 2009b, p. 9), the inclusion of ‘being’ emphasises that ECEC is not just about preparation for school-readiness (DEEWR, 2009a; Sumison et al., 2009). In the rush and pressure of modern life, being provides a reminder that young children should be able to enjoy life in the here and now (DEEWR, 2009a; Füredi, 2002; Honore, 2008; Layard & Dunn, 2009; Sumison et al., 2009). Therefore, being honours childhood as a significant period in its own right, not just as preparation for future life.

Consistent with the competent child paradigm, being positions the Learning Outcomes as relevant to children in the present time (Theobald et al., 2011). Its presence enshrines children’s agency and acknowledges that an infant effectively communicates to a receptive adult, via body language, sound and action. Educators are encouraged to recognise this, but also to hold ‘high expectations’ that effective communication for the same child will change in the future (DEEWR, 2009a). Therefore, the Learning Outcomes are also long-term goals, which will evolve and fluctuate as the child grows and as such also link to the notion of ‘becoming’ (Connor, 2012; DEEWR, 2009a).

In considering these Learning Outcomes in relation to becoming, useful insights can be drawn from the Melbourne Declaration on Education Goals for Young Australians (Ministerial Council on Education Employment Training and Youth Affairs, 2008). This key strategy underpinned the development of the EYLF and commits to giving “every young Australian a real chance of becoming a successful learner, a confident and creative individual, and active and informed citizen” (p.18-19). In updating the previous Adelaide Declaration, the new commitments and goals acknowledge that society and contemporary life has changed and indeed continues to change at a rapid pace (Connor, 2012). Connor (2012) highlights that this rapidity of change means that knowledge and skills can quickly become obsolete. Therefore, the EYLF states, “Becoming reflects [the] process of rapid and significant change that occurs in the early years as young children learn and grow. It emphasises learning to participate fully and actively in society” (DWEER, 2009, p.7) Consequently, the Learning Outcomes
focus on building flexible learning behaviours including communication, problem solving, a strong sense of agency and conceptual understandings of inter-relatedness.

**Pedagogy**

Whilst the EYLF articulates a national perspective for children’s being and becoming, the thrust of the document focuses on creating a shared vision about how to approach children’s learning. As the educators’ guide to the EYLF states:

Without a guiding curriculum framework, educators’ individual images, beliefs and values about what children should be and what they should become influence both the planned and unplanned curriculum experiences and learning of children and can lead to wide differences in outcomes for children (DWEER, 2010, p.14).

The guide summarises that the shared pedagogical vision of the EYLF – as articulated in the Principles and Practices - are founded on the following key beliefs:

- Children are capable and competent
- Children actively construct their own learning
- Learning is dynamic, complex and holistic
- Children have agency - they have capacities and rights to initiate and lead learning and be active participants and decision makers in matters affecting them (DEEWR, 2010, p.14).

These can be seen to clearly align with contemporary notions from Childhood Studies, sociocultural theory and children’s rights. However, these beliefs represent quite a shift from traditional, developmentalist approaches to understanding children’s learning (Edwards, 2005c, 2007a, 2007b; Fleer, 2005; Smith, 1996).

Traditional constructivist-developmentalist theories stem largely from the work of Piaget. Hedges notes that, “Piagetian practice emphasised a stimulating child-
centred environment few would disagree with,” (2000, p. 16), however conceptualisations of children were influenced by notions akin to the ‘lone scientist’ (Edwards et al., 2008; Waller & Swann, 2005). Developmentalist ideas offered a framework for ‘normal development,’ with ideas about what was considered ‘normal’ based on linear age-related stages. These shaped assumptions about children’s competencies and capabilities (Edwards, 2003; Edwards, 2005a; Fleer, 2005; Fleer & Robbins, 2007; Smith, 2013) and educators were encouraged to engage in Developmentally Appropriate Practice, in which learning experiences were designed to target children’s current developmental abilities as defined by these stages (Edwards, 2005b; Fleer & Robbins, 2007). Therefore, unless intervention was required, ECEC educators were encouraged to focus upon setting up open-ended learning environments and to observe, supervise and facilitate children at play (Edwards et al., 2008).

More recent research has demonstrated the importance of adult involvement in enhancing the learning and developmental potential of children’s play (see Bodrova, 2008; Fleer & Raban, 2006; Fleer, 2009; Pramling Samuelsson & Asplund-Carlsson, 2008; Stephen, 2010; Siraj-Blatchford, 2008, 2009; Thomas et al, 2011; Yelland, 2011). Therefore, current theorising has become more closely aligned with Vygotsky’s sociocultural conceptualisation of learning and development (1978). From a sociocultural perspective, development is understood as occurring within the context of children’s participation in the relationships and routines of their community and represented by children’s increased mastery of their social world (Rogoff, 2003; Waller & Swann, 2005). This is a process children are understood as being actively involved in constructing (Rogoff, 2003; Smith, 2007; Vygotsky, 1978; Waller & Swann, 2005). Thus, contemporary thinking positions development “not [as] something that exists within the child, but rather [that] takes place as the child interacts with her/his cultural community” (Fleer, 2005, p.5). As Edwards (2005) notes, “what constitutes development is dependent upon the skills needed in [the] community...not necessarily the universal ones described by developmentalism” (p.137).
However, constructivist-developmental understandings of children and their learning are described as so culturally ingrained that the shift in theoretical thinking has not led to simultaneous changes to practice (Edwards, 2007a, 2007b; Fleer, 2005; Smith et al., 2000). Prior to the launch of the EYLF, research found that many educators misunderstood sociocultural theory as relating to multiculturalism (Edwards, 2006). Further, making the paradigmatic shift in thinking was found to be an extremely difficult process, requiring more than just exposing educators to the theory (Avgitidou et al., 2013; Edwards, 2007a, 2007b; Fleer, 2005; Fleer & Robbins, 2007). Therefore, there is concern that despite the influence of sociocultural theory in the creation of the EYLF, the tacit understanding of the theory amongst educators may inhibit effective adoption of the EYLF in practice (Stephen, 2010). Indeed, as Ortlipp et al (2011) found, “curriculum documents cannot make practitioners practice in particular ways” (p. 59).

The EYLF focuses largely on the planned or intentional aspects of the curriculum (DEEWR, 2009a, p. 9). It retains a play-based approach, but also emphasises “intentional teaching,” which is described as being “deliberate, purposeful and thoughtful” (p.15). Through intentional teaching educators are encouraged to plan to extend children’s thinking and learning, something that may occur through modelling, demonstrating, open questioning, speculating, explaining or engaging with children in problem solving. In recognition of children’s agency and their rights to participation, educators are encouraged to collaboratively engage with children to extend their learning - to co-construct play and learning with children.

A wide range of terms are used in the EYLF, and more broadly, to describe this process, including ‘scaffolding’ within what Vygotsky referred to as the zone of proximal development (1978), Rogoff’s ‘guided participation’ (2003), Smith’s ‘joint attention’ (1999) and the currently popular, ‘sustained shared thinking’ (Siraj-Blatchford, 2009; Sylva et al., 2004). Siraj-Blatchford and colleagues coined the term sustained shared thinking during the influential Effective Provision of Pre-school Evaluation (EPPE). They describe the educator and children as
partners working “(often playfully) together in an intellectual way to solve a problem, clarify a concept, evaluate activities, or extend a narrative” (2003, cited in Siraj-Blatchford, 2008). Krieg (2011) similarly places the educator into the role of mediator, mediating between the child’s interests and the wider societal thinking that has been done for them in the subject area. Therefore, co-construction proposes a dynamic relationship between educators, children and content (Cutter-Mackenzie & Edwards, 2006; Edwards & Cutter-Mackenzie, 2011).

Collaborative approaches attempt to reduce the binary between play and teaching, and to articulate a sociocultural approach in practice (Pramling Samuelsson & Asplund-Carlsson, 2008). Notably some of these interactions may be unplanned, but in others the educator may have intentional goals in mind for children but seek flexible and spontaneous opportunities to work towards these together. Therefore, as the EYLF guide for educators illuminates, educator involvement is not aimed towards filling an empty vessel, but rather “sparking a flame” (DWEER, 2010, p.15), and taking this analogy further, to work with children to kindle the fire. Moss (2007) suggests that this collaborative “meaning making” is important, offering a way to disrupt what he describes as the “dangerous consequence of increasing institutionalisation of childhood” (p.240).

However, Waite (2011) notes, “contributing to, without commandeering, play situations for learning is a delicate skill and may run counter to practitioner’s expectations and experience of control” (2011, p.75). Indeed, educators can find it difficult not to lead collaborative interactions (Maynard, Waters, & Clement, 2013). Siraj-Blatchford (2008) believes that sustained-shared thinking can be adult-initiated though, as long as the adult does not dominate the process too early and it remains experiential and play-oriented. This subtle balance is a little unclear in the EYLF through the linking of ‘teaching’ with intentional practice (DEEWR, 2009a). Therefore, whilst the thrust of the EYLF encourages collaboration and play-based learning, the balance between children’s agency and educator facilitation could be open to interpretation (Krieg, 2011).
This balance may be further impacted upon by the introduction of testing for early stage one in formal schooling, which has seen some ECEC centres feeling pressure to give children a head start (Bodrova, 2008; Radich, 2010). Additionally, families often exert pressure and can express dissatisfaction if they feel that their child is ‘just playing’ (Ortlipp et al., 2011; Radich, 2010). The EYLF consortium did not miss this risk towards the ‘schoolification’ of ECEC (Sumption et al., 2009). They recognised that the very existence of the EYLF increased the risk, as does the increased recognition that it helps the profession to attract (Ortlipp et al., 2011; Radich, 2010; Sumption et al., 2009). Therefore, the challenge of the EYLF is to attempt to establish a new professional identity for the ECEC educator that is neither entirely about ‘minding babies’ (Rockel, 2009), or being a school teacher (Dalli, 2008; Fenech et al., 2010; Rentzou & Sakellariou, 2011; Woodrow, 2008; Woodrow & Busch, 2008). This will require shifting conceptualisations of ECEC educators from being ‘experts’ in child development to being expert in ways to collaborate with children (MacNaughton, Hughes, & Smith, 2007).

Section Summary
This section has detailed the national reforms that have recently taken place in Australia towards realising the economic, social and educational benefits of ECEC. Of particular relevance to this study is the implementation of the first national Early Years Learning Framework, ‘Belonging, being and becoming.’ This document represents a shared, national vision for children’s learning and development, and advocates a collaborative, sociocultural approach honouring children’s participation and play. The following section explores the latter of these in more depth, since a close examination of play and play-based learning is integral to exploring nature-based play.

2.3 Play
Play is one of the most distinguishing features of childhood in the Minority world (Fromberg & Bergen, 1998; Maynard & Thomas, 2009; Sturgess, 2003), and is commonly described as ‘a necessary occupation for children’ (Bundy, 2001). Indeed, children’s ‘right to play’ is enshrined in Article 31 of the UN Convention on the Rights of the Child (Lester & Russell, 2010; UNICEF, 1989). It is also the main vehicle for learning within ECEC, as extending learning through play capitalises upon young children’s natural motivation (DEEWR, 2009a; Maynard & Thomas, 2009; Radich, 2010). As such, this section will begin by defining play and then consider how play is changing for contemporary children. Finally, it will link back to the section above to consider how the use of play is changing within ECEC.

**Defining Play**

Play is spontaneous and natural for most children, yet it is remarkably difficult to define. Consequently, although most adults can recognise play, its characterisation within literature is widely debated. This is largely due to the fact that play can take so many forms. In the English language, the word is used as a verb in relation to any form of game, including Scrabble, video games or tennis, activities that may not be particularly ‘playful,’ and that are also undertaken by adults.

A useful way by which scholars have attempted to define play is by describing the criteria for play or playful behaviour. Doris Fromberg suggests the following criteria: “Young children’s play is

- Symbolic, in that it represents reality with an ‘as if’ or ‘what if’ attitude;
- Meaningful, in that it connects or relates experiences;
- Active, in that children are doing things;
- Pleasurable, even when children are engaged seriously in activity;
- Voluntary and intrinsically motivated, whether the motive is curiosity, mastery, affiliation or something else;
- Rule-governed, whether implicitly or explicitly expressed; and
- Episodic, characterised by emerging and shifting goals that children develop spontaneously and flexibly” (1999, p. 28).
This criteria-led approach is not perfect, as it is unclear how many of the criteria need to be met for an activity to be classed as play (Maynard & Thomas, 2009). Nevertheless, these criteria provide useful guidance by which to consider play in the context of this study.

These seven criteria demonstrate that if certain conditions collude, a play episode could take place in a wide array of situations, as play refers to the way in which the activity is approached. Consequently, play can be conceptualised as a subjective attitude, an internal mental state, rather than merely an observable behaviour (Fromberg, 1999; Howard & McInnes, 2013; Sturgess, 2003). Indeed, children may describe the same activity as play or not-play depending on the situation (Howard & McInnes, 2013; Sturgess, 2003). Therefore, it has been suggested that children develop cues from which they delineate play from non-play.

Key attributes of child-defined play in indoor situations are reduced adult involvement, location of the activity (such as floor rather than table top) and choice or ownership over the activity (Howard & McInnes, 2013; Sturgess, 2003). Outdoor environments likely conform less to children’s notions of ‘work’ (Melhuus, 2012; Waller, 2006), although for many children, adult involvement is the most significant influence over whether they view an activity as play or non-play (Howard & McInnes, 2013; Lowe, 2012; McInnes, Howard, Miles, & Crowley, 2011). It is thought that this cue is particularly developed by the culture of schools, where play and learning become strongly differentiated (Sandberg & Ärlemalm-Hagsér, 2011). However, adult absence is also considered a key play cue for many pre-school children as well (Lowe, 2012; McInnes et al, 2011; Pramling Samuelsson & Asplund-Carlsson, 2008).

The subjective nature of play positions it as an important factor in influencing children’s wellbeing (Howard & McInnes, 2013; Maynard & Thomas, 2009; Sturgess, 2003). The EYLF recognises this stating, “Children’s immersion in their play illustrates how play enables them to simply enjoy being” (p.15). Play has
long been understood as vital to young children's holistic learning and development, being thought to provide an emotional outlet, to promote flexible, adaptive thinking, creativity and problem solving, and to build confidence, esteem, and resilience (Malone & Tranter, 2003; Maynard & Thomas, 2009; Sandberg & Årlemalm-Hagsér, 2011). It is also an important means by which children socialise, communicating and emotionally trusting others as they jointly construct their play (Fromberg, 1999; Sandberg & Årlemalm-Hagsér, 2011). As a result, the common belief that through play children explore and learn about themselves and the world around them has come to be accepted across many academic and professional disciplines (Bruce, 2004; Singer & Singer, 2005). Although for children the purpose is usually to have fun – children play “for the sake of playing” (Bae, 2010, p. 215).

The understanding that the activity or process of playing is the end goal of play, resonates with Csikszentmihalyi's notion of flow (1997). When in the state of flow, people describe being wholly absorbed in an activity, with little concern for the wider world and often losing a sense of time. In addition, in line with the criteria for play, flow is similarly subjective and intrinsically motivated, requiring shifting but achievable goals to maintain a subjective state of flow. This connection between play and flow reinforces the notion that play links to wellbeing, as the flow state is believed to be a powerful source of happiness.

**Contemporary Children's Play**

We have a great public park in our neighbourhood [...]. It is a vast space that provides plenty of opportunities for messing about with a ball. It has bushes for playing hide-and-seek or for building bases and everything that an energetic kid needs to have a good time. The only thing missing from our recreation grounds are children (Füredi, 2002, p. 8).

As Furedi draws attention to, there is concern surrounding the changing nature of play in modern childhood (Ball, Gill, & Spiegal, 2008; Bodrova, 2008; Burdette & Whitaker, 2005; Clements, 2004; Darbyshire, 2007; Füredi, 2002; Gill, 2007; Gill, 2011b; Little, Wyver, & Gibson, 2011; Louv, 2006, 2008; Skenazy, 2009;
Wyver et al., 2010). For previous generations of Australian children, play, particularly active, outdoor play, was taken for granted as integral part of the fabric of childhood (Bowden et al., 2011; Clements, 2004; Füredi, 2002; Grose, 2005; Little & Wyver, 2008; Mackay, 2007; Wyver et al., 2010). It was expected and accepted that children in the community would be outdoors playing within mixed age groups around their local neighbourhood, with the play activities evolving under their own direction (Gill, 2011a; Karsten, 2005; Little & Wyver, 2008; Malone, 2007; Skår & Krogh, 2009; Tranter & Malone, 2008; Wyver et al., 2010). Such play would seem to fit neatly with Fromberg’s (1999) seven criteria for play.

In March 2011, Planet Ark, the charity linked to National Tree Day, commissioned an independent study to investigate childhood interaction with nature and how this was changing for Australian children. In an almost complete reversal of previous generations, it found that Australian children now play indoors more than outdoors (Bowden et al., 2011). Aligning with other Australian reports (ARACY, 2010; Australian Government, 2007; Bittman, 2011; Garvis, 2011) the Planet Ark report indicated that children are increasingly spending their free time in sedentary pursuits such as playing computer games or watching television.

In the modern English language, the verb ‘to play’ is used in relation to ‘playing’ computer games. This perhaps describes the interactive nature of these games, compared to the passivity of ‘watching’ television. Indeed, computer games may be seen to mimic many of Fromberg’s seven criteria for play, by providing a sense of symbolic and active challenge, which is rule governed, and designed in a way to scaffold motivation and problem solving by shifting goals (Brown & Cairns, 2004; Emri & Mayra, 2007; Jennett et al, 2008). Most importantly, children subjectively describe the fun and sociability they feel playing them (Brown & Cairns, 2004). However, families tend to heavily regulate screen-based activities for pre-school children, and hence, on average, they spend less time playing computer games than older children (Australian Government & ACMA, 2007).
Nevertheless, Australian children aged 2-5 years typically spend 90 minutes per day watching television programs (Cox et al., 2012). Further, it is suggested that over 90% of Australia’s three to four year olds spend on average two hours and 35 minutes per day watching the television screen when DVD watching is included in the tally (Australian Government & ACMA, 2007, p. 7). This is more than the 15 hours of pre-school education allocated for their learning each week. It also far exceeds the government’s maximum recommendation of one hour per day, as set out in the ‘Get up and grow report’ for early childhood (Department of Health and Aging, 2009).

Some families report that popular television programs, such as the ‘Wiggles,’ result in young children dancing and jumping along with the characters in the show (Garvis & Pendergast, 2011). However, it has generally been found that increased hours of television viewing correlates directly with increased body mass index in pre-school children (ARACY, 2010). This aligns with reports of a childhood obesity epidemic, in which 20% of Australian pre-school children are currently identified as overweight or obese (Riethmuller, McKeen, Okely, Bell, & Sanigorski, 2009; Skouteris et al., 2010b). Additionally, given the subjective state of play, there are concerns that the passive, sedentary nature of contemporary children’s play may be associated with rising emotional and behavioural problems in childhood (Burdette & Whitaker, 2005; Siviy & Panksepp, 2011).

Despite these concerns, given the importance of children’s rights and participation, it is worth considering whether contemporary children themselves prefer screen-based play activities. Public and parental opinion would suggest that they do (Bowden et al., 2011; Clements, 2004; Louv, 2008). On the other hand, research has illuminated that children are often stating preferences within the constraints (implicit or explicit) of parental allowances (Jenkins, 2006; Malone, 2007; Tandy, 1999) or as a result of habits established at a young age (Garvis & Pendergast, 2011). Indeed, studies from Europe and Australia have shown that many children, when given the opportunity to relate ‘a good day,’ will describe a scenario involving playing freely in the outdoors with friends and family (Ipsos MORI & Nairn, 2011; Tandy, 1999). Similarly, in a study with
Australian pre-school children, the children all drew places and objects closely linked to nature when asked to create a picture of their favourite place (Fletcher, 2006).

Overall, although it has been suggested that the childhood memories of previous generations are romantically biased, there do appear to be significant changes to children's play in comparison to previous generations (Burdette & Whitaker, 2005; Clements, 2004; Darbyshire, 2007; Fails et al., 2005; Fisher, Hirsh-Pasek, Golinkoff, & Gryfe, 2008; Skår & Krogh, 2009). These impact upon both the geography of childhood, which can be seen to have moved from outdoors to indoors, and the nature of play, with a shift from active and creative, towards sedentary and passive (Bowden et al., 2011; Karsten, 2005; Skår & Krogh, 2009; Valentine & McKendrick, 1997).

**Learning through Play**

Within the landscape of modern childhood, ECEC settings are readily portrayed to be rich contexts for play (Bodrova, 2008). Indeed, a focus on play usually distinguishes ECEC settings from school (Fleer, 2011), with it regularly stated that young children 'learn through play'. However, how play actually facilitates learning has long been given considerable scrutiny by scholars.

Vygotsky (1978) particularly advocated for the importance of symbolic play (make-believe or sociodramatic play) in contributing to children's learning development. For many, this embodies most fully their notions of play, and aligns particularly with conceptualisations of innocence and freedom in childhood. However, Vygotsky postulated that in make-believe play children define and adhere to their own boundaries for the play scenario and, through abiding by these parameters, learn to self-regulate their own behaviours and emotions (Bodrova, 2008). Indeed, Vygotsky believed that in their socio-dramatic play, children firstly display maturity and control beyond those they can yet demonstrate in real life (1978). In addition, through using imaginary props for their play scenarios (such as a chair as a car), he proposed that children developed the ability to abstractly represent ideas in their mind, an important
basis for future literacy and numeracy. Therefore, as Bodrova (2008) summarises:

Vygotsky maintained that for children of preschool and kindergarten age their mastery of academic skills is not as good a predictor of their later scholastic abilities as the quality of their play. In a four-year-old's play one can observe higher levels of such abilities as attention, symbolizing and problem solving than in other situations – one can actually watch the child of tomorrow. (p. 360)

Bruce has similarly advocated for the learning potential within ‘free-flow play,’ which refers to children’s self-directed and deep involvement in play and is also largely linked to pretend or imaginative play episodes (1991). She proposes 12 features of free-flow play including that it derives from first-hand experiences, is based upon a personal play agenda and involves the making-up of rules and props. She suggests that if at least seven of the features are present, learning is likely to occur (Bruce, 2004).

Make-believe play is believed to peak in the pre-school years (Bodrova, 2008; Fisher et al., 2008; Fromberg, 1999), although the predominance may be misleading due to the later influence of, and time spent in, formal schooling. Having said that, Piaget believed that this time represented a move from the pre-operational to the concrete operational stage (as described in Fromberg, 1999), and similarly Vygotsky proposed that beyond pre-school there is an increasing internalisation of the imagination (1978). As such, it may be considered particularly important for children to engage in imaginary play at pre-school. This importance is pertinent to this study, as natural environments are often particularly conducive to imaginary play. This may be because natural materials are polymorphic, for instance a stick can represent a myriad of functions in play (Melhuus, 2012), and natural environments simultaneously offer polymorphic spaces (Waller, 2006, 2007).
Consistent with the focus on collaborative pedagogy highlighted in the previous section, Bodrova (2008) has maintained that it is important for educators to engage with children in their imaginative play at ECEC. She has suggested that ECEC educators need to purposively scaffold increasingly mature play skills such as using polymorphic props, taking on and sustaining attributes consistent with a specific character, and adhering to the implicit rules of the established play scenario. With respect to these, Bodrova (2008) positions the educator as replacing the role of older, more experienced playmates absent from the social groupings of contemporary children at pre-school.

Similarly, Waller (2006, 2007) advocates for the importance of recognising children’s own play narratives, and highlights the importance of listening to and honouring these, to offer ‘spaces’ for children to enact their own agency in their play. He suggests that educators can become involved in co-constructing these narratives, if the children assent, but by following the children, rather than having a prior specific learning direction in mind. Indeed, there are concerns that increasingly placing adult expectations onto play affects children's freedom of expression (Bae, 2010). Siraj-Blatchford (2009) notes that some educators have expressed concerns about balancing the “‘rights’ of a child to ‘childhood’” and extending their learning through engaging in sustained-shared thinking (p.86).

Fleer and Peers (2012) have recently also begun to draw upon Vygotsky’s ideas around imagination and creativity to advocate for children’s imaginary play in the Australian pre-school context. They argue that following the binary between play and work, a new binary between cognition and imagination was developing in early childhood play-based learning theories. Arguably Fleer herself, along with other Australian scholars, contributed to this ‘cognitivization’ in their earlier papers (Edwards & Cutter-Mackenzie, 2011, 2013; Fleer, 2009a, 2009b, 2011; Fleer & Raban, 2006; Yelland, 2011). However, in their 2012 paper, Fleer and Peers describe their shift in emphasis from cognition to creativity, and cite the importance of ‘collective imagination’ in the pre-school context for social and cultural development. They advocate for “sustained shared imaginary conversations” between educators and children (p.423) and observed that
educators engaged in these in two key ways. Firstly, through inquiring and clarifying with the children about their meaning-construction in their imaginary play scenarios, something they described as being an “interested observer of children’s play” (p.423). Secondly, through joining in with the children in imaginary conversation, they supported “the children to conceptually work with the imagined (or abstract) ideas which represent reality” (p.426), bridging relations between individual and collective imagining.

Ghafouri (2012) explored children’s engagement in such experiences in the context of nature and a sense of flow. A spontaneous encounter with a dead squirrel just outside the playground stimulated an on-going child-led discovery project in which the children constructed collective narratives of life and death. These flowed between imaginary and conceptual understanding with the children creating a bedcover for the squirrel on the first visit in case it was sleeping. The educator allowed the children to revisit the squirrel each day to continue their investigations, and supported their developing ideas, both imaginary and conceptual. Over time the children drew on their collective knowledge to come to understand notions of death. By comparison, the same children were relatively uninterested in a field trip to a local farm, in which information was transferred to them by the farmer and they had to line up to pat the animals. Ghafouri summarised, “when the learner experiences flow…the emergent learning experiences will be beyond what a planned and scripted lesson can offer” (p.15).

Thus, contemporary theorisations of play and learning are continuing to explore the different ways learning is and can be facilitated through play. In the British-based EPPE, it was found that settings that took a playful rather than didactic approach, but with a dual focus on social and cognitive outcomes, offered the highest quality and effective pre-school programs (Sylva et al., 2004). This aligns with the medley of teaching practices advocated in the EYLF and the balance between honouring children's being and developing their becoming.

Section Summary
The changes to children's play are one of most demonstrable ways in which contemporary society is impacting upon childhood. Rather than freely roaming and exploring neighbourhoods like many in previous generations, children are more likely to be found attending supervised extra-curricular activities or inside the home engaged in sedentary pursuits. Furthermore, the shift towards greater educator involvement in children's learning could be seen to reiterate the paradox that by enshrining the importance of the early years, children were at risk of further 'losing' their childhood. However, cutting edge theorisations of play are restructuring the role of the ECEC educator to weave education and play together in ways that promote learning whilst continuing to honour play. This consideration of pedagogy and the role of the educator will continue to be a feature of the next section, which focuses on nature and nature-based play.

2.4 Nature

The prior section identified the way in which play is changing for contemporary Australian children. Of particular relevance it indicated a shift from outdoor to indoor play (Bowden et al., 2011). In line with this, children's opportunities to play spontaneously in nature in an experiential, multi-sensory manner are also reducing (Skår & Krogh, 2009). Consequently, popular author and journalist, Richard Louv (2008), suggests that the current generation are suffering from 'nature-deficit disorder.' He proposes that a regular dose of ‘vitamin N’ (nature) is required (Louv, 2011), and that this would be beneficial in relation to obesity, mental health and behavioural problems. Indeed, nature-based play appears to offer the opportunity to address many of the concerns surrounding contemporary childhood and as such worldwide interest has been gathering momentum (Fargher, 2012; Knight, 2009; O’Brien & Murray, 2007; Sandseter, 2012). Therefore, in this section I consider how children connect to nature, and how opportunities for this might be changing. I then consider contemporary environmental education and the current interest in bush kindergartens, before focusing specifically upon nature-based play and outdoor pedagogy in pre-school playgrounds.
**Childhood and Nature**

There is a large body of work surrounding nature connectedness (Schultz, 2002; Mayer & Frantz, 2004) or relatedness (Nisbet et al, 2009). This is conceptualised as the extent to which people feel a part of, or separate from, nature (Schultz, 2002). These ideas are largely drawn from the vision of influential ecologist, Leopold (1949), and rely upon notions of nature and the self. The ideas also resonate with E.O Wilson's biophilia hypothesis (1984), in which he suggests that humans have a natural, inherited affiliation with life and lifelike processes. This innate connection may account for the finding that nature relatedness has a unique and distinct connection to happiness (Nisbet & Zelenski, 2011; Zelenski & Nisbet, 2014). This builds upon research that shows that time spent in nature is restorative and aids mental health (Berman, Jonides, & Kaplan, 2008; Bowler, Buyung-Ali, Knight, & Pullin, 2010; Kaplan & Kaplan, 1989; Mårtensson et al., 2009; Nisbet & Zelenski, 2011; Ulrich, 1984). Even just a view of nature has been shown to improve the recovery times of patients in hospital (Ulrich, 1984).

It has been suggested that biophilia may be most obvious in childhood (Chawla, 2012; Kahn, 1997; Louv, 2006; Orr, 1992), or most optimally nurtured during this time (Asah et al, 2012; Ernst & Theimer, 2011; Gill, 2011; Liefländer et al, 2012; Moss, 2012; Thompson et al, 2008; Wells & Lekies, 2006). In particular, Liefländer et al (2012) suggest that strengthening connectedness to nature is most sustainable before the age of 11 years. However, many children do not appear to exhibit natural biophilia, instead showing a fear of nature, particularly dark woodlands and snakes or spiders (Kahn Jr., 1997). Kahn suggests that this actually provides further evidence of biophilia, implicating such fears to a natural legacy of our human ancestry (1997). In his nine typologies of values towards nature, Kellert similarly suggests that children naturally pass through varying stages in their relationship with nature, including a period of dominance over nature around the pre-school years (1996).

Taking a more sociocultural approach, Hyun (2005) suggests that how adults respond to young children's curiosity for everyday nature, such as a spider in the
home or birds in the park, is an important influence for whether biophilia develops. It is suggested that through increased individualism, modern life promotes greater focus upon the self and thus facilitates dissociation from nature and its processes (Frantz, Mayer, Norton, & Rock, 2005; Hales, 2006; Schultz, 2002; Schultz, Shriver, Tabanico, & Khazian, 2004). When adults model this to children, and particularly when the children have little experience of nature themselves, fear and anxiety towards nature may reach irrational levels. This may fuel true ‘biophobia,’ described by Orr as ranging from “discomfort in ‘natural’ places to active scorn for whatever is not man-made, managed or air-conditioned” (1994, p. 186). This appeared evident in a recent study of a British Forest School, in which a child participant described:

The first week at Forest School I thought I saw a big monster. It was a just a little tiny bee! I was scared of bees and flies and wasps because they do make a loud buzzing noise when they go near your ear...And I learned about worms, and now I'm not scared of worms anymore because I was digging and I found lots and lots of worms (Ridgers et al., 2012, p. 62)

This child’s reflection suggests that the extended experience with nature at Forest School helped to alleviate their fears (2005). Hyun proposes that such experiences are particularly important in childhood because “young children’s intellectual perception of nature seems to be different from adults” (p.205). Hyun observed that young children explore nature in a more sensory manner, touching, smelling, playing, drawing and pretending. In many respects, this is the way babies and young children explore their world and therefore it may be that nature just provides a particularly sensory rich environment. However, this does compare to adults, who Hyun observed in the same context as the children, and who did not actively participating with nature in any way. This is reiterated in a study by Sebba (1991) in which it was described that, “children experience the natural environment in a deep and direct manner, not as a background for events, but, rather, as a factor and stimulator” (p.395).
This is evident in Vadala et al's (2007) characterization of children's play in natural environments. Drawing on the memories of young adults, they typify two key ways in which children engage in nature-based play. The first is described as 'child-nature play,' in which "either solitary or with others, the focus [is] on observing, catching, exploring, or creating with natural objects" (p.7). The second type of play is referred to as 'child-child play in nature,' in which children use sticks, stones or other natural materials as "barriers, weapons or tools" for socio-imaginative play such as war games (p.7). In this way, children manipulate, build and change the environment to suit their games. Therefore, Gurevitz (2000) summarises that adults conceive of nature as a physical presence, whereas children tend to experience nature as a potentiality.

The notion of ‘potentiality’ resonates with the concept of affordance, as originally proposed by Gibson (1979, cited in Kyttä, 2002). However, in contemporary work on affordance Kyttä (2002, 2004) has shown that in Minority worlds children operate within fields of ‘constrained action’ and that socio-cultural contexts or factors constrain opportunities for children to engage with potential affordances for play. Therefore, increasingly, children's experiences with nature have moved from freely-accessed play in natural settings to organised, adult directed nature activities (Skår & Krogh, 2009; Sobel, 2012). Kellert describes the difference as being between direct experiences in nature - “spontaneous play or activity in a backyard, in a nearby forest, [or] meadow” - compared to ‘indirect’ experiences of nature, described as still involving physical contact but in “more restricted, programmed and managed contexts...typically the result of regulated and contrived human activity” (2002, p.119). There is some concern that this is causing the ‘museumification’ of nature (Gobster, 2007), a ‘look, but don’t touch’ approach (Sobel, 2012) that is mismatched to the way in which they experience nature.

**Environmental Education**

This mismatch has led some scholars to paradoxically suggest that some environmental educational activities may actually act to prevent children
developing their own connection with nature (Hart, 2003; Payne, 1997; Payne, 1998; Sobel, 2012). Environmental education has traditionally drawn upon John Dewey’s foundational ideas around experiential education (Dewey, 1938/1998) and offered ecological learning about nature in a practical, ‘hands-on’ manner (Cutter-Mackenzie, 2010; Edwards & Cutter-Mackenzie, 2011; Hart, 2003). More recently though, environmental education has been in a state of evolution and there has been a shift towards the concept of ‘Education for Sustainability’ (EfS).

EfS recognises the unsustainability of a globalised, commercial society upon the planet’s resources and the impact of humans upon the earth’s natural systems. To a certain extent, this therefore does place focus on the vulnerability of the natural world, and draws attention to the need to protect nature. Despite the shift towards a greater focus on EfS, the pedagogical phrase ‘education in, for, and about the environment’ is commonly used to describe the breadth of environmental education it encompasses (see Davis & Elliott, 2004; Payne, 1998). This phrase suggests that a continued focus on experiential educational experiences remains. However, a number of scholars argue for greater recognition of embodiment in these experiences (see Le Grange, 2004; Payne, 1997; Payne, 1998). Embodiment places emphasis on the “situated, fleshy, creative self” (O’Loughlin, 2006, p. 22), and thus advocates for learners’ human bodies “interacting with non-human nature so as to engender in them an appreciation of their oneness with it” (Le Grange, 2004, p. 391). Payne argues that greater account needs to be taken of children’s lived, embodied experiences in the environment as a basis for EfS, rather than abstract notions of saving a wider, pristine environment (1997; 1998).

This emphasis on embodiment resonates with an eco-centric or biocentric perspective of the environment, which advocates for the need to reconnect to nature, to enhance our affinity with nature, and to value the environment not solely as a sustainable resource but also for its own intrinsic value (Cutter-Mackenzie, 2010; Kahn Jr. & Kellert, 2002; Stern, 2000). There has been considerable debate around whether EfS distorts the very nature of environmental education, by adopting the technocentric assumption that
technological advances will resolve environmental problems (see Cutter-Mackenzie, 2010; Kahn Jr. & Kellert, 2002; Stern, 2000). In addition, Jickling (1994) has raised concern that EfS places too much emphasis on the negative aspects of our relationship with the environment before children have established a connection with nature, something which may cause them to develop ‘ecophobia’ (Hart, 2003; Sobel, 1996; Sobel, 2012; Strife, 2011). This concern has been particularly prominent in early childhood, where the view that children are too young to understand or to have to worry about the state of the planet has somewhat prevented the uptake of EfS (Davis, 2009; Davis & Elliot, 2004; Davis & Elliott, 2004; Davis & Elliott, 2009; Duhn, 2011; Lewis, Mansfield, & Baudains, 2010). Indeed, there is the potential for significant tension between protectionist views about childhood, and protectionist views of the environment.

Australia’s national environmental education statements offer a sense of resolution for this tension (Department of the Environment and Heritage, 2005; DEWHA, 2009, 2010). Positioning EfS as cross-curricular priority area, they aim towards developing David Orr’s notion of an ecologically literate society (1992, 1994). Orr reminds that “environmental degradation and the decay in our concept of citizenship occurred simultaneously and as mutually reinforcing trends” (1992, p.2). Therefore, in addition to a focus on the environment, contemporary EfS prefaches a collaborative approach to learning and a focus upon the importance of community participation and social justice (Department of the Environment and Heritage, 2005; DEWHA, 2009, 2010):

...the development of critical thinking skills and learning how to work collaboratively to improve human and environmental wellbeing are also important outcomes of environmental education. Thus, Effective environmental education has implications ‘not only for what we learn but also how we learn’ [Tilbury, 2005, p.13]. (Department of the Environment and Heritage, 2005, p. 6)

This implicates a connection between EfS and children’s participation in sustained shared thinking or the co-construction of play and learning narratives.
This suggests that a collaborative play-based pedagogy in natural settings may help to build a connection to nature, as well as model the citizenship skills necessary for the development of a sustainable society (Barrett-Hacking et al, 2007; Capra, 1999; Chawla, 2008; DEH, 2005; Orr, 1992, 1994).

**Adult Mentors**

Despite concern about the trend towards adult-directed nature activities for contemporary children, a wealth of research indicates that the influence of an adult mentor is important for turning childhood play experiences into an environmental life path (see Asah et al., 2012; Chawla, 1999; Chawla, 2007; Chawla, 2008; Hart, 2003; Thompson et al., 2008; Vadala et al., 2007; Wells & Lekies, 2006). Environmentally friendly adults commonly describe the influence of a significant adult or mentor who encouraged their interest in and care for the natural world (see Asah et al., 2012; Chawla, 1999; Chawla, 2007; Chawla, 2008; Hart, 2003; Thompson et al., 2008; Vadala et al., 2007; Wells & Lekies, 2006). As Rachel Carson infamously reminds, “If a child is to keep alive his inborn sense of wonder, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in” (1956, p. 45).

The positive influence of adults was evident in an Australian study exploring preschool children and nature, in which it was found that many of the children in the naturalised playground engaged in destructive or violent play behaviour towards natural creatures (Fletcher, 2006). Fletcher observed that this behaviour only occurred in the absence of adults, and regularly observed the same children demonstrating caring behaviour in the presence of adults. Therefore, whilst children may have an innate, biophilic curiosity, she believed that caring behaviour largely develops in the context of relationships. As Capra notes, “there is no culture in ecosystems, no consciousness, no justice, no equity” (1999, p. 3). Therefore, childhood participation in nature-based activities with adults can be understood as “the beginning of a nature-acculturation process” (Asah et al., 2012, p. 562).
The involvement of a mentor makes sense, because despite many adults fondly recollecting outdoor nature-based play experiences, clearly not all have environmental beliefs. This is evident in a study of the land management beliefs of Australian farmers (Gosling & Williams, 2010). Whilst presumably the majority of the farmers experienced nature-based play experiences on family farms in their childhood, they did not all support environmentally friendly land management practices. Therefore, Stern (2000) proposes a theory of environmentally significant behaviour, in which he argues that environmental beliefs are a mediating factor for environmental behaviours.

**Bush Kindergartens**

Australian folklore has its foundation in the bush. Aboriginal Dreamtime stories teach of the land, yet Australian children have not had a model of education which allows children to be outdoors for extended periods of time to develop a connection with the environment (Fargher, p19).

Nature kindergarten models are offering a way to address Fargher’s lament and to offer contemporary children freedom for deep and direct play in a natural environment. Simultaneously they also include inter-generational participation with adults who can act as mentors. In this way, they offer a contemporary version of the fondly recalled experiences of previous generations. Conceivably, they offer an improved experience, as harsh discipline and other practices disrespectful to children’s human rights are often forgotten in romanticised memories (Waller, Sandseter, Wyver, Arlemalm-Hagser, & Maynard, 2010).

At Scandinavian nature kindergartens, children spend upwards of 80% of their time playing outdoors in the natural environment, usually an area of woodland (Sandseter, 2012), with few commercial toys (Melhuus, 2012). Influenced by this model, twenty years ago Britain developed Forest Schools, (Maynard, 2007b; O’Brien, 2009) and there are now hundreds across the UK, some of which call themselves nature kindergartens if they involve young children. In a similar style to the Forest School model, Westgarth pre-school in Victoria piloted a ‘Bush Kinder’ programme in 2011. They ran the morning session for their pre-school
class in a local public bush reserve once a week and this has now become a unique component of the pre-school experience offered at the school (Fargher, 2012; Westgarth Kindergarten, 2011). Following this lead, the bush kindergarten idea has proliferated and many more have been established across Australia recently (see Facebook Group, n.d.; Jacaranda Pre-School, 2012).

An increasing body of research has been developing around these experiences particularly in Scandinavia and the UK (see Davis & Waite, 2005; Fjørtoft, 2001; Maynard, 2007a, 2007b; Murray & O’Brien, 2005; Niklasson & Sandberg, 2010; O’Brien, 2009; O’Brien & Murray, 2007; Ridgers et al., 2012; Roe & Aspinall, 2011; Sandell & Öhman, 2010; Sandseter, 2009c; Waller, 2006, 2007; Waller & Bitou, 2011). They demonstrate the multi-faceted ways such experiences can enrich the pre-school experience and simultaneously address many concerns surrounding contemporary childhood, including physical and mental health.

In addition, it seems evident that the absence of toys in these experiences seems to place greater emphasis on relationships (Elliott & Chancellor, 2012). At Westgarth Bush Kinder the educators “observed children relating with, understanding, respecting and supporting each other in new ways such as working together to move a log or rock” (Elliott & Chancellor, 2012, p.12). As a result, at Forest School in the UK, children have been recorded demonstrating increased awareness of their actions towards others and increased ability to work cooperatively (Murray & O’Brien, 2005; O’Brien & Murray, 2006; O’Brien & Murray, 2007). Additionally, through having to communicate and develop their own imaginary narratives, children have been shown to engage in more complex and social play outdoors (Niklasson & Sandberg, 2010). The educators at Westgarth also described how “the bush environment seemed to have a ‘calming and leveling’ effect on the group dynamics” and when siblings visited they “integrated easily into the play scenarios; all children were welcomed in play.” (Elliott & Chancellor, 2012, p.12).

It was also noted that after an initial period of physical engagement, the children at Bush Kinder were found to increasingly engage in reflection and philosophical
discussion with their friends and educators (Elliott & Chancellor, 2012). Indeed, as well as changing the dynamics of the relationships amongst the children, the outdoors seems to also influence the relationships between children and educators. In a UK Outdoor Learning Project the educators observed that “in the outdoor space the children waited for the adult response and seemed to know that they would get one” (Waller, 2007 p.402). Therefore, in natural environments children appear to engage in less attention-seeking behaviour (Blanchet-Cohen & Elliot, 2011; Dowdell, Graya, & Malone, 2011).

Polymorphic features in the natural environment may be particularly conducive to affording opportunities for children and educators to jointly make-meaning and engage in sustained shared imaginary conversations around unusual features such as the ‘trampoline tree’ or the ‘goblin’s house’ (Waller, 2006, 2007). By revisiting the same site each week, the children in Waller’s studies revisited and extended these joint narratives over time. This suggests they began to develop a connection to the features, building a sense of belonging to their local natural environment (Melhuus, 2012; Roe & Aspinall, 2011; Waite, 2007) and by extension the wider local landscape (Wason-Ellam, 2010, p. 60).

Bush kindergarten models see children playing and learning regularly in public areas such as parks, national forests and bush reserves. This means that groups of children more regularly come into contact with members of the wider local community. This provides an opportunity to address concerns about the difficulty of justifying true sociocultural education if children and carers are locked away from the broader community (Brennan, 2007b). It also sends the message to the wider populace that children belong in the community, not just isolated from it in cars and ECEC centres. This challenges the burgeoning notion that children who play indoors are “deemed, safe, good and responsible” whilst those that roam outdoors are “a potential accident or social threat” (Darbyshire, 2007, p. 90). Finally, British Forest School studies have shown evidence of a so-called ‘ripple effect’ whereby children cajole their families into returning to the activity site at evenings and weekends for free active play (Murray & O’Brien, 2005; O’Brien & Murray, 2006). This brings the sense of belonging full circle and
fosters the familial connection to the local area, community and nature, fostering a sense of belonging that is free from a socioeconomic sense of proprietorship.

**Nature-based Play at ECEC Centres**

In this study I focus specifically upon children's experiences of nature in their pre-school playground. Whilst there is growing interest in bush kindergartens, momentum to naturalise ECEC playgrounds has also grown dramatically and potentially reaches many more children (see Facebook Group, n.d.). Some Australian ECEC playgrounds have always contained natural features. However, ABC Learning, the largest long-day care chain in Australia prior to its collapse in 2008 (ABC News, 2011, January 28), was amongst many ECEC providers who implemented outdoor play areas surfaced extensively with soft-fall and fake turf, with little or no natural vegetation (Elliott, 2008). The current trend has therefore been seeking to reverse such playspaces and increase opportunities for children to engage in nature-based play in their playgrounds.

This trend has been further supported by the National Quality Standard, which came into effect in 2012. The first standard within Quality Area 3 (Physical Environment) surrounds the appropriateness of the location of the pre-school, with element 3.1.3 requiring that “outdoor spaces include natural elements and materials which allow multiple uses” (ACECQA, 2013). Additionally, under the regulations and services section it is a requirement that “outdoor space is designed to afford children opportunities to explore and experience the natural environment” (ACECQA, 2013). In addition, state documents have been promoting the further naturalisation of outdoor play areas, including a ‘Natural playscapes’ fact sheet from Kidsafe NSW (2012) and the South Australian Government Vision and Values pamphlet which includes illustrated examples of local pre-schools with vegetated gardens, bridges and streams (SA Dept of Education and Children's Services, 2010). This momentum is evident in a new ECEC centre under construction in inner-city Brisbane, which “will feature more than an acre of outdoor space complete with a rainforest, a creek and an outdoor pizza oven” (Petersen, 2012, p. n.d.).
Two notable Australian studies have explored pre-school children’s experiences of nature-based play within their pre-school grounds. Dowdell et al (2011) compared children’s outdoor play experiences between two pre-schools, one with a highly naturalised garden and the other with an artificial ‘outdoor’ area within the confines of a warehouse. The children at the warehouse setting frequently changed activities and engaged in over-enthusiastic play, including rough play and disagreements over toys. They were most frequently observed playing by association rather than together in groups. By comparison, in the naturalised playground the children most commonly played in small groups and no over-enthusiastic play was observed. Notably, at the pre-school with the naturalised grounds the educators were also more involved in the children’s play than at the warehouse setting.

In line with earlier indications about the importance of adults, the influence of the educator may have been crucial here, because in Fletcher's study (2006) the children in the naturalized playground were often engaged in rough play and play fighting. Fletcher's study was described earlier in relation to the children’s behaviour towards natural creatures and involved exploration of pre-school children and nature across a range of Australian ECEC settings. It appeared that in the most naturalized playground the children were particularly boisterous and physical with one another, although this did not appear to attract attention as notably they competently handled these situations within their play and rarely called upon the educators to intervene. While Fletcher's thesis has close links to mine, hers was undertaken prior to the implementation of the EYLF. I therefore build upon her explorations to consider nature-based play within the context of children’s participation in inter-generational relationships with adults.

**Outdoor Pedagogy**

Ernst and Tornabene (2012) explored the intentions of pre-service early childhood educators to use natural outdoor environments for learning. They found intentions to be strongly influenced by educators’ personal nature relatedness and the value they placed upon experiences in nature for children’s health and wellbeing. However, in a further study it was found that practical
barriers such as access, time or winter weather were the over riding factor influencing educators’ use of the outdoors for learning (Ernst, 2013; Ernst & Tornabene, 2012). Beyond this, a number of studies have explored how children and educators interact during outdoor playtime (see Blanchet-Cohen & Elliot, 2011; Davies, 1997; Malone & Tranter, 2005; Maynard, 2007a; Maynard & Waters, 2007; Maynard et al., 2013; Renick, 2009; Waite, 2011; Waite & Rea, 2008). These have identified a particular tension around the uptake of a collaborative approach in the outdoor playgrounds of ECEC centres. Maynard and Waters (2007) have identified four reasons why educators appear particularly reticent to collaborate with children outdoors.

Firstly, there is an indication that educators are not fully aware of the affordances for learning offered by outdoor environments (Davies, 1997; Davis & Elliott, 2009; Maynard & Waters, 2007). As a result educators appear to rely on their own fond memories of outdoor play, fostering romantic notions of children running freely, and leaving them reluctant to intervene in children’s free outdoor play (Maynard & Waters, 2007; Melhuus, 2012; Waite, 2007, 2011). Secondly, Maynard and Waters suggest that there is a lack of national cultural association with nature and the outdoors in many Anglicised nations, such as their study location in Wales, and as such a lack of emphasis on developing children’s connection to nature.

The third reason surrounded a need to focus upon safety and mitigate risk. This aligns with Renick’s (2009) exploration of educators’ beliefs about outdoor play at pre-school, in which it was found that because of the heightened risk, “the teachers considered supervision as their primary responsibility” outdoors, and focused on learning indoors (p.71). (Risk will be explored in greater depth in the next section of the literature review). Finally, the fourth reason was attributed to notions of the educator and the child. Wales was in a period of EC policy transformation at the time of the study, yet the educators felt that the new curriculum was little different to the previous one and therefore learning was interpreted largely as relating to conceptual content and they focused largely on the classroom context. As such, they tended not to engage with children in their
play outdoors. This may account for why, in a similar study by Blanchet-Cohen and Elliot (2011), it emerged that a common perspective among educators was that outdoor play time was “‘breaktime,’ time to have a coffee and a chat,” and “interacting with [the] kids was seen as radical” (p.769).

However, as identified several times already, the natural environment offers multiple, changing loose materials, which capture the children's interests and offer opportunities for spontaneous child-initiated, sustained-shared thinking interactions (Blanchet-Cohen & Elliot, 2011; Fletcher, 2006; Maxwell, Mitchell, & Evans, 2008; Stephenson, 2002; Waters & Maynard, 2010). Therefore, educators with a keen interest in nature have described the freedom, flexibility and creativity collaboration outdoors offers (Blanchet-Cohen & Elliot, 2011; Stephenson, 2002). However, despite the momentum towards both collaborative teaching and the naturalisation of pre-school playgrounds, there does not appear to be any recent Australian studies that have specifically explored educators’ pedagogy in naturalised pre-school playgrounds and considered whether and how this might impact upon the children's experiences of nature-based play within these green spaces.

Section Summary
This section has highlighted that children appear to engage with nature differently to adults and indicated that opportunities for them to explore nature in a deep and direct manner in their own leisure time are reducing. It described the momentum for bush kindergartens and the greening of ECEC playgrounds, which are attempting to offer children opportunities to reconnect with nature and engage in nature-based play, whilst participating in inter-generational relationships with responsive adults. However, safety concerns may impact upon the ways in which educators interact with children outdoors and how they facilitate nature-based play. Therefore, the final section turns to examine the concept of risk.

2.5 Risk
Nature-based play at ECEC centres affords children and educators increased opportunities for creativity in play and learning. In addition, the active, creative nature of nature-based play simultaneously addresses many existing concerns surrounding modern childhood. However, the introduction of natural materials and environments into ECEC settings presents additional hazards and potentially dangerous loose materials. Therefore, the opportunities presented by nature-based play must be tempered by due consideration of the risks. In this section, I begin by examining the notion of the ‘risk society’ and its influence on childhood. I then consider the burgeoning field of risky play and examine the literature surrounding children and educators’ risk perceptions, before focusing specifically on the risks inherent in Australia’s unique natural environment.

**Risk Society**

In disciplines such as science, engineering and economics, risk is calculated and calibrated as a real, measurable variable. To a certain extent risk assessment in education relies upon these technico-scientific notions and the calculability of risk. However, prominent risk theorists such as Douglas, Giddens and Beck, highlight the social, cultural and historical contexts in which risks derive “meaning and resonance” (as summarised in Lupton, 1999, p. I). As Douglas notes:

> The very word ‘risk’ could be dropped from politics. ‘Danger’ would do the work it does just as well. When ‘risk’ enters as a concept in political debate, it becomes a menacing thing, like a flood, an earthquake, or a thrown brick. But it is not a thing, it is a way of thinking, and a highly artificial contrivance at that (Douglas, 1994, p. 46).

Fox (1999) considers the sociocultural and technico-scientific approaches further by considering more closely the differentiation between hazards and risks. He describes the differing perspectives along a continuum from realism to relativism (represented in Figure 2.3). At the realist end, hazards are considered to be real and are understood as having the potential to cause harm, with risk relating to the likelihood of this occurring. Between realist and relativist extremes he
highlights a perspective in which the hazard is understood as being real but the risk is culturally perceived. Finally, drawing upon work by Wells (1996), Fox points towards an even more relativist view in which the hazard itself is socioculturally constructed. That is, objects are inherently inert, but become hazardous in circumstances in which we consider that an undesirable or adverse outcome may result.

![Figure 2.3 Schematic of a continuum the conceptualisations relating to risks and hazards (Fox, 1999).](image)

This sociocultural understanding of hazard and risk seems particularly relevant in contexts involving children. The image of childhood as innocent and pure engenders particular protection from risk, and as such, hazards are considered to be more grave when they may potentially affect children (Jackson & Scott, 1999). An advocate for the free-range child movement, Skenazy, in her journalistic style clarifies:

Think of how, thanks to fear, we restrict so many aspects of our children’s lives. They’re not allowed to walk alone (cars!), explore (perverts!), or play in the park (those perverts again) or in the woods (ticks!) or in trees (gravity!) or in water (drowning!) or in dirt (dirt!) (2009, p. 8)

Strangers are largely inert, yet a few may represent a potential danger to all members of society. However, in constructing childhood as special, and children as innocent and lacking in competence, strangers become a much more menacing threat. Research by the television broadcaster BBC Scotland found that, despite
the fact that child murder by a stranger is extremely low and had not changed for over 20 years, 76% of respondents thought there had been an increase in such tragedies, while 38% believed that the increase had been ‘dramatic’ (described in Furedi, 2002). Beck captures the sociocultural nature of this: “it is cultural perceptions and definition that constitute risk. ‘Risk’ and the ‘(public) definition of risk’ are one and the same” (1999, p. 135). Although the media is often blamed for creating these inflated fears, social commentators in the UK and Australia remind that it is our viewership that condones and demands it (Füredi, 2002; Mackay, 2002).

Rather than the risk from strangers, it is perhaps the minor nature-based play concerns mentioned by Skenazy above, particularly gravity and dirt, which more fundamentally indicate a change in attitudes towards risk. These were largely considered acceptable risks for previous generations of children. As Lee et al (2010) emphasise, “it is hard to overestimate how far the concept ‘at risk’ has expanded when applied” to childhood (p.295). Indeed, Füredi reminds us “in the past, not even the archetypal overanxious parent would have taken the precautionary approach that is now seen as the norm” (2002, p. 28). This development of such “significantly different perceptions of the same risk” (Burgess, 2006, p. 331) can only be understood in the context of the ‘world risk society’ (Beck, 1999).

As purported by Ulrich Beck, having moved beyond industrialisation, we are now living in a world risk society (1999). He points towards the enormity and threat of global issues such as climate change, terrorism and highly infectious disease, which are the result of the human process of industrialisation, but which individuals cannot control or opt out of. He argues this has led to a reduction in trust in leadership and in the ‘project of modernity’. Faced with these threats, he proposes a new reflexive modernity has taken place, “one that is concerned with its unintended consequences, risks and their implications” (Beck, 1999, p. 152). For instance, workplace health and safety legislation emerged out of this mindset, with the aim of reducing the loss of life at work (Burgess, 2006).
Beck proposes a connection between reflexivity and increased individualism, suggesting that to counter a lack of trust and make meaning in spite of global threats, we focus upon the creation of our own life biography (1999). Giddens summarises this, “we are, not what we are, but what we make ourselves” (1991, p. 75). However, the resultant emphasis upon personal decision and choices creates a level of anxiety over making the right, or best, decisions and coping with both the scope of opportunity and potential for personal failure (Fox, 1999).

Doing this on behalf of a child, particularly when the early childhood years are widely purported to be so important, places increased pressure on parents' natural desire to protect and provide for their child (Jackson & Scott, 1999). The pervasive developmentalist paradigm would suggest that children be protected from the anguish of this process: “It is interesting to note that childhood is the only form of social subordination equated with a state of freedom” (Jackson & Scott, 1999, p. 98). Thus, contemporary reflexivity and dominant conceptualisations of childhood can be seen to heighten general anxiety surrounding children (Jackson & Scott, 1999).

In tandem with increased individualism, Beck highlights that “reflexive modernisation dissolves traditional parameters of industrial society: class culture and consciousness, gender and family roles,” something he refers to as ‘detraditionalisation’ (1992, p. 87). This, in turn, leads to the erosion of the positive influence of community to rationalise and thus down-play risks (Burgess, 2006). Indeed, individualism, detraditionalisation and reflexivity become inseparable through the loss of wider trust, dependence upon self-reliance and competitiveness. Therefore, when the loss of community relationships is combined with the personal burden of choice and decision, health and safety practices become a scapegoat for blame and litigation. This intensifies the risk society spiral, until we have reached a situation where “risk has become a prism though which the...state now conducts its affairs” (Burgess, 2006, p. 330).

In an attempt to map how community cohesion and reflexivity collude to influence cultural responses to risk, Douglas and Wildavsky applied Douglas’ grid-group model (recapped in Douglas, 2013). As Figure 2.4 shows, in high-
group, high-grid situations individuals support one another and collectively place trust in a hierarchical institution. Therefore, high-grid situations may be more typical of pre-risk society. By contrast, low-grid, low-group is characterised by high levels of individualism and a self-regulatory approach to risk, with low-grid, high group typically referring to collectivist, egalitarian groups such as activist, voluntary groups. This latter grouping, in particular, emphasises the way in which the organisation or grouping influences what is considered a risk, and how serious that risk is perceived to be. Jackson and Scott (1999) summarise these ideas in relation to parenting, “Taken together, these two processes – individualisation and de-traditionalisation – create a context in which greater parental investment in children occurs within what seems to be a less predictable and less safe world” (p.89).

Figure 2.4 Representation of Douglas’ Grid-Group model as it applies to the concept of risk

At this stage, Beck offers a sage elucidation of the concept of risk:

The discourse of risk begins where our trust in our security ends and ceases to be relevant when the potential catastrophe occurs. The concept of risk thus characterizes a peculiar, intermediate state between security and destruction, where the perception of threatening risks determines thought and action (1999, p. 135).

When this perception determines ‘thought and action’ in relation to children, ‘no-risk’ can sound like the logical and rational voice (Gill, 2007). Gill suggests that
pleas to “adopt the inevitably revised value system of the victim” are particularly unhelpful in this regard: “If we were always required to see the world through the eyes of the most unlucky, then we would always choose zero risk” (2007, p. 28). The pervasiveness of such pleas have led to the protectiveness that “engenders a preoccupation with prevention” (Jackson & Scott, 1999, p. 90).

The situation has reached the stage where beyond risk-centred, it is proposed that we have become a risk-averse society (Gill, 2007), consumed by surplus safety (Wyver et al., 2010). The extremity of this is being addressed by bodies such as the Royal Society for the Prevention of Accidents, which reminds parents and carers, “healthy play can result in painful injuries, and this is something that should be considered part of normal development for children of all abilities” (n.d. cited in Wyver et al., 2010, p. 265). Furedi puts this into a longer term context: “It is always useful to recall that our obsession with our children’s safety is likely to be more damaging to them than the risks they encounter in their daily interactions with the world” (2002, p. 195).

Therefore, within the reflexivity of the risk society, there is increasing concern about the risk of ‘no risk’ (Ball et al., 2008; Bundy et al., 2009; Early Childhood Australia Inc., 2013; Gill, 2007; Gleave, 2008; Greenfield, 2003; Jenkins, 2006; Little, 2006; Little & Wyver, 2008; Sandseter, 2009a; Stephenson, 2003). This has been causing a shift in focus in discourse and in ECEC practice, which is beginning to reconceptualise risk in less negative terms. It is now becoming increasingly recognised that children need opportunities to experience and learn how to manage risk (Nikiforidou, Pange, & Chadzipadelis, 2012; Stan & Humberstone, 2011), with the notion of ‘risk literacy’ emerging in the ECEC context (Nikiforidou et al., 2012). The EYLF highlights that natural environments offer particularly conducive opportunities for children to experience and develop awareness of risks (DEEWR, 2009a).

**Risky Play**

The fledgling field of risky play similarly takes a positive approach to risk. Alison Stephenson’s oft cited work entitled, ‘Physical risk-taking: Dangerous or
endangered?’ (2003), seems to have initiated recent academic discourse around this in the context of early childhood. In New Zealand's pre-schools she began to question the impact of risk-aversion or surplus safety measures upon the development of young children and sought to understand what it was about risk – the excitement and fear – that children found so engaging. Of particular relevance to this study was the indication that opportunities to take risks were consistently identified outdoors but not indoors (Stephenson, 2003). A number of subsequent reflective studies continued the theme of risk-taking opportunities in outdoor play, such as Little and Wyver’s, ‘Outdoor play: Does avoiding the risks reduce the benefits?’ (2008). However, it seems that it was following Ellen Sandseter’s doctoral studies that the term ‘risky play’ became fully established in literature.

Sandseter observed and interviewed children in Norwegian pre-schools to establish how they described risky play activities. They particularly relished the sensation of being on the cusp of fear, describing, ‘it tickles in my tummy!’ (2009b, 2010). Sandseter was then able to work with the children to establish in which situations they experienced this and to identify six risky play categories (Sandseter, 2007), which have been adopted across recent Australian studies (such as, Bundy et al., 2011; Hill & Bundy, 2012; Little & Wyver, 2010; Little et al., 2011).

**Risk Perception**

A number of studies have sought to further understand how children approach risk, and their decisions around risk-taking (Christensen & Mikkelsen, 2008; Little, 2006; Little & Wyver, 2010; Little et al., 2011; Morrongiello & Matheis, 2004; Sandseter, 2009b, 2010; Stephenson, 2003; Waters & Begley, 2007). For example, in Australia, Little and Wyver (2010) have investigated pre-school children’s ability to appraise risks and how this connects to their decisions about using playground equipment. Such studies have also begun to consider the individual characteristics that may influence risk-taking behaviour such as age, gender or sensation seeking predisposition (Christensen & Mikkelsen, 2008; Little, 2006; Little & Wyver, 2010; Little et al., 2011; Morrongiello, Corbett,
McCourt, & Johnston, 2006; Morrongiello, Klemencic, & Corbett, 2008; Morrongiello & Matheis, 2004; Sandseter, 2007; Sandseter, 2009c; Stephenson, 2003; Waters & Begley, 2007). In addition, Little, Wyver and Gibson (2011) have considered sociocultural influences including adult attitudes and play context upon children’s risk taking. However, they found the playgrounds in their study to be so sterile, particularly in ECEC centres, that they offered little opportunity for the children to engage in risky play.

Indeed, Füredi suggests “a growing number of playgrounds are...designed for anxious parents [or perhaps educators] rather than the developmental needs of youngsters” (2002, p. 44). There is concern that in these playgrounds children may make their own risk by using the equipment inappropriately, something which often puts the children in greater danger than equipment designed with an element of challenge (Ball et al., 2008; Gill, 2007; Little & Wyver, 2008; Stephenson, 2003). Alternatively, there is growing concern that “children who conform” (Little & Wyver, 2008, p. 35) will become “a generation ... faced with the long-term consequences of decreased play. These consequences will likely outweigh the short-term ‘gains’ of fewer bruises or grazes” (Bundy et al., 2009, p. 34).

Waters and Begley (2007) explored the differences in risk taking between sensation seekers and conformist personalities in the nature-based play context. For the most boisterous child in their study, the Forest School environment and permissive approach afforded greater opportunities to be physical and challenge himself without being reprimanded. Simultaneously, for the most reticent risk-taker, Forest School was the only environment in which she was seen to take risks and physically challenge herself. Therefore, Waters and Begley have raised concern that despite physical changes to pre-school playgrounds, there is a possibility that risky play might remain limited by institutional rules and regulations.

Justification for this concern is somewhat evident in Maynard’s exploration of Forest School, in which she identified a Foucauldian tension between Forest
School leaders and school teachers with regard to children’s risky play (2007b). Forest School leaders have been trained to honour the benefits of risky play - essentially to frame risk more positively (Knight, 2009; The Forest School Training Company Ltd, 2009) and this was described as conflicting with the dominant protectiveness of the school system. In many respects, risk at Forest School is a hurdle that each individual educator needs to overcome through exposure and experience before the broader learning opportunities of the outdoors can be appreciated and explored (Waller, 2007).

The influence of educator risk perception was the subject of one of Ellen Sandseter’s most recent publications entitled, ‘Restrictive safety or unsafe freedom?’ (2012). Notably, in Norway, all educators “evaluated risky play as positive for children” (Sandseter, 2012, p. 92). They were highly aware of their personal risk perception and the importance of stretching their own limits to let the children experience challenges. They also reported that if they felt too uncomfortable with a situation, such as the height that a child is climbing, then they would swap supervision with another practitioner who felt more comfortable with the risk. Akin to the Norwegian educators, many Australian educators acknowledge the benefits of risky play to children (Bundy et al., 2009; Little et al., 2011). However, like the British teachers in Maynard’s study, this is commonly overshadowed by their concerns for safety (Bundy et al., 2009; Bundy et al., 2011; Hill & Bundy, 2012; Little, 2010; Little et al., 2011; Sandseter, 2013). Therefore, compared to Scandinavian educators, Australian educators appear to be less in tune to the perceptive nature of risk, rationalising their fears as expected duty of care, rather than readily stretching their own risk limits (Bundy et al., 2009; Sandseter, 2012; Sandseter et al., 2012).

It is suggested that this is an Anglicised cultural approach, reflecting contemporary societal attitudes towards risk and childhood (Sandseter, 2012; Wyver et al., 2010). For instance, an Australian teacher interviewed by Bundy et al (2009) stated, “we’re here for the safety of the children…and that’s paramount in our eyes. And it’s paramount in society’s eyes” (p.41). By contrast, Norwegian educators describe a national cultural interest in developing children’s
connection to nature and consequent acceptance that this might result in injury from time to time (Sandseter, 2012). As such, the Norwegian educators in Sandseter’s studies describe feeling that their actions are respected by wider society.

In addition, litigation is notably rare in Norway and educators do not unduly fear it as a threat (Sandseter, 2012). In contrast, Australian educators described differing perceptions between parents, society and educators about “what should justly constitute a breach of duty of care,” conveying a sense of mistrust, vulnerability and unfairness (Bundy et al., 2009, p. 41). This is exacerbated by ‘no win no fee’ lawsuits targeted at play injuries, in which it is suggested that the marketing language “targets parental guilt and creates barriers between teachers and parents by portraying teachers as negligent and untrustworthy” (Wyver et al., 2010, p. 270). The fear of litigation weighed heavily on the minds of Australian teachers and educators, something that is believed to be a recent shift in Australian society (Bundy et al., 2009, p. 41). In many ways it is emblematic of a risk-averse, increasingly individualised society.

**Australia’s Natural Environment**

The settlement of Australia by Europeans has been marked by a failure to recognise that the landscapes, flora and fauna of the continent are radically different from those of Europe. Remarkably, environmental education research in Australia in the last decade has largely not addressed natural history pedagogy tailored to the specifics of the continent (Stewart, 2011, p. 69).

Stewart’s comment is highly relevant to a study considering nature-based play in Australia and influenced by the nature-based educational models of Europe. Indeed, despite the ready uptake of risky play frameworks and research in Australia, there does not appear to have been any acknowledgement of Australia’s natural risks, many unique in their own right, and so different to European environments.
Linking to Fox’s continuum of risk conceptualisation displayed earlier (Figure 2.3), risky play research suggests delineation between the terms hazard and risk (Greenfield, 2003; Little & Wyver, 2008; Sandseter, 2012; Sandseter & Kennair, 2011). Greenfield proposes that a “hazard is something the child does not see, whereas risk relates to the child’s uncertainty about being able to achieve the desired outcome, requiring a choice whether to take the risk or not” (2003, p. 5).

Expanding on this, Australian-based researchers Little and Wyver advocate, “Adults can mostly see the hazards and endeavour to eliminate them. The way is then clear for children to face the challenge and accept the risk should they choose to do so,” (2008, p. 37). They also add that “an environment free from hazard is necessary...” (2008, p. 37). Therefore, the underlying assumption in risky play research seems to be that unwanted hazards can be removed to afford safe risk-taking opportunities in early childhood. However, in the context of nature-based play in Australia, this may become more difficult to guarantee.

Westgarth Bush Kinder in Victoria have a specific policy relating to snakes (the Eastern Tiger snake is known to inhabit the reserve they use) and in their risk assessment the risk consequence is deemed major, although the likelihood is defined as unlikely (Westgarth Kindergarten, 2011). Spiders are not specifically addressed, being presumably subsumed within general insect bites and stings category, designated as minor and unlikely (Westgarth Kindergarten, 2011). These hazards can also find their way into naturalised early childhood playgrounds, such as the nest of brown snakes discovered at an ECEC playground last month (Morrow, 2014). However, no research has emerged surrounding such environmental risks in an early childhood play context, either at bush kindergartens or ECEC centres. Therefore, this study will seek to gather the perceptions of educators and children towards nature-based play risks, including those unique to Australia.

The other key hazard that differs significantly from European environments, particularly the Northern European countries where nature kindergartens were developed, is the greater risk from sun exposure. Australia, along with New Zealand, has the highest rate of skin cancer in the world and sun exposure during
childhood is one of the key risk factors (Ettridge, Bowden, Rayner, & Wilson, 2011; Jones, Beckmann, & Rayner, 2008). Consequently, given that peak UV radiation occurs during the school day, a National SunSmart Schools program was developed (Jones et al., 2008), which extends to ECEC centres (Ettridge et al., 2011). In line with this, 84% of ECEC centres in Australia are believed to schedule outdoor play only for the beginning and/or end of the day (Ettridge et al., 2011). This means that many children will be missing out on the opportunity for extended physical activity (amongst the many other benefits) associated with prolonged outdoor play.

A Swedish study investigated an interesting double correlation between the impact of the pre-school environment upon both children’s physical activity and sun exposure (Boldemann et al., 2006). It was found that the playgrounds richest in vegetation offered natural shade and as such lower UV exposure, whilst also providing children with the highest daily step counts for activity (Boldemann et al., 2006). This was partly because children were allowed to spend longer outside due to the shaded conditions and also because the terrain itself presented greater physical challenges.

In Australia, the risk management procedure of Westgarth Bush Kinder ensures that all children wear long-sleeved shirts and trousers (light-weight in summer) to provide protection from biting or stinging insects and plants (Westgarth Kindergarten, 2011). This would provide double duty in terms of sun protection, particularly in combination with the SunSmart standard ‘no hat, no play’ and sunscreen policies (Cancer Council Victoria, n.d.). Therefore, whilst sun exposure may initially appear to be a significant barrier to nature-based play in the context of Australian ECEC, in fact it may become an important driving force: nature-based play could offer the multiple benefits of outdoor, active play (and more) for pre-school children, without compromising sun safety.

**Section Summary**

Post-industrialised Minority world societies have become labelled ‘risk-centred’ or even ‘risk-averse’ and consumed by surplus safety. The implications of this for
the experience of childhood and the learning and development of young children is causing concern, leading to the burgeoning field of risky play. Risky play is intrinsic to nature-based play and is thought to be particularly important in helping children to build resilience, confidence, physical and emotional control. However, risky play relies upon the concept that adults can manage the play environment by removing the hazards that children do not see. This turn of phrase is particularly pertinent in Australia where the environment differs significantly from other Minority world countries. This study seeks to capture how educators and children perceive the risks in Australia and how this potentially impacts upon nature-based play for pre-school children.

**Literature Review Conclusion**

Following the conceptual architecture provided by Figure 2.1, I have examined and critiqued the various intersecting fields of literature informing this study. Firstly, taking the notion that childhood is socially constructed, I considered the intersections and tensions surrounding contemporary images of childhood. I then critically examined the national ECEC reforms taking place, which aim to maximise the multi economic, social and developmental benefits of ECEC education. I then turned to considering how play experiences are changing for contemporary children and examined how play-based learning is being theorised and debated in the literature. The penultimate section focused on nature and pointed towards a gap to more fully investigate how, following the implementation of the EYLF, children experience nature in naturalised pre-school playgrounds. Finally, the last section engaged with the notion of the risk society and considered the way in which individualised reflexivity has increased anxiety around childhood. However, reflexivity is now increasingly being turned upon itself, to consider the implications of the risk-averse supervision upon children.

Such reflexive concerns about the way in which modern society is impacting upon childhood appear to have colluded to result in the proliferation of interest
in nature-based play type experiences. Nature-based play at pre-school offers children experiences aligning to societal notions of a good and healthy childhood, but deliverable in a form accessible to contemporary children and families. However, what remains unanswered is how children experience nature-based play in naturalised ECEC playgrounds and how they and their educators perceive of the risks associated with this play. Having engaged conceptually with the existing evidence pertinent to these issues, I now turn to the theoretical framework (Chapter 3) and the research design (Chapter 4) for this study.
Chapter 3: Theoretical Framework

Introduction

...to know how a researcher construes the shape of the social world and aims to give us a credible account of it, is to know our conversational partner (Miles & Huberman, 1994, p. 4).

In the interests of positioning myself as a ‘conversational partner,’ I have outlined my personal orientation in Chapter 1. I also located my engagement with the key concepts and ideas relevant to my study throughout the literature review in Chapter 2. Building upon this, I now present my theoretical framework. This framework comprises five connected elements critical to social research: ontology, epistemology, theoretical interests, methodology and methods (Crotty, 1998; Denzin & Lincoln, 2000). In this chapter I will focus on the ontological, epistemological and theoretical underpinnings of this study. These inform the methodology and, in turn, the methods of inquiry, both of which will be detailed in the following chapter (Chapter 4: Research Design).

3.1 Ontology

Ontology refers to conceptions of reality (Crotty, 1998), something I briefly flagged in the literature review in relation to realist and relativist notions of risk and hazard. As this earlier discussion highlighted, risk perception has evolved over time, which is most apparent in changed attitudes towards the same risks (Burgess, 2006). Acknowledgement of the socio-cultural nature of risk perception, as well as the assertion that childhood is a socially constructed phenomenon suggests a relativist ontology for this study (Lincoln & Guba, 2000). My standpoint, however, is not as relativist as Lincoln and Guba’s stance, described by Pitman and Maxwell as “radically relativist” (in LeCompte, Millroy,
Rather, I position myself between the relativist end and the mid-point on the continuum I presented in Figure 2.3 (Fox, 1999). Such positioning accords with Crotty’s notion that “social constructionism is at once realist and relativist” (1998, p. 63). For instance, although I take a relativist view of risk perception, I find it hard to argue with the medical reality that can arise if someone is bitten by a venomous snake. Therefore, I have approached this research with a relativist-realist ontological view.

3.2 Epistemological View

Epistemology refers to the nature or theory of knowledge, an attempt to understand and explain “how we know what we know” (Crotty, 1998, p. 3). In this study I take a qualitative mode of inquiry and, in alignment with my relativist-realist ambivalence, I adopt an epistemology that combines constructivist and participatory paradigms. In many respects, this epistemic combination arises from the need in this study to bridge both social and ecological worlds (Redclift & Woodgate, 1997), and the Cartesian duality between culture and nature (Le Grange, 2004; Overton, Mueller, & Newman, 2008).

Sociology commonly takes a social constructivist worldview, based upon the principle that “meaning is not discovered but constructed” (Crotty, 1998, p. 9), that ‘truth’ resides in community consensus (Lincoln & Guba, 2000). This view necessarily underpins the notion that childhood is socially constructed (see James & James, 2008; Jenks, 2005; Woodhead, 2009). However, recent critique from within the field of Childhood Studies is questioning the privileging of a social constructivist epistemology (Tisdall & Punch, 2012). Even Alan Prout, one of the leading Childhood Studies theorists, has distanced himself from the narrow focus of social constructivism, arguing instead that society “is made up through a wide variety of shifting associations (and disassociations) between human and non-human entities” (Prout, 2005, p. 109). Indeed, in the context of nature, constructivism is framed as ‘villain’ (Redclift & Woodgate, 1997), with Le
Grange describing that the “separation of human consciousness from nature in Western tradition has made it possible for nature to be controlled, manipulated and exploited for human greed” (2004, p. 389).

By contrast, the participatory paradigm, as proposed by Heron and Reason (1997), positions humans within an integrated participatory system. In the second edition of the Handbook of Qualitative Research, Lincoln and Guba legitimised a participatory epistemology as the fifth alternative inquiry paradigm (2000). The participative worldview shares the strong self-reflexivity of constructivism (Heron & Reason, 1997). It also considers knowledge to be largely socially constructed, although it more strongly acknowledges individual agency in reconstructing knowledge, something Burr believes “slips through the fingers” of constructivism (1998, p. 14). Importantly though, Heron and Reason (1997) describe the process of ‘experiential knowing,’ whereby through interaction and participation, tacit knowledge is gained through the wider senses. This experiential knowing would appear to be especially applicable to participation in non-human interactions, such as those involving nature. For instance, whilst the experience of a campfire may be imbued by social and cultural constructions, these do not seem to fully account for the heat that we feel and the knowledge inherent in this sensation. Therefore, whilst the constructivist paradigm is important in considering notions of childhood, exploring children’s experiences of nature-based play may be better accounted for by a participatory worldview.

Although authors do not always make their epistemic allegiance explicit in literature, early childhood research has become renowned for its wealth of creative and innovative participatory methods (see Clark, 2005a; Clark, 2005b; Cutter-Mackenzie, Edwards, & Quinton, 2013; Phelan & Kinsella, 2013; Waller, 2006). Hence, there would appear to be a trend towards the participatory paradigm within the discipline. However, two main concerns make me hesitate from fully embracing this paradigm. Firstly, whilst children exert agency and influence within their social worlds, external, dominant assumptions or images of childhood can shape expectations. Whilst these socially constructed
expectations are arguably brought by one party to a participatory meeting, they do appear to persist, even despite adult experience with children who do not conform to these images of the child (Jackson & Scott, 1999; Valentine & McKendrick, 1997; Woodhead, 2009). These assumptions may restrict children’s opportunities to engage in nature-based play (Maynard, 2007a).

The second concern is the requirement of the participatory paradigm to fully commit to a cooperative inquiry in its methodology (Heron & Reason, 1997). Whilst I am entirely supportive of this idea and attempt to involve children in a degree of joint meaning-making in this study, I heed the caution of researchers who warn that creative methods do not automatically confer genuine participation (see Gallacher & Gallagher, 2008; Waller, 2006; Waller & Bitou, 2011). Therefore, although I strive towards co-researching with children in my methods, I still fall short of the top of Hart’s ladder of participation (1992; 1997). As such, for both these reasons, it seems most appropriate to identify my epistemology as situated across social constructivist and participatory paradigms.

### 3.3 Theoretical Interests

Having established my ontological (relativist-realist) and epistemic (social constructivist-participatory) views, I now turn to the three theoretical interests informing this study: Childhood Studies, sociocultural theory and flow. These interests reflect the inter-woven nature of my ontological, epistemological and methodological choices. This is represented in a simple visual diagram in Figure 3.1. However, this theoretical combination does not occur without considerable tension and I will explore this more closely as I consider the relevant aspects of each of the three theories for this research.
Childhood Studies

The overarching theoretical context for this study is located within Childhood Studies, a relatively recent field of inquiry (James & James, 2008; Jenks, 2005; Woodhead, 2009). Childhood Studies draws on a broad range of academic disciplines to make sense of the complex social phenomenon of childhood (James & James, 2008). Woodhead helpfully distils three key features that can be seen to form the current tenets of contemporary Childhood Studies:

The first is about childhood: the many senses in which childhood is socially constructed, with implications for the ways it is studied and theorised. The second is about children: recognising their status and their rights as the starting point for research, policy and practice. The third is about childhood and adulthood: acknowledging that studying childhood is in numerous different respects about inter-generational relationships (2009, p. 19).

Having already explored the first feature, the social construction of childhood, in the literature review, I will concentrate upon the second and third features here. These draw attention to agency and relationship in contributing to lived social experience, and position Childhood Studies comfortably across both
constructivist and participatory paradigms. Therefore, in exploring Childhood Studies more closely I will begin by exploring Woodhead’s second feature, children’s status and rights.

The United Nations Convention on the Rights of the Child (UNCRC) (UNICEF, 1989) has been an important impetus in the emergence of Childhood Studies. The Convention comprises 54 articles, which collectively honour children’s rights to protection, provision and participation (Morrow, 2011; UNICEF, 1989). Of these, it is children’s participation rights that have attracted most contention. Participation recognises children as social actors who have the capacity to influence their lives as well as be influenced. Therefore, participation rights recognise children’s capability to be involved and to be listened to in relation to matters that concern them. As such, the UNCRC draws attention to children’s competence whilst also reconsidering their vulnerability, hence positioning children as persons worthy of dignity, status and voice.

Following on from this, Childhood Studies advocates for the involvement and participation of children in research about their lives (Tisdall & Punch, 2012). Whilst children’s lives were previously explored mainly through the lens of adult caretakers, Childhood Studies has helped to bring children to centre stage (James & James, 2008), arguing “children have a unique perspective or point of view, which in the past has often been ignored” (Smith, 2013, p. 5). There has been concern that children do not know their own minds or that being involved, particularly on sensitive topics, may be too stressful for children. However, Graham and Fitzgerald (2010, 2011) have indicated that ‘having a say’ in matters that are important to them positively impacts upon children’s wellbeing.

Taking a Childhood Studies perspective builds “child-centred scholarship” (Woodhead, 2009, p. 19), which includes seeking children’s “perceptions on their own lives and experiences as an essential input towards understanding childhood and creating better conditions for it” (Smith, 2013, p. 1). Further, Childhood Studies advocates for researchers to go beyond mere consultation, but to get inside “children’s culture” (Woodhead, 2009, p. 23). Thus, akin to Heron
and Reason’s notions of cooperative inquiry (2007), the Childhood Studies approach endeavours to offer children opportunities for deeper, active participation in the process and direction of research (James & James, 2008, p. 27; Woodhead, 2009).

Towards achieving this, Bae suggests that children demonstrate “agency and self expression through play” and therefore advocates for a connection between UNCRC articles 12/13 and 31, children's participation and play rights respectively (2010, p. 210). Therefore, a playful approach is built into the research design of this study to assist in facilitating the pre-school children’s participation. However, a playful approach can encourage fantastical, untrue responses. (von Benzon, 2013) These will need to be carefully considered, because as von Benzon (2013) argues, by simply ignoring these contributions we risk silencing one form of children’s voices. In addition, there can be power imbalances amongst groups of children at play and as such not all children may be afforded opportunities to fully express themselves through all play incidents (Löfdahl & Hägglund, 2007). Additionally, children’s subjective experience of play may sometimes be overtaken by adult learning outcomes or adult framed research agendas, which may bear little relevance to the direction of the participating children’s current interests (Waller, 2006; Waller & Bitou, 2011).

Recognition of these power dynamics resonates with Woodhead's third tenet of Childhood Studies, inter-generational relationships. These relationships are crucial to this study given that the exploration of children’s nature-based play occurs within the boundaries of adult organised ECEC settings and adult-child research. While I have been as transparent as possible about my own personal orientation, beliefs and values, the influence of the educators and the culture of the pre-school upon children’s nature-based play experiences remain pertinent to consider. These point towards the second theoretical interest of this study, sociocultural theory.

**Sociocultural Theory**
Sociocultural theory derives from the ideas of Vygotsky (1978), who viewed learning and development as a culturally embedded process that occurs through interaction with others. I explored this perspective earlier when I examined the pedagogical approach of the EYLF in the previous chapter. Therefore, here I will focus upon addressing the tensions between Childhood Studies and sociocultural theory. Whilst the emphasis upon interaction salient in sociocultural theory mirrors Woodhead’s description of the third feature of Childhood Studies (2009), in educational contexts the two theories may appear to be situated on either side of a paradigmatic divide about how to conceptualise learning (Edwards, 2005b, 2005c; Moss, 2007; Packer & Goicoechea, 2000).

In the conceptualisation of learning, the constructivist implications of Childhood Studies may suggest a connection with Piaget’s ideas that children ‘construct’ knowledge through the process of discovery. This perspective suggests that when children experience the sensation of water they will acquire an understanding about wet and dry. By contrast, as mentioned above, sociocultural approaches suggest that learning and development occurs predominantly in the context of relationships with others. Therefore, continuing with the water example, it is through their relationships with others that children learn to articulate the concepts of wet and dry, and come to attach cultural and personal meaning to them (Rogoff, 2003).

In this study, while childhood is understood as a socially constructed phenomenon, this does not imply a constructivist view of learning. In fact, in acknowledging (as Childhood Studies does) that the experience of childhood is not universal, it is understood that children’s abilities do not linearly conform to developmentalist milestones. Therefore, adopting the stance that childhood is socially constructed, actually signals the potential of a sociocultural perspective for understanding children’s learning and development. This aligns with the thinking of Anne Smith (2013), who advocates that Childhood Studies and sociocultural theory are highly compatible and create a ‘fruitful’ theoretical framework. In fact, having been introduced to the convergence of these two theoretical interests, it becomes difficult to view them in isolation, positioning
their union as a contemporary extension of neo-Vygotskian theory (Smith, 2013).

In the context of this research, Childhood Studies is a useful interdisciplinary lens through which to consider the experience of childhood and prompt investigation into whether assumptions and expectations of pre-school children may impact upon their experiences of nature-based play at pre-school. Sociocultural theory then builds upon this to position nature-based play within the cultural milieu of the pre-school and the social interactions surrounding and integral to this play. This aligns with the work of Rogoff, one of the key scholars to expand upon Vygotsky’s work, and who conceived sociocultural development as occurring across the three planes of apprenticeship, guided participation, and participatory appropriation (Rogoff, 2003). However, in the context of this study, sociocultural theory is not only applicable to the learning and development of children, it is also significant to the role of the ECEC educator in society.

Ortlipp et al (2011) recently undertook a discourse analysis of the EYLF to characterise how ECEC educators are constructed within it. They examined the frequency of key words relating to ECEC professional identity such as ‘play’, ‘care’, ‘teaching’ and ‘learning’ to scrutinise the EYLF for what it “says (and does not say) about... early childhood practitioners” (Ortlipp et al., 2011, p. 61). They found a profound emphasis on teaching rather than care. This shift in the identity of the ECEC educator in policy may not be echoed in the public sphere, particularly in settings such as long day care centres which exist primarily to care for children while their parents work. In this way, dominant sociocultural expectations and beliefs may act to maintain a predominant focus on care in the role of the ECEC educator. These differences in expectations and understandings may create tension in the relationships between educators and families. This tension may impact upon children’s opportunities for nature-based play, particularly in relation to risk.

In the literature review I highlighted the pervasiveness of the risk society (Beck, 1992, 1999), and indicated the sociocultural nature of risk perception in the
context of children (Lupton, 1999). With this in mind, sociocultural theory is particularly applicable to the concept of risk, and especially important in understanding risk perception in the context of ECEC. For instance, educators’ risk perceptions will be influenced by wider societal risk discourses and attendant health and safety procedures. In addition, parental anxiety may shape educators’ risk perceptions in the pre-school context. In this way, differing approaches to risk may become culturally embedded within local settings affecting children’s experiences of nature-based play. Reconnecting sociocultural theory to children’s learning and development, it becomes relevant to consider whether the cultural approach to risk at the pre-school impacts upon children’s perceptions of the risks of their nature-based play.

In concluding this section on sociocultural theory, I have shown that linking the key tenets of Childhood Studies and sociocultural theory provides a tailored lens through which to understand nature-based play in the pre-school context. However, how children might actually experience nature-based play – their engagement and absorption in it - remains unaccounted for theoretically. This suggests a third and final theoretical interest is required and for this I draw upon flow theory.

**Flow**

Mihaly Csikszentmihalyi describes the experience of flow as ‘the state in which individuals are so involved in an activity that nothing else seems to matter” (1990, p.4). Flow is used to refer to the psychology of ‘optimal experience’ (1990, 1997). It is understood as a particularly absorbing state, situated between boredom and the anxiety of insurmountable challenges (see Figure 3.1). Therefore, flow occurs when an activity is “difficult enough to be interesting, but not so difficult that it is impossible” (Jessee & Gaynard, 2009, p. 146).
Following Csikzentmihalyi’s original flow graph (Figure 3.2), a more in-depth model has been developed (Figure 3.3), positioning flow within the context of eight other states of consciousness, with the concentric circles representing the intensity of the emotion experienced (1997). Although flow requires the conscious directing of attention, it is understood as resulting in a relaxation of the brain from full arousal, to a focused state of peak efficiency. The sense of flow is therefore linked to happiness, an intrinsic sense of satisfaction, and personal growth, with this growth occurring both in the skills of the activity and in the higher consciousness.
Csikszentmihalyi has elucidated eight components of flow that are potentially relevant for this study:

1. The activity is achievable.
2. We can concentration on what we are doing.
3. The activity has clear goals.
4. It provides immediate feedback.
5. Engagement is deep but effortless, removing awareness of everyday worries and frustrations.
6. We feel in control.
7. The focus is on the activity rather than the self, although the self is strengthened through flow. (The experience of the activity is intrinsically rewarding - the end goal is an excuse for the process)
8. The sense of time is altered. (Csikzentmihalyi, 1990, p.49).

Contemporary notions of flow consider it occurring in a dynamic system between the person and their environment (Nakamura & Csikszentmihalyi, 2002). In this way, although largely a personal experience, the conditions for flow may be constrained or enhanced by sociocultural factors.

Flow is of particular interest to learning as it taps into students’ intrinsic motivation to enhance their skills and to continually repeat this experience of growth (Nakamura & Csikszentmihalyi, 2002). The EYLF makes reference to flow in describing children’s involvement in play and learning, describing involvement “as a state of intense, whole-hearted mental activity, characterised by sustained concentration and intrinsic motivation” (DEEWR, 2009, p.45). The EYLF suggests that educators can recognise this state by children’s “facial, vocal and emotional expressions, the energy, attention and care they apply and the creativity and complexity they bring to the situation” (p.45). Reference to flow in the ELYF is only very brief and therefore the Children Services Central organisation (n.d.) have since produced a small pamphlet to expand upon the concept of flow so as to help educators facilitate it.
These documents specifically point towards flow theory rather than Bruce’s notion of ‘free-flow play’ (1991). However, many of the 12 features of free-flow play do resonate with the eight components of flow, and the overall definition that free-flow play offers the “ability and opportunity to wallow in ideas, experiences, feelings and relationships” also seems to encapsulate notions of the flow state (Bruce, 1991, p. 42). In this way, free-flow play may be able to offer a useful model to encompass notions of both flow and play. In addition, the outdoor environment is often considered particularly conducive to free-flow play (Bruce, 2004; White, 2011). However, although free-flow play does accommodate adults or educators joining in with children’s play, it is commonly associated with free or undirected play. This could be somewhat at odds with the thrust in the EYLF towards educators taking an intentional approach to children’s learning. Therefore, although it may be somewhat pedantic to differentiate between the two, for the purposes of this study, I take flow theory, rather than free-flow play per se, as a theoretical interest.

Flow theory seems particularly relevant for this study as it resonates with the earlier acknowledgement that play is a subjective mental state. Of course, not all play will result in flow, yet when a child is engaged deeply in imaginary play or curious investigation, they would appear to embody notions of flow. In this way, the ideas of Vadala et al (2007) around child-nature play, and child-child play in nature, may offer particular opportunities to observe flow. Similarly, in risky play the balance between boredom and anxiety is almost palpable.

Flow therefore allows for consideration of how children experience nature-based play – as play or as work, or as something enjoyable, relaxing or boring. In addition, the opportunities for interaction embedded within flow – the merging of the self with the environment – offers the opportunity to simultaneously consider the depth of engagement and absorption between the child and nature within their play. Finally, utilising the concept of flow allows for exploration of how the educators may balance the delicate line of scaffolding and extending children’s learning, whilst maintaining a sense of flow in their play.
Summary

In outlining the theoretical interests of this study, I have tried to highlight some of the ambiguities and tensions in adopting an interdisciplinary approach. I have articulated the connections between the different theoretical interests as clearly as possible. Edwards suggests, “There is nothing in the space between paradigms except room for another” (2005c, p. 139) and I hope that by embracing these tensions, I have also been able to provide a clear justification for their use. This intersecting approach will hopefully strengthen the study by offering a framework that can hold the tensions between culture and nature.
Chapter 4: Research Design

Introduction

In this chapter I outline my methodology and methods. These build upon the epistemological and theoretical interests detailed in the previous chapter and take a participatory and collaborative approach towards the research. My chosen methodology draws upon ethnographic principles, and my methods are based upon the highly acclaimed, multi-method Mosaic approach (Clark & Moss, 2001). I will give an overview of both the ethnographic influences on my study and key features of the Mosaic approach, before describing the pertinent ethical considerations and introducing my key research tool, ‘Wattle-Pottle.’ I will then describe the settings and participants and detail how I employed the Mosaic approach in this study.

4.1 Methodology

As detailed in Chapter 3, the methodology for this study takes a qualitative approach informed by a constructivist-participatory epistemology. This epistemology, along with the three theoretical interests underpinning the study, point towards a research design that facilitates and encourages children’s participation in research alongside the significant adults who help shape their lived experiences (in this case their pre-school educators). Viewing children as competent to participate in this way, particularly very young children, has presented a challenge to adult researchers to adapt the research process to meet the abilities of the child and facilitate and support their participation (Danby & Farrell, 2004). Consequently, a wealth of creative, innovative methods aimed at accessing children’s authentic voice have emerged, often involving children in art or play activities, or more recently in capturing their own visual data using cameras or video-recorders (see Clark, 2005a, 2005b; Darbyshire, Schiller, &
However, there is now increasing concern over the uncritical ways such methods may be deployed in research (Gallacher & Gallagher, 2008; Palaiologou, 2013; Spyrou, 2011; Waller & Bitou, 2011). Gallacher and Gallagher suggest, “participatory methods are in danger of being seen as a ‘fool-proof’ technology that – when applied carefully and conscientiously – will enable research involving children to achieve ethical and epistemological validity” (2008, p. 513). They argue that participatory methods should be grounded in ethnographic research, rather than being considered as an alternative approach. Heeding this advice, and in consideration of sociocultural theory, I have used the principles of ethnographic research to guide the methodology for this study. However, it should be noted that the small-scale nature of this study, with relatively short timeframes, restricted the opportunity to engage in a deep, extended ethnographic inquiry.

Ethnography was originally developed to describe the fieldwork of anthropologists, and generally referred to the study of “a group of people who lived in a culture that was remote and quite different” from that of the researcher (Glesne, 1999, p. 7). Therefore, ethnography is considered a useful approach in considering childhood (Evans, 2013) and notions of “children’s culture” (Woodhead, 2009, p. 23) as differing from adult life. However, given my interests in sociocultural theory, children are considered as participants within broader inter-generational culture. In the context of this study it may be more useful to consider the pre-school setting as the ‘culture’ under investigation. Although ECEC centres are physical places, their function and approach is largely socially constructed and this is distinct from other community organisations (Bloom et al., 2005).

In the literature review, the notion of an ECEC culture was alluded to a number of times, for example in the discussions of belonging and family partnerships; examinations of the changing construction of ECEC educators (Ortlipp et al.,
2011; Sumison et al., 2009); and contemporary theorisations of play-based learning (Edwards & Cutter-Mackenzie, 2011; Fleer, 2009a, 2009b, 2011). In addition, there is an indication that in the preschool year there can be tension between the culture of pre-school and the culture of school (Lee-Hammond, 2012). Therefore, articulating ECEC centres as dynamic cultural units allows recognition of the responsibility and duty of care required by educators, which may, for example, influence educators’ perceptions of risk between home and at work. It also acknowledges that children’s nature-based play experiences at preschool may differ considerably from those in other areas of their life (Spyrou, 2011).

The understanding that an ECEC culture exists (both at a collective and centre-specific level), directs a research design that seeks to understand it. Ethnography commonly utilises participant observation and interviewing as the main methods to build a picture of the sub-culture under investigation (Glesne, 1999, p. 10). In an ECEC setting, ethnographic research can comfortably encompass participant observation, interviews with educators and creative, participatory methods with young children. Whilst ethnography does not in itself ameliorate the concerns around the uncritical application of participatory methods with young children, it may offer greater scope for reflexivity by situating interpretation within the cultural milieu of the pre-school (Spyrou, 2011; Warming, 2011).

At this stage, it is useful to reiterate the research aim and questions for this study because they are framed in line with an ethnographic methodological approach.

**Research Aim:** to explore nature-based play in naturalised Australian ECEC playgrounds.

**Research Questions:**

1. How do pre-school children experience nature-based play within naturalised ECEC playgrounds?
2. How do pre-school children and their educators perceive the risks of nature-based play in the Australian ECEC context?

4.2 The Mosaic Approach

The ‘Mosaic approach,’ developed by Clark and Moss (2001), combines “traditional methods of observation and interviewing with the introduction of participatory tools” (Clark, 2005b, p. 13). In this respect, the Mosaic approach offers a way by of conducting an ethnographic study in a participatory manner with young children. It was developed specifically to gather “the voices of young children in the evaluation of early childhood services” and “to create an image of children’s worlds” (2005b, p. 13). Influenced by the world-renowned pre-schools of Reggio Emilia, the Mosaic approach places strong emphasis on different modes of ‘listening,’ to incorporate the many ways in which children may communicate or participate (Clark, 2005a, 2005b). In addition, the development of the method was strongly influenced by a Childhood Studies perspective. These combined influences are evident in the key elements of the approach:

- **multi-method:** recognises the different ‘voices’ or languages of children;
- **participatory:** treats children as experts and agents in their own lives;
- **reflexive:** includes children, practitioners and parents in reflecting on meanings, and addresses the question of interpretation [in this study only children and educators will be involved];
- **adaptable:** can be applied in a variety of early childhood institutions;
- **focused on children’s lived experiences:** can be used for a variety of purposes including looking at lives lived rather than knowledge gained or care received;
- **embedded into practice:** a framework for listening that has the potential to be both used as an evaluative tool and to become embedded into early years practice (Clark, 2005b, p. 13).
Common participatory tools within the Mosaic approach include child-framed photographs and child-led tours, which lead to children making maps, drawings or books. These tools, along with participant observation, form the first part of the method, and the resulting creative efforts are used to facilitate dialogue and discussion through interviews and focus groups in the second part. In this second part, the rationale is that children can reflect on their lived experiences rather than an abstract concept (Clark, 2005b). Clark and Moss refer to this as ‘internal listening,’ whereby children are encouraged to reflect on their own meaning-making, through notions of “what does it mean to be me in this place now in the present moment, in the past and in the future?” (Clark, 2005b, p. 17).

The Mosaic approach therefore can be understood to offer an overarching research design which is customisable, offering a suite of methods to choose from and scope for a personalised style of delivery. Mosaic-style approaches have recently been used in a number of outdoor learning contexts both by Clark and Moss and by other scholars (see Blanchet-Cohen & Elliot, 2011; Clark, 2005b; Melhuus, 2012; Waller, 2007; Waller & Bitou, 2011). In particular, it has been utilised in Forest School and bush kindergarten-style settings, including Waller’s study which elucidated pre-school children’s learning stories embedded within their imaginative play in the forest (Waller, 2007).

4.3 Ethical Considerations

The research methods for this study were approved by the Southern Cross University (SCU) Human Ethics committee (Approval Number ECN-12-274) on 1st November 2012, in line with the Australian National Statement on Ethical Conduct in Human Research (2007). Whilst undertaking this study, I was based at the Centre for Children and Young People at SCU. The Centre is world renowned for its work on ethics in relation to research involving children (Graham, Powell, Taylor, Anderson, & Fitzgerald, 2013; Powell, 2011; Powell & Smith, 2009). During my studies the Centre produced the Ethical Research
Involving Children (ERIC) Charter and Guidance in partnership with UNICEF (Graham et al., 2013). This is an aspirational framework for engaging with ethics, and therefore aims to go above and beyond what may be required by procedural ethics compliance (Masson, 2004, p. 43), which frequently only set minimum standards to prevent bad practice (Alderson & Morrow, 2011).

ERIC prefaces critical engagement with the ‘Three Rs’ - reflexivity, rights and relationship – and aims to facilitate the development of a reflexive research mindset, which considers the balance of power in research relationships between children and adults. The development of ERIC influenced my study and continues to influence my critique of my methods. Therefore, prior to describing the settings and my customised version of the Mosaic approach, I will detail the additional ethical considerations that informed my thinking at the outset, noting that these may have evolved since this time. I will arrange this under the key ethical principles of the ERIC guidance: informed consent, harms and benefits, privacy and confidentiality, and payment and compensation.

**Child Participants**

**Informed Consent**

A core element of ethical research is ensuring participation is voluntary not enforced. This requires participants to be able to make an informed choice about whether to participate or not (Graham et al., 2013). I asked educators to identify children who might have an interest in being part of this study and then prepared an information letter seeking their parent or guardians’ consent. This gatekeeping potentially silenced some children from involvement in the research. For instance, being short of one participant at one of the settings, I enquired with the educator whether a child who had shown a particular interest in me might be able to be involved in the research. She replied, “Are you sure you want him? His mum will definitely say yes.” Using the educators as a conduit to the families potentially offered the families a safer space to voice their concerns, but equally, as Flewitt accounts, it may have placed pressure on families to agree or risk jeopardising their relationship with the educator (2005). I aimed to
reduce this as far as I could through the wording of the letter inviting participation in the research (see Appendix B).

In consideration of ERIC and the wealth of research from other researchers who have created novel ways for young children to indicate their informed consent (see Bone, 2005; Dockett, Einarsdóttir, & Perry, 2012; Flewitt, 2005), I feel I could have given the children greater opportunity to indicate their consent at the outset. Instead, I relied upon the children's ongoing assent throughout the research process (Dockett, Perry, & Kearney, 2012). I explained the purpose of the research to the children in age-appropriate language at the beginning and informed them that they could leave the research activities at any time. Therefore, although parental consent was received on behalf of the children, minute-by-minute dissent from the child could over-ride this at any time. Cutter-Mackenzie describes a similar approach to participation when gathering pre-school children's perspectives (see Cutter-Mackenzie et al., 2013; Edwards & Cutter-Mackenzie, 2011). Within her 2011 study a child left the research activity to do some painting instead, but later chose to return and continue participation. With this in mind, the Mosaic approach offers a flexible style, allowing individual children a degree of choice over which activities they participate in, whilst at the same time remaining consistent with the objectives of the overall study.

**Harm and Benefits**

Given the theoretical perspective of Childhood Studies and notions of children's rights, it is pertinent to this study to protect children from harm, and beyond this, to ensure that their participation is genuine. Gallacher and Gallagher (2008) have criticised the implication that child-friendly methods are required to empower children's participation, suggesting that this contradicts the very notion of children's agency. The use of play could be construed in this way, yet play is often considered by children as their domain (Lowe, 2012), and a key time when they exert their agency. Further, the literature review emphasised that play is a particularly engaging and enjoyable state and that children's well-being is increased if they subjectively view an activity as play rather than work (Howard & McInnes, 2013). Therefore, the methods are designed to be active
and to create a playful manner, facilitating children’s participation in a similar style to the contemporary play-based learning advocated by the EYLF.

Unlike the responsive time-relevant relationship between educators and children at early childhood settings, I was conscious that the topic itself was unlikely to be aligned with the children’s play interests at the time of the fieldwork. In addition, I was concerned that the children might be daunted by the prospect of being involved in research, something they had little experience of. Indeed, the children were unfamiliar with the role of a researcher asking, “Are you someone’s mum? Are you a teacher?” in an attempt to understand how they might be expected to behave around me. Therefore, as noted in my third entry in my research diary, I decided to take along a soft toy to give the children initial play signals, situate the research within more familiar territory for them, and to provide a hook to capture the children’s initial interest in the research theme.

I prepared the following script:

Hello, my name is Julia and I’m from Scotland. When I arrived in Australia I found an animal hidden in my suitcase! (slowly pull Billy out of the box to meet the children) I’ve called him Billy. But he doesn’t have anywhere to live. I’m not sure where Billy could live in Australia. Do you have any ideas? (Encourage all responses, note ideas beyond the pre-school they might suggest).

Would there be anywhere like that / suitable at pre-school? (when somewhere in the pre-school grounds is suggested) Let’s all go and take a look. (Depending on their suggestions, ask the children if there is anywhere more natural and/or other natural spaces in the playground that we could compare)

I chose a badger, as I was keen to use an animal that would likely be unfamiliar to young Australian children, so that they would have no prior knowledge or preconceptions. For instance, I did not want to use a koala, which might cause the children to feel that they needed to give the ‘right’ answer that koalas live in trees. I was also conscious not to choose a British animal that is feral in Australia
(such as a fox), and to which the children may have prior negative connotations. However, I began to wonder whether the children would ask me where badgers live in Scotland and thereby still seek to show me the ‘right’ places in the pre-school grounds.

Therefore, encouraged by local pre-school educators, I decided that an imaginary creature might be a better option. I had been hesitating because I was concerned that an imaginary soft toy may not embody the notion of nature. However, I felt that the advantage was that I could make something with a combination of fur, skin and feathers suggesting an ability to live in the broad range of natural play spaces that may be found in pre-school grounds. Having settled upon an imaginary animal, I wanted to choose a name that suggested natural connections, embraced playfulness and fun, and would not necessarily be gender-specific. I decided to select the common name of a native Australian plant to make the connection to nature, and then create a rhyming component to embody playfulness. I came up with a few options: Mallee-Pallee, Mallee-Pallee Ally, and Wattle-Pottle Dot, before settling on Wattle-Pottle (see Picture 4.1).

These new ideas made me question the validity of my script. I was concerned that I might be setting up a false expectation that Wattle-Pottle would come to live at the children’s pre-school. Additionally, I realised that I was not being entirely fair to the children and that I was attempting to engage them and facilitate their participation to such a degree that I was actually entirely shielding the subject of the research from them. In effect, I was curtailing their participation and involvement in the direction and journey of the research and blocking other potential avenues in which they may contribute information about their nature-based play.

I therefore decided to use Wattle-Pottle as a tool to more openly convey my research aim to the children, and more closely engage them in the joint meaning-making advocated by the Mosaic approach (see Appendix D for final script). By taking Wattle-Pottle on the journey with us, the children were able to participate in a range of different ways, sometimes taking hold of Wattle-Pottle and being
the ones to ask questions of me or taking Wattle-Pottle off to an area where they wanted to play or photograph. Therefore, Wattle-Pottle held power in the research and the children the capacity to manipulate this, something that may have been more difficult to negotiate had the relationship been solely between adult and child.

![Figure 4.1 Child-framed photograph of research tool, Wattle-Pottle.](image)

In this way, I used Wattle-Pottle to attempt to diffuse dominant power dynamics and mitigate any potential harm that might occur from undermining children’s agency and participation. The other key potential harm that concerned me was discussing natural risks with the children. I felt strongly committed to ensuring that participation in the research did not cause the children to fear these risks. Therefore, I designed the discussion questions carefully to try to prevent introducing any new ideas and instead to capture the children’s own knowledge and thoughts about the risks in nature. This was not entirely successful, although interestingly the children used Wattle-Pottle to let me know if they did become scared. For instance, one child suggested, “Wattle-Pottle might be getting a bit
scared now,” and another confided, “Wattle-Pottle, I’m feeling a bit scared of them throwing those rocks.”

**Privacy and Confidentiality**

To protect the privacy of the children I have not disclosed the location or name of their pre-school. In addition, although photographs were taken by the children of themselves and of their playgrounds, these were deleted from the camera after printing and the one set of printed copies were used only in the children’s creative work, which was left at their pre-school. The only exception is the one child-framed photo of Wattle-Pottle included above, in which no children are present, and the background comprises such a small component that it would be impossible to identify the centre.

Despite these concerns for privacy, I wanted to offer the children the opportunity to have a voice in the study, allowing them to track their progress in the research in the future and their families to identify their child’s contribution (Smith et al., 2000, p. 25). Therefore, I chose to follow the increasingly common format of offering the children the opportunity to choose their own pseudonym (see Flewitt, 2005; Roe, 2006).

**Payment and Compensation**

I chose not to offer incentives to the children participating, as only a small number were involved in the research and therefore I felt it would be unfair to their classmates. However, I anticipated that the children would enjoy talking about their play and their pre-school and feel proud to take the researcher on a tour. Indeed, the children were very excited to get to play with Wattle-Pottle and to wear their wooden name badges, and both were a source of great interest to the other children in the class. Therefore, the children were delighted to take home their wooden necklaces at the end as a small keepsake of their participation.

**Educators**
Informed Consent

Whilst I have prefaced the ethical considerations relating to children, I was conscious that it was important also to consider ethics in relation to the involvement of the educators. I wanted to interview two educators from each site, but as above needed to ensure that participation was voluntary. This was difficult as I initially liaised with the directors, and as such the educators may have felt a sense of employee obligation to take part. Therefore, I created an invitation for all staff, which explained what participation would involve and highlighting the voluntary nature (see Appendix C).

Harm and Benefits

In relation to harm and benefits, it was important to acknowledge that interviewing differs from general conversation in that it is “a purposeful interaction in which one person is trying to obtain information from another” (Gay, Mills, & Airasian, 2006, p. 418). As such, I was concerned that the educators may have felt that they were being judged by an ‘expert.’ However, a qualitative ethnographic approach that utilises participatory methods, seeks to establish the educator as the expert of their own experiences, reassuring them that there is no right or wrong answer. In relation to this, Denzin and Lincoln suggest that as an interviewer it is important to think consciously about “how to present oneself” (2000, p. 655). As such, similar to Miles’ notion of being a “conversational partner” for the reader (Miles & Huberman, 1994, p. 4), I felt it was important to disclose a little and be such a partner for the interviewee. In this respect, not being trained as a teacher, and coming from overseas offered an advantage as it allowed the educators to relax in the knowledge that they were more experienced and could ‘induct’ me into Australian ECEC and risk culture. This positioned me to ask probing questions, with scope for rapport building around cultural comparisons.

Privacy and Confidentiality

Despite this, the educators may still have felt that they would be judged professionally by others who might read the published results. To minimise this, I have de-identified the data so as not to disclose information about any
individual nor connect them to their workplace. This was clearly communicated to the educators so that they could feel free to participate fully in the research. This meant that I was unable to provide the centres with as much detailed feedback as I had initially anticipated, as it would have been easy for them to identify the educators within their centre. Therefore, I created a general feedback summary for educators and families (see Appendix F), in addition to a simplified one for families to read aloud to their children (see Appendix G). Ideally I would have liked to include some visual imagery on the children’s version but I didn’t have enough time to do so prior to the community pre-school breaking up for the school holidays.

**Payment and Compensation**

Consistent with my approach with the children, I chose not to offer incentives for educators to take part in research. Instead, the centres and the educators were keen to be involved and saw it as an opportunity to improve their practice and think further about the nature-based play opportunities they offered. Therefore, small changes to staff practice may result, which may benefit the children at the centre.

As will be evident from the information presented, my research design has been developed with the intention of providing a safe space for all participants, while at the same time issuing a genuine invitation to children and educators to participate in meaningful ways in the study.

### 4.4 Description of the Settings and Participants

**Settings**

In this study I worked with two pre-school settings. Both were based in medium-sized Australian towns of comparable size and both offered what could be described as mainstream early childhood education. One centre was a private long day care centre for approximately 80 children from 0-5 years of age, plus before and after school and vacation care. At this centre I worked only with the
pre-school class, aged 4-5 years, which they called pre-kindy. In the interests of privacy and anonymity I will refer to this centre as Setting A. The other centre was a not-for-profit community pre-school offering daily pre-school education and care for approximately 45 children aged 3-5 years. I will refer to this centre as Setting B.

The outdoor spaces of both centres were very comparable: both had large, natural yards with mature trees, small bushes and other vegetation, and live grass underfoot. Both had some natural landscaping features involving slope, rocks and bridges, as well as nature-specific features such as frog hotels (pipe constructions aimed at encouraging frogs). Both also had large sandpits, cubby houses, and some playground equipment, including swings, which at both were surrounded by bark rather than artificial softfall. In addition, both centres had recently added vegetable beds and passionfruit vines, as part of a process of expanding opportunities for children to connect with nature and learn about sustainability (see Figure 4.1 below for impression paintings of the playgrounds). In relation to natural Australian risks, both pre-schools were situated in a sub-tropical region with many different types of snakes, including dangerous brown and red-bellied black snakes, and many types of spider, including redbacks.

Figure 4.2 Impression paintings of the two ECEC playgrounds in this study

![Setting A](image)

![Setting B](image)
Participants

Educators

I interviewed 2 educators from each centre, 4 educators in total. I refer to them as educators or assistant educators (see below) in line with the terminology used in the EYLF. The EYLF prefers the use of the word educator rather than teacher to encompass the wide range of qualifications that early childhood workers hold. I semi-purposively selected the educators involved in this study by requesting at least one person from each centre be a degree-qualified educator. I established this caveat because an early childhood degree is required for the positions of greatest influence in ECEC centres, such as director or room leader, and it was envisaged that these would be influential in centre-specific culture towards nature-based play and risk.

To protect the professional identity of the educators, I will refer to the educators at Setting A (the long day care) as A1 (Setting A, educator 1) and A2 (Setting A, educator 2). Educator A1 was the room leader for the pre-school (pre-kindergarten class). She was a degree qualified early childhood specialist with 16 years experience, who had been working at the centre for 6 years. A2 was one of two assistant educators in the pre-school classroom. She had a TAFE Certificate III qualification in childcare. She had learned ‘on-the-job’ at the centre and once qualified taken up a position there. She had been working at the centre for 8 years. In my narrative I may sometimes refer to her as the assistant educator for fluidity and clarification.

At Setting B, the community pre-school, I will refer to the educators as B1 (Setting B, educator 1) and B2 (Setting B, educator 2). Educator B1 was the director of the centre and also the room leader for one of the classes at the centre. She was a degree qualified early childhood educator and had worked at the centre for 24 years. B2 was the room leader of the other class at the centre. She was a diploma qualified early childhood educator and had been working at the centre for 28 years.
**Children**

I worked with 6 children from each centre, 12 children overall. 11 of the children were aged 4-5 years, and were often some of the oldest in their class. One child at Setting B (the community pre-school) was only 3 years old. In line with my aspirations to make the experience enjoyable and fun for the children, they were invited to make up their own pseudonyms. I wrote their chosen pseudonyms onto wooden necklaces, like the one I wore when I first attended the centre and which the children had admired. We all wore them when we were ‘doing’ our research.

At the long day care centre (Setting A) the children chose pseudonyms depending on their personal interests. I worked with four boys, Ninja Turtle, Superman, Spiderman and Surfing, and two girls, Cat Woman and The Bead One. At the community pre-school (Setting B) the children chose to continue the research theme and label themselves Dr and then their first initial. Therefore, at Setting B I worked with Dr.K, Dr.E, Dr.F, Dr.J, Dr.L and Dr.M. All were girls expect for Dr.F. Serendipitously, the different style of the children’s chosen pseudonyms makes it easy to identify which centre the children attend in the data presented throughout the following chapter.

**4.5 Method**

**The Mosaic Approach**

Data were collected using the Mosaic approach over 4 sessions, with each session taking place approximately one week apart. In the first session, I introduced myself to the children and explained the role of a researcher. In an attempt not to disrupt the children’s usual engagement with nature, I initially told the children that I was interested in finding out more about children’s outdoor play. For the first two weeks I undertook participant observation, which helped to build trust with the children by allowing them to get used to me and get to know me. I found it was helpful to spend a little longer than I had initially planned and join in with routines, such as snack time, and indoor games, such as
musical statutes, to build rapport with the children. I recorded my observations by hand on a matrix organised under concepts of childhood, play, nature and risk, and typed these up as soon as I returned, fleshing out my notes in an ethnographic-style field note diary.

In the third session, I introduced the children to Wattle-Pottle, and explained about Wattle-Pottle's interest in nature-based play. I invited them to take Wattle-Pottle and I on an active child-led discovery tour of the natural play spaces within their pre-school grounds from their perspective. The tours were undertaken in groups of three to assist in creating an ambiance of informality and playfulness (Howard & McInnes, 2013; Sturgess, 2003). In line with the Mosaic approach, the children’s ideas were collected “on the move” (Clark, 2005b, p. 14) with the use of a portable MP3 recorder, which I wore around my neck to leave my hands free to hold Wattle-Pottle and the camera if required. Generally though, the children wanted to carry Wattle-Pottle and to take photographs of themselves holding Wattle-Pottle in different parts of the playground. The children related stories from their play to me and explained why they liked to play in some areas more than others. Appendix D includes the script and guiding discussion questions for this visit.

In preparation for the final visit, I printed the photographs that the children had taken and typed up key sound-bites from their dialogues, including a visual picture to represent the content of each sentence and aid the children’s understanding of the text. I also printed some warning signs such as red, hexagonal stop signs and yellow, triangular caution signs, which we could use to explore the concept of risk. The children and I used these materials to create a big collage of their playground, adding collected natural materials to decorate it. Whilst undertaking this process we further discussed nature-based play and considered any risks that Wattle-Pottle might need to be aware of. These discussions were again recorded on the portable MP3 recorder and Appendix D also includes the discussion questions for this visit.

Interviews
I arranged to interview the educators at a mutually convenient time during the four weeks of my fieldwork. These were conducted one-to-one, lasting 30-60 minutes, and recorded via the portable MP3 recorder. In line with common practice in qualitative interviews, I made use of a range of question styles, largely based around a semi-structured approach. For example, “What sorts of opportunities are offered to allow children to play in nature [at your centre]?” followed by “How do you feel about the opportunities that your centre provides?” These interviews engaged the educators in dialogue to build a narrative around their reflections upon nature, play and risk and the opportunities provided at their centre (see Appendix E for the question matrix). In this way I attempted to facilitate opportunities to gather the educators’ ‘voice,’ which can sometimes be missed in the cultural construct of ECEC policy.

My questions were closely linked to the research topic and as such may be criticised as leading questions that impose my own “presuppositions and constructions on the data” (Crotty, 1998, p. 83). In acknowledging this potential limitation I have detailed my personal orientation, highlighted my influences and explained my approach. This is aimed towards Crapanzano’s notion of moving from being an “invisible researcher,” to a position where readers learn about both the researcher and the interviewees (1980 cited in Denzin & Lincoln, 2000, p. 661). This paradigm frames interviews as “negotiated accomplishments of both interviewers and respondents that are shaped by the contexts and situations in which they take place” (Denzin & Lincoln, 2000, p. 663). Nevertheless, Wolcott cautions that “what people tell us tends to reveal how they believe things should be. What we ourselves observe firsthand is more likely to reveal how things are...” (1992, p. 20). Contradictory evidence has been particularly found between the beliefs and behaviours of ECEC educators (Tonyan, Mamikonian-Zarpas, & Chien, 2013; Waite, 2011). With this in mind, the educator interviews serve as a complement to my observations and the data collected about children’s lived experiences of nature at pre-school.

**Process of analysis**
As soon as possible after each visit or interview, I typed up all transcripts and field notes. This timeliness was especially important following activities with the children, as I found it sometimes difficult to distinguish between individual children’s voices in the recordings of their group discussions. However, the recordings themselves were usually clear and I found I could largely recall the content of each child’s contribution, helping to match the child to their voice. Following the first batch of recordings, I printed out any sections of dialogue I was uncertain about and read them to the children, either to confirm the speaker or that I had understood the meaning of their story. The children at Setting A in particular really enjoyed this, although I found that they were disappointed if it transpired that I had not printed out any of their stories for clarification. I was also able to follow-up some of the stories with their educators for their interpretation, as will be seen in the following chapter in the encounter with the mud pit.

In analysing the transcripts and field notes, I began by manually colour-coding them around the five intersecting areas of interest in this study: childhood, early childhood education and care (ECEC), play, nature and risk. I then took a thematic analysis approach using focused coding and memoing across and within these five broad categories (Lofland et al., 2006). Influenced by Glaser’s constant comparative method (1965) I cyclically readjusted, collapsed or expanded the emergent themes and sub-themes, shifting them within and across the five categories. The final themes and sub-themes most pertinent to answering my research questions are presented in the following chapter.

Before incorporating relevant data into the following chapter, I ‘cleaned’ it to remove additional words common in spoken English such as ‘um,’ ‘like’ and ‘but,’ repetitions, and occasionally spoken grammatical errors (particularly by the children). I felt that this offered greater dignity and respect to the participants in translating their evident communication abilities more clearly into the written word.
Summary

This chapter has built upon the ontology, epistemology and theoretical perspectives described in Chapter 3. Taking an ethnographic approach, the methods were guided by key understandings from Childhood Studies and sociocultural theory to choose an approach that supported children’s active engagement alongside that of their educators. This resulted in the selection of the Mosaic approach and the subsequent design of the research tool, Wattle-Pottle, and associated participatory activities. Therefore, collectively, the theoretical framework, methodology and methods as outlined above, were carefully designed to ensure I could fully explore nature-based play at the two Australian preschools involved in this study. The resulting data is presented in the following chapter, Chapter 5: Results.
Chapter 5: Results

Introduction

In the previous chapter I detailed the research design for this study, which is based upon the Mosaic approach (Clark, 2005b). I also described the research participants (4 early childhood educators and 12 pre-school children) and the two early childhood education and care (ECEC) centres, Setting A and Setting B. It was evident from these descriptions that the playgrounds at both settings were similarly naturalised, and that the centres were both actively adding features to increase opportunities for the children to engage with nature. Therefore, it could be assumed that the children would all experience nature-based play in similar ways, depending upon their personal interests. However, a quite marked difference was evident between the experiences offered at the two centres, and to a lesser degree between the children’s perceptions of nature-based play risks.

Through my presentation of the findings in this chapter, I aim to elucidate how pre-school children experience nature-based play within naturalised ECEC playgrounds (Research Question 1) and how pre-school children and their educators perceive the risks of nature-based play in the Australian ECEC context (Research Question 2).

To facilitate this, I present the data under the five intersecting areas of interest in this study: childhood, ECEC, play, nature and risk, as shown in Figure 5.1. I used this structure to analyse the findings, refining, collapsing and shifting the emergent themes under each of the five headings (Lofland, Snow, Anderson, & Lofland, 2006; Miles & Huberman, 1994). This iteration lists the final emergent themes and sub-themes that most inform my research questions. Therefore, Figure 5.1 acts as a visual map for this chapter and I will present my findings by moving sequentially across the areas of interest from childhood through to risk.
5.1 Childhood

This first section explores educators’ conceptualisations of childhood. I did not specifically ask educators how they frame, or view, children, but rather their apparent conceptualisations emerged through our conversations about play, nature and risk. Two main ideas relating to conceptualisations of childhood emerged: capability and trust. I will consider each in turn.

Capability

The educators in this study appeared to hold opposing views about the capabilities and competencies of pre-school children. At Setting A, the educators largely referred to the children’s capabilities in relation to their age. Being the oldest age group at the centre they were framed by the assistant educator (A2) as being more competent than the younger children:
A2: Not so much the young guys, but these guys will know if there is something sharp not to go near it.

A2: We just encourage them not to run with sticks, in case they do fall over...[and] normally, well our group, they are normally quite good, and they listen and they normally take it up, then go, “Oh ok I'll put the stick away,” or, “I'll stop running.”

However, the room leader (A1) also drew attention to their limited capabilities in relation to adults:

A1: [The parents] don’t even check their children’s bags and even at this age, at four [or] five, they are actually trusting their children to put the right things in their bags, instead of a bag full of toys: “I put a jumper in that bag!” - “Nah, he had a bunch of toys in his bag!” They are trusting their child to do the right thing, but at four and five it’s like, “Jumper? Nah let’s take all the dinosaurs to school!”

A1: A child’s not going to differentiate [between dangerous and non-dangerous spiders]; I actually find it very hard to differentiate between them.

At Setting B, when the Director (B1) facilitated the implementation of the Early Years Learning Framework (EYLF), it resulted in a shift in mindset for educator B2 in terms of how she framed the children:

B2: It was a big change...I just thought, “...If we don’t have things drawn and they don’t learn to cut on a straight line, and then a semi-circle and then a circle, how are they ever going to do it?” And I thought, “Look this is fine... we’ll start this, but at the end of the year I don’t think we’re going to have children with skills...ready for school.” And it probably took a term and I was totally blown away, because I could not believe what they were cutting and what they were doing and it was because it
was driven by them...I understood then that that was what it was all about, and their skills are amazing and what they can do is absolutely incredible.

Consequently, she now felt that children should not be limited by adults’ preconceived ideas of their capabilities, and throughout the interview appeared to frame the children in her class as predominantly capable:

\[B2: I\text{ think we just learn with them.}\]

\[B2: You never expect that they can’t do it.\]

\[B2: I\text{ think sometimes people underestimate children.}\]

Therefore, between the centres in this study, contrasting conceptualisations regarding the capabilities and competencies of pre-school children emerged.

**Trust**

In the context of nature-based play specifically, these contrasting conceptualisations were conveyed largely in relation to trust. Firstly, whether the educators trusted that the children would react appropriately in risky situations in nature, and secondly, whether they felt able to trust the children with natural play materials such as sticks and stones.

Firstly, B2 reinforced her conceptualisation of children as capable by demonstrating confidence in the children’s ability to react appropriately in risky situations: “And they know, they can identify them [snakes, spiders], and they know that they get an adult.” Whereas, the room leader at Setting A (A1), in accordance with her acknowledgement of the limitations of pre-school children’s capabilities, did not trust that the children would react appropriately:
Researcher: How about the children themselves? Do you have a level of trust in them if there was a snake or something in the garden that they would react appropriately?
A1: No.
Researcher: No?
A1: No (laughs).
Researcher: Do you think that is because it has not been tested? Or just through your experience?
A1: It’s because they are children. They are going to touch whatever they want to touch, they really don’t understand risk as such... It’s like, “Oh God we just [talked / taught you about] snakes! You’re not supposed to chase the snake.” No, I don’t trust them at all.

Secondly, aligning with her apparent focus on the children’s capabilities, the Director of Setting B (B1) demonstrated trust in the children’s ability to play safely with the stones in the dry creek bed when she said, “And they don’t tend to throw them. 99% [of the time] they’re doing something constructive with them, occasionally someone might throw them, 1% of the time maybe.” In contrast, the room leader at Setting A (A1) preferred not to allow the children to play with sticks, “because they tend to start whacking each other with them.” Although, the assistant educator (A2) clarified that it is just the “big [sticks], just because they are quite rough these boys, with each other, but normally with the small sticks they’re just building [pretend] fires, it’s just when they start running around after each other with them. Then we just encourage them not to play with them.”

Therefore, the educators in this study appeared to position children across a capability continuum, with this positioning seeming to influence the degree of trust they placed in them. In a nature-based play context, these conceptualisations of childhood appeared to affect whether and how the children were allowed to use riskier objects such as sticks and stones in their play.
In drawing this section on childhood to a close, the results can be distilled into the following finding, which has significance for both research questions in this study.

**Finding 1:** Differing beliefs about childhood appear to influence the trust educators afford to pre-school children regarding access to ‘riskier’ materials for nature-based play such as sticks and stones.

### 5.2 Early Childhood Education and Care (ECEC)

This second section focuses on the institution and practice of early childhood education and care. Numerous issues relating to this topic emerged in dialogue with the educators, however only two offer insights that specifically inform the research questions for this study. The first theme, family partnerships, links to the discussion above about trust, emphasising the importance of trusting relationships between educators and families. The second theme also draws upon the first section, with conceptualisations of childhood having implications for pedagogy. I will consider family partnerships first, followed by pedagogy.

**Family Partnerships**

The EYLF emphasises the importance of children’s sense of belonging and building strong relationships between children, their families, educators and the centre. The narratives of the educators revealed differing levels of engagement in family partnerships between the two centre:

*A1: They might react to you differently because they know you, [compared] to another staff member, because we are all shift workers. So if somebody else hands them back an accident report and says, “Oh your child just fell over and grazed their knees,” if they don’t know that staff member as well they can react differently.*
Researcher: And do you think the children have the opportunities to do those sorts of things [play in nature] when they are not at pre-school?
A2: I don’t know, to be honest.
Researcher: I guess it’s going to be different for each family...
A2: Yeah, probably different for each family I guess. I would assume so. Some going home in their own backyard, but... I just don’t know.
Researcher: So it’s not something that [the children] talk about?
A2: No, not really.

B1: I did a Cert IV in Training and Assessment last year, so I could go and teach [trainee ECEC educators at college], but I still haven’t actually sent my CV out to anywhere yet because, I don’t know, I’m still very attached to the pre-school and the children and the families.

B2: It’s family, and I feel really close to them all...[in all my years at the centre] I’ve had children and grandchildren and cousins...so it’s very nice. Special.

Building upon these levels of engagement and rapport, the importance of trust within the relationships between educators and families became evident. For instance, the room leader at Setting A described feeling anxious about minor childhood accidents because she could not trust families to react consistently, or to not over-react:

A1: That definitely adds to your stress level. Sometimes you can’t pick how parents are going to react...because they might be stressed from something...themselves, so sometimes they might react one way and sometimes they might react another way...One day [their child] might have tripped over and [they] think, “...Oh it’s fine, they were just playing, she’s always tripping over.” And other times, “What happened? Did somebody push her? Are they ok? Where’s the accident report? It’s like being on a trampoline all the time, you never quite know which way it is going to bounce.”
Consequently, she described having to curtail the children in their nature-based play:

A1: It is never going to be as good as the home environment in that respect. It’s just not really comparable because you do your best, but it is still an environment where you have lots of staff looking after a lot of children who belong to other people. So you do have to reduce the risks as much as possible.

Researcher: Do you feel like you are having to curtail them?
A1: Definitely, definitely. If you are a parent you can afford to let them take more risks, I think, because you know you don’t really want to stop them from doing stuff, but as an educator, in loco parentis, it’s like you do want to curb some of those risks because you just don’t want them to climb up there and fall. It’s different.

Further, the assistant educator at the setting described feeling constrained not just by safety, but also by parental pressure towards the weather and dirt:

A2: If it’s too cold we’re not allowed to take them out, because the parents don’t like them being outside if it is cold. Even if it is a sprinkle of rain they have to come in, they’re not allowed to stay out in that, because parents don’t like them out in the rain.

A2: The parents didn’t like them getting too dirty.

In contrast, the Director at Setting B (B1) said, “Generally our community of parents is quite comfortable with what we do. Certainly no one has ever complained that I can think of.” Further, she mentioned that “parents sometimes check whether the children are allowed to be barefoot as some centres don’t allow it,” suggesting that rather than dictating to the educators, the families respected their professional judgement. Indeed, it appeared that the educators at Setting B had established themselves as trusted professionals in the context of young
children. Therefore, rather than being a place where children’s activities were curtailed, the centre seemed to be positioned as a key site, within the landscape of modern childhood, for children to experience nature-based play:

*B2: Maybe...they can’t do it at home but it’s good if they do it here.*

*B2: ...with playing outside, and in the dirt and stuff like the mud pit, sometimes these children go home in quite a state! Anyhow, parents are like, “Oh well, that’s what they’re here for.”*

Therefore, the educators in this study appeared to have quite divergent levels of rapport and trust in their relationships with the children’s families. These relationships appeared to influence the children’s experiences of nature-based play by impacting upon the educators’ willingness to offer risk, allow the children to play in the rain, and to engage in messy play outdoors.

**Pedagogy**

The second theme associated with ECEC is pedagogy. The EYLF supports a medley of teaching strategies from free-play to intentional teaching and this range was evident in the educators’ narratives.

At Setting B, having apparently challenged herself to frame children capably, B2 explained how this was reflected in the pedagogy at the centre:

*B2: You know most days what we think that we’ll do, that might flow on from the day before, [well] something else kind of evolves, but...we follow them, listen to them, and follow them. And it's just not how it was, really, but...I think it's very good. It's much more creative.*

*B2: You kind of have to back off a bit more. It’s certainly not structured like it ever was...All the shelves are open and they can just choose whatever paper [or] if they want cardboard. The children just go and...*
get what they want. And we make them really responsible for the bins, the recycle bins [and] what goes in there.

B2: They come to the mat if they want to be able to listen, if they feel like their body is ready to listen. “This is a listening area, if you don’t think you are ready to do that then maybe you want to go over there and do something else.” So they are making the choices, and they’re responsible and then they get that personal growth too.

Educator B2 felt that the personal growth and responsibility this approach offered to the children was reflected in their interactions with one another outdoors:

B2: You know this morning outside on the monkey bars one of the little boys couldn’t work out how to do it and [another child] said, “Come round, come on, I’ll show you.” I just think that all that stuff is developed a lot.

Indeed, the influence of their child-led, collaborative approach was also evident in the way in which the children at Setting B engaged with the participation offered to them in this study:

Researcher: Have you found Wattle-Pottle helpful?
Dr.K: Yeah and tell them [the next group of children at the next preschool] all the words we said.
Researcher: All the things about nature?
Dr.K: Then they might be able to answer like a different word to that, that joins in with that.

At Setting A, the educators also described observing the children and drawing upon their interests:
A1: If it is a structured activity it tends to come from their free play choices, so [we] watch what they are doing and see what they are interested in and then we just work from there.

However, these observations tended to lead to the planning of adult-directed activities, such as the painting activity I observed when I arrived at the setting one day:

Field Notes: Setting A, Thursday 6th June:
Today, a painting table had been set up and every child was required to come to the table to create a night picture. The same black piece of A4 paper was laid out, one for each child, with their name and the date already written on it by the educator.

Alternatively, the children’s interests were used as stimulation to set up the preschool environment for free play:

A1: If they’re collecting sticks outside and making [pretend] fires, we have brought that inside and made [pretend] campfires and added Eskies [cool-boxes] and chairs and tables and tents and things.

Therefore, at Setting A the educators appeared to take a bilateral structured or supervisory approach, with the supervisory aspect predominating outdoors:

A2: It’s more free play outside (long pause).
Researcher: Why do you think you focus more on free play outside?
A2: Because normally it is very hard to get them to sit down when they are outside to do something (laughs), yeah they just like to run around. They are just happy doing their own thing rather sitting down doing a task that has been given...sometimes we’ll go outside to play games and stuff like that but....normally it’s free play when they’re out there.
A1: When we go outside, I tend to let the kids play by themselves, unless they are being a bit unruly I guess and then you interact more with them and focus them and say, “Let’s play Hide and Seek” or “Let’s play What’s The Time Mister Wolf.”

In line with this, spontaneous collaboration was not evident:

A2: Last year...they were quite into collecting those little nut seedy things, I don’t know what they are. They’re like little nut things that are just fallen out of the trees, and we filled up quite a few jars of them last year.

Researcher: What did they do with them?
A2: They were going to use them for art and crafts but they never did they just sat in the jars! (laughs)

Instead, time outdoors was valued for allowing the children to expend excess energy:

A1: It is a very long day when they are inside, and children are just very active anyway. They don’t like being inside all the time.

A2: And just so they use some energy up too when you pick them up, because when they’ve been stuck inside all day they are going batty, because they just want to run around.

A1: Munch & Move...it’s a health program aimed at pre-school aged children and younger aged children. We have a staff member here who is trained in that... Intentional teaching wise she’ll come and take half my group and they’ll go outside and they’ll do ball games and running games and activities and whatnot, and then they’ll swap over. So that happens quite regularly.
This suggests that there were divergent conceptualisations of the outdoor playgrounds between the two centres. At Setting B the outdoor area emerged as a valued extension of the classroom area for collaborative teaching and learning opportunities: “I think we’ve taken the structure out of the outdoor experience as well, a bit like within the rooms” (B2). Whereas, at Setting A, the classroom emerges as the dominant place for learning, with the outdoor area seeming to offer children a play break, perhaps more akin to recess at school: “[It’s] like their escape” (A2).

Therefore, whilst attempting not to over-emphasise the ostensible polarity between the two centres in this study, they do emerge as utilising distinguishably different pedagogies: from spontaneous, flexible, collaboration with children, to a more planned and bilateral approach delineating child-led play and educator-led learning activities. Further, within these divergent pedagogies the outdoor area appears to be conceptualised in opposing ways.

In concluding this section on ECEC, I identify two further findings with significance for the research questions in this study.

**Finding 2:** The quality of reciprocal trust in the relationships between educators and the children’s families seems to impact upon the nature-based play opportunities educators provide for pre-school children.  
**Finding 3:** Pedagogical approach influences educators’ conceptualisations of the outdoor play space.

### 5.3 Play

Having explored the ways in which the educators across the two centres approached play in their teaching practice, in this section I turn to the children’s experiences of play. Consistent with the Mosaic Approach, the children’s data draws upon a greater mix of observational field notes and dialogue.
At Setting B the children appeared to engage frequently and deeply in focused play over sustained periods of time:

Field Notes: Setting B, 14th May am, 22°C, 97% humidity, fully cloudy
Some boys were playing in the small patch of trees and shrubs, one boy slightly climbed a tree and spent 30 minutes or longer alone amongst the branches imagining that he was the captain of a ship.

In addition, mirroring the collaborative approach of their centre’s pedagogy, they were often autonomously social and purposeful in their play:

Field Notes: Setting B, 14th May am, 22°C, 97% humidity, fully cloudy
Dr.E. and a group of around 7 children spent over 40 minutes playing in the sandpit building a big dam together. They discussed their plans and problem solved when it collapsed, deciding it would be a waterfall instead. They used lots of water, which they collected from the water butt in a bucket and carried over to the sandpit themselves. As the hole got bigger and filled with water, the children stood in it in their bare feet. By the end of their play session their feet, legs and arms were covered with wet sand. The educator only intervened when they left the tap running but hadn’t put the bucket underneath or if they let it overflow - “Look at all the water we’ve wasted.” The water butt has a gauge on it so the children can see how much is available.

In contrast, at Setting A, the pre-school children seemed to frequently change activities during their outdoor play time:

Field Notes: Setting A, 25th May am, 14°C, 87% humidity, no wind
Throughout the past two sessions I haven’t really seen Cat Woman engage in play for any length of time, she’ll go on the swings for a bit, play in the sand for a bit but it is in very, very short burst. She rarely seems to engage in play with the other children, although she will help
the younger children on the swings and is friendly and sociable with everyone.

Therefore, although a sense of joint-purpose was sometimes evident, it did not often appear to be sustained:

Field Notes: Setting A, 25th May am, 14°C, 87% humidity, no wind

Ninja Turtle and Superman found some new pieces of bamboo in the sandpit today. They excitedly decided to use them as the basis for a sculpture, adding all of the buckets and spades, balancing them all carefully. After just a couple of minutes they had built a unique sculpture that was quite a feat of engineering! They called over to an educator to come and take a look. She was excited with what they had created and told them to wait whilst she ran to get the camera. After the photos the boys were at a bit of loss as to what to do next. They wanted to go and play somewhere else but felt the need to protect what they had made from the other children. The sculpture collapsed soon afterwards and the two boys sat in the sandpit for a while with the materials. I asked Ninja Turtle, “What are you making now?” “I don’t know,” he said. “I’m getting bored now,” Superman added. They continued there for about another 20 minutes, although there no longer seemed to have any purpose or interest in their play together.

Here, as their short play episode came to a natural end the boys appeared to rely upon educator recognition and did not autonomously redirect their own play. Indeed, the supervisory rather than collaborative nature of their interactions with the educators outdoors, appeared to result in greater reliance on the educators for assistance or attention:

Field Notes: Setting A, 18th May am, 15°C, humidity 65%, cloudy

Today, a slightly younger girl placed her face next to the drawbridge as Ninja Turtle ran over it. “He hit me with the bridge,” she cried out. He didn’t purposely do it - it was inevitable as the wobbly bridge shakes when
someone runs on it...[Later] another child stood too close to the swing when Cat Woman was swinging, resulting in her being kicked. “She kicked me!” she wailed.

It was not clear whether these children relied on adult supervision to assess risks on their behalf or whether they were doing it purposely to seek attention. Either way, conflicts and collisions seemed to occur very frequently, and the educators seemed to spend a lot of time dealing with upset children. This may have been as a result of the wider age range of the centre, where the children played outdoors together from age 2-5 years.

However, by contrast, the collaborative play skills absorbed by the children at Setting B appeared to allow them to debate and negotiate with greater autonomy, as evidenced by this lively discussion about the research topic:

Dr. K: God made the food. God gives us food, for real.
Dr. F: But the world grows the food...because the plants grow the food...
Dr. K: I think Dr. F, do you know, God made the food on the plants.
Dr. F: No, the plants...
Dr. K: No, God made the food and the plants. He made everything.
Dr. F: Well no, we grow some plants and God grows...but God grows the most plants than we do.
Dr. K: Yeah.
Dr. F: Yeah well I think that God does, he looks after the world. He thought that...
Dr. E: God made the world.
Dr. F: Well no...
Dr. K: God made the trees and the birds.
Dr. F: Well, do you know...it starts with the dinosaurs first. So we should have a chat about the dinosaurs, because the dinosaurs were first.
Dr. E: At the same time as the dinosaurs, the crocodiles lived.
Dr.K: ...Hey, do you know, I saw a movie of dinosaurs and a person said on that movie before the movie even came on, that birds - not all of the dinosaurs are gone yet, because birds are dinosaurs.

These negotiation and conversation skills and their autonomous sense of collaboration seemed to facilitate them to engage deeply and purposively in their play, and also created a sense of industrious enjoyment: “There is such a lot to do [here] Wattle-Pottle...I can do anything I want to [singing] I can do anything I want to” (Dr.K).

This contrasts with the feelings of boredom mentioned by the Superman and Ninja Turtle above, which were reiterated at the end of the project, when The Bead One whispered to me:

The Bead One: Um, I just, don’t play much here...I don’t play very much when I’m here...I’m getting a bit bored. ... I’m getting kind of bored at playing outside.
Researcher: Oh ok, you prefer to play inside?
The Bead One: Hmm, no. I’ve been here ... [at this centre] for a very long time now. I’ve been here for quite a while.

Therefore, it appears that the divergent pedagogies of the centres not only influenced how the educators conceptualised the outdoor areas, but the children's enjoyment and play experiences in those spaces. The children at Setting B seemed to largely engage deeply, socially and purposively in their play, whilst the children at Setting A appeared to briefly dip in and out of many different activities, which in some cases led to feelings of boredom. This offers a fourth significant finding for this study.

**Finding 4:** Pedagogical approach appears to significantly impact upon children's engagement in, and enjoyment of, their play outdoors.
In the next section, I will build upon this finding further, to focus specifically on the children's experiences of nature-based play.

5.4 Nature

This section presents data from both the educators and the children specifically in relation to nature. This data coalesces around two themes: educators’ nature relatedness and children's nature-based play experiences.

Educators’ Nature Relatedness

This first theme considers the educators connection to nature and how this appeared to influence the nature-based play opportunities they provided for the children. Akin to the presentation of the educators’ conceptualisations of childhood in Section 5.1, I did not investigate the educators’ nature relatedness directly, but rather aspects emerged during our dialogues about the importance of nature-based play at pre-school.

Both educators at Setting B indicated a strong connection to nature:

B1: Personally I’m someone who loves the beach and... I feel very connected to nature and I know that when I walk on the beach how that makes me feel.

B2: Wherever we go, I always tell them the names of the plants, and you know what they do, and how they grow..., I have always done that, just in my own life and so it is just what I do here.

This seemed to be reflected in their vision of childhood:

B1: To me it's the feel of the environment, like we were saying, it's the children kicking through the bark and the smell of the bark and all of
that you get from the natural environment that you don’t get from synthetic products.

B2: It’s play, it’s fun, you know? They are feeling, they are touching. It’s all their senses, it’s all that, and I just think it is wonderful, and it’s natural, it’s not purchased.

Therefore, the educators seemed to feel highly motivated to foster opportunities for the children to connect to nature at their centre:

B1: You know some children don’t get opportunities to be in nature very much and so I think if you can keep it as natural and as sensory as you can then that’s excellent.

B1: Also the personal, emotional benefits of being connected with nature that they can take with them through their lives. It’s not just the sort of bigger picture [climate change etc], which is really important, but it’s actually something that is important for your emotional wellbeing…that relationship with nature is such an important thing. Well, it is for me, so I suppose that I would like that for them as well.

In addition, as alluded to in the narrative above, the educators were passionate advocates for sustainable practice, so much so that they used the notion of Education for Sustainability interchangeably with the term nature-based play. Indeed, sustainability emerged as the most prominent reason for offering nature-based play experiences at their pre-school:

B1: I think that for children to get those experiences in early childhood, they then incorporate that into their philosophy of life going forward and the importance to them of maintaining the environment for future generations.
B2: You learn to appreciate it, and a healthy respect for the environment, and then they’ll grow up caring for it too.

Consequently, the educators embedded sustainable practices in the daily workings of the centre:

B1: ...we've got the worm farm set up, so we’re collecting the bread crusts to feed to the worms and the apple, so the children learn what things they can have and they can’t have... we do things like we have silkworms and we look at the life cycle. We have frogs, we've got the little frog hotel out there too...and...I noticed that [today] Dr.M. had the whole basket full of passionfruit out there and we’ll bring those in and cut them up for morning tea.

For B2, sharing these learning experiences with the wider pre-school community was also particularly motivating:

B2: If we harvest things from the garden, they take them home. Some parents bring in plants or they come and say, “Oh I haven’t got that, can I get a bit of that herb there.” It’s a community feeling thing as well.

B2: We extend from what they do at home, and if they are not doing it at home, or they are doing it on a small scale, well it’s learning, and it’s learning for the whole family, and the children take it home.

Therefore, at Setting B, it appears that the educators believed nature-based play to be important in fostering a personal connection to nature both for the wellbeing of the child and the future sustainability of the planet. As such, there appears to be somewhat linear connections between the educators’ personal connections to nature, their values around nature and sustainability, and their rationale for nature-based play.
At Setting A, the picture emerges as more of a patchwork. Although perhaps not as cogently articulated as the educators at Setting B, the room leader (A1) also appeared to hold a personal connection to nature:

*A1: I’ve worked at a few different centres and [our backyard] always makes me feel better than the fake backyards, like they give me a different feeling. I really feel enclosed by them rather than comfortable, whereas I walk into this backyard and I feel it’s really nice.*

In addition, she seemed to have a particular interest in minibeasts and bugs:

*A1: The daddy long legs actually can’t bite [people], it actually doesn’t have long enough fangs to bite [us], but it is actually really dangerous. It is actually a very poisonous spider it just can’t impart that to people in general, just poor little bugs.*

This was something recognised by her colleagues and the children:

*A2: They like to do that [spray paint spider webs on black paper] with educator A1. A1 does that every now and then with them.*

*Superman: I’m going to get– A1’s got a book about it!*  
*Ninja Turtle: Well, he’s dangerous and he’s dangerous [pointing to different insects in the book].*  
*Researcher: How do you know?*  
*Ninja Turtle: Well, because A1 read this to me before.*

However, despite this interest in minibeasts, a degree of ambivalence emerged in the narrative of educator A1, through descriptions of nature as sometimes physically or aesthetically unappealing:

*A1: ...the great big ugly garden spiders...*
A1: No legs. No. It’s a legless, blind lizard. They are actually really ugly.

Therefore, she seemed to suggest a preference for keeping nature under close control:

A1: You just have to kill a few [spiders] and get rid of them.

In combination with her more directive pedagogical approach, this seemed to result in the organisation of creative activities for the children to engage with nature in a structured way:

A1: Well we’re kind of doing lifecycles and bugs and bees and different kinds at the moment, and we do art and craft activities and sometimes we take them outside to do science experiments. One planned for next week, because we are starting lifecycles of spiders, [is] to go and catch spider webs, which I haven’t done with this group.

The narrative of educator A2 also suggested a somewhat ambivalent attitude towards nature. On one hand she described respect for spiders:

A2: Normally it just depends on what spider it is, like if it was like a redback or something like that you’d probably use a container to trap it in that to remove it from the centre, but if it’s just a harmless one then we normally just tell them to leave it alone and not touch it.

And, when pressed about her thoughts on the importance of nature-based play at pre-school, she highlighted the polymorphic affordances of natural materials for imaginative play:

A2: They’ve got to actually pick…up a stick and they think about it and they go, “Oh I’m going to use it as my fishing rod!”... It uses their creativity, just going out and finding something that’s not already been
made up for them to play with. It makes them use their imagination, which is good.

A2: If they are not getting the chance to do that at home then they are not really developing in that area.

However, on the other hand, she didn’t describe any particular connection to, or personal interest in nature. Indeed, she referred in an offhand manner to her son’s play outdoors:

A2: When you are older you look a bit weird running around in the rain (laughs)! It’s just something that they like to do when they are young.

Further, as discussed in an earlier section, although the pre-school class from the previous year had taken a particular interest in a type of gumnut in the playground, she did not appear to have been motivated to investigate these, describing them as “those little nut seedy things, I don’t know what they are.”

Despite the educators at Setting A appearing to be somewhat ambivalent towards nature, they were both wholly supportive of the changes the centre owners had made to the playground:

A1: They’ve done a lot of work out there…it’s so good. It takes the right owners to do that, and these guys have looked at it and gone, “Yeah, we’ll do that.”

A2: I think with the gardens [vegetable patches / rock gardens / shrubbery patches] it is a lot nicer - when we didn’t have the gardens it was just blank from one end to the other.

These changes were described as having been driven by the trend towards re-naturalising childcare centres and notions of sustainability:
A1: Typically things go in cycles. If you were in child care centres five years ago, 10 years ago they were more pristine environments - no nature as such. It's like they wanted it cleaner and lighter and brighter and minimal...and not nature. It's like they were tending to do away with everything, whereas now they are incorporating it.

A2: They like the more natural look.

A1: The current owners are more interested in sustainability and the children being more aware, so they've put in place more programs and are more encouraging for us to talk to the children and make them more aware, and even of recycling at the centre and that sort of thing.

Indeed, the following dialogue with educator A2 suggests these changes were designed for greater aesthetic appeal, rather than motivated by the children's experiences of nature-based play:

A2: I think the circle garden was probably the first thing that they did, because before the garden was there it was just a big mud patch...
Researcher: OK, and so did the kids use to play in that mud?
A2: Um, yes and no, but tried to encourage them not to do it because the parents didn't like them getting too dirty, because...as soon as it rained it was just a big slosh pile.

The nature relatedness of the educators in this study emerges across a spectrum and correspondingly they demonstrated different levels of personal motivation for nature-based play. These ideas, as well as the findings elucidated in the previous sections – the educators’ beliefs about childhood, their relationships with the children's families, and their pedagogies - offer possible explanations for why the children’s experiences of nature-based play at the two centres seemed to be so different. I now explore these experiences, presenting the data that informs Research Question 1: how do pre-school children experience nature-based play within naturalised ECEC playgrounds?
Children’s Nature-Based Play Experiences

This theme aims to directly answer the first research question for this study by elucidating the pre-school children’s experiences of nature-based play within their ECEC playgrounds. In building towards this, I firstly consider how the children conceptualise the grounds of their pre-school: whether they feel as though they are playing in nature. Afterwards, I will explore the two predominant experiences of nature that emerged: immersion in nature-based play and play against a natural backdrop.

Children’s Thoughts on Nature

In identifying children’s experiences of nature-based play, it is useful first to understand if they felt the playground offered them an experience of nature. Therefore, I began by determining whether they recognised the word nature and asking the children whether they felt like they were playing in nature when they were outside at pre-school.

Quite a number of the children did not readily know the word nature:

*Researcher*: If I say the word nature what does it make you think of?

*Cat Woman*: Eh, kind of, country?

*Researcher*: Yeah, that’s right, kind of like countryside.

*The Bead One*: The leaves in the countryside?

*Researcher*: Yeah, that’s right…

*Ninja Turtle*: I don’t know, I didn’t know that.

*Researcher*: You’re not quite sure? Maybe if I say a different word. If I say environment?

*Superman*: What does that mean?

*Researcher*: …What do you think he [Wattle-Pottle] could mean by nature?

*All*: Don’t know.
Dr. F: I think it might mean climbing trees.
Dr. E: I think he could play in the water.
Researcher: Could do, yeah.
Dr. K: I think he could mean he likes living in trees.

Researcher: So, do you feel here at pre-school you get to play in nature?
All: Yes.

As the following conversation indicates, their direct answers about their experiences at pre-school were likely influenced by my cues and they seemed to try to provide what they perceived to be a socially desirable response:

Researcher: So do you feel like when you are playing out in the garden here, do you feel like you are playing out in nature?
Superman: No. Oh wait, no I do.
Researcher: You do?
Superman: Um, I feel like I’m playing in the forest [pointing at the trees].
Researcher: Because of these big trees?
Superman: Yeah.

However, the child-led tours helped to draw out their own thoughts about the experience of nature:

Researcher: So do you remember I said right at the start that Wattle-Pottle was worried that not that many children were playing out in nature anymore?
Superman: Yeah and now you bring him here.
Researcher: And we’ve been showing him around haven’t we?
Superman: Yes so he could see everything. And like he could see our hair now.
Researcher: ...So do you feel like you get to play in nature quite a lot?
Superman: Yeah, sometimes when I’m, em, well when there’s heaps of trees around, like one hundred or twenty. I feel like I’m in nature.

Dr. J: [I feel like I’m playing in nature] maybe, running around and collecting and going through all the bark.

The Bead One: I feel like I’m playing in nature when the grass and the plants are there, and the trees and the leaves. I feel like I’m playing in nature.

Researcher: Where would you like to take Wattle-Pottle next?

Dr. K: The sandpit?

Researcher: Do you think the sandpit is a natural place?

…

Dr. K: Yeah…because a lot of people come and play here.

Indeed, for the children the social aspects of their outdoor play seemed to be more important to them than natural aspects:

Researcher: What do you think Spiderman? Do you feel like you are playing in nature here?

Spiderman: Because when I’m playing with Superman.

Researcher: OK.

Spiderman: In the garden.

Researcher: You like playing together in the garden?

Both: Yeah.

Dr. L: Nature is about loving your friends.

The sociability of nature-based play emerged in two key ways. Firstly, encounters with natural creatures regularly offered opportunities for spontaneous social gatherings:
Field Notes: Setting B, 14th May am, 22°C, 97% humidity, fully cloudy

Dr. F and a friend found a small lizard, they carried it around on their hands showing all of the other children. Some children asked to keep it but Dr. F told them, “No, he lives here.” After a while it jumped off his finger and ran away.

Field Notes: Setting B, 14th May am, 22°C, 97% humidity, fully cloudy

A group of boys spotted a baby cane toad amongst the stones, they came and told one of the educators [for dispatch as they are an invasive species]. However, the educator decided not to catch it because it was so tiny. The boys crouched around it for a long time, trying to pick it up and prodding it with a stick. Dr. F. tried to pick it up with his fingers, and was then worried when his friend told him, “They are poisonous, don’t touch it.” Dr. F. smelt his fingers, “I can’t smell poison,” he said. His friend said, “I’m a scientist, I know all about these.” The boys then discussed whether it was trying to make its way back to its family in the swampy ditch (‘the lake’) just beyond the pre-school fence.

Secondly, the children at Setting B particularly enjoyed socio-dramatic play, using natural affordances or natural materials:

[At the birdbath]

Researcher: And what kind of things do you cook with?
Dr. K: Bark and sand and water and bits of the garden.
Dr. E: And bits of the garden and bark from there (pointing to a nearby paperbark tree).
Dr. F: I cook in there too.

[At the dry creek bed]

Educator B2: Yes this is the restaurant quite often.
Dr. E: And we pretend the rocks are fish…And sand and chocolate and…tree bark. The bark is the chocolate.
Dr. F: And sprinkles (picks up a handful of dry, barky mud and sprinkles it from his fingers). And we use lavender.

Researcher: Ah you said earlier you liked lavender.

Dr. E: And you have a smell (rubs the plant and offers me a smell).

[At the high fort]

Dr. F: And there is these (holds out a bit of lichen).

Dr. E: And these (more lichen).

Researcher: So it seems to me, that some of the things in this garden are natural and some of the things, maybe like the slide and cubby aren’t so natural...

Dr. E: And the tent.

Researcher: And the tent. but it seems like you still take natural things into those places to play?

Dr. E & Dr. K: Yeah.

Therefore, at Setting B, nature seemed infused through the children’s experiences of play:

Researcher: So I wonder, when Wattle-Pottle and I say the word ‘nature,’ and we mean animals and plants and all those things, is there another word that you would use instead of nature?

Dr. L: Playing.

Dr. F: And nature looks after the world, and the world looks after the nature.

Dr. K: [And nature gives you] happy feelings.

Dr. F: Like if everything is happy it makes the world happy.

However, at Setting A, the children seemed to differentiate more clearly between natural and non-natural features and for many children the act of playing seemed to be largely separate from that of nature:

The Bead One: I do like going for a little walk.
Researcher: Ok, and do you ever play on this path, The Bead One?
The Bead One: When I’m a bit tired out I just have a little walk here.

Researcher: Do you feel like you are playing in nature when you play here?
Ninja Turtle: Eh, I feel like I’m playing games here.
Researcher: Not so much in nature?
Ninja Turtle: No.

In the following sub-sections I will explore these emergent experiences of nature more closely, with particular respect to ‘immersion in nature-based play’ and ‘play against a natural backdrop’.

**Immersion in Nature-Based Play**

Sometimes the children seemed to be immersed in nature-based play activities, with immersion evoking ideas of a deep and purposeful engagement and a full sensory experience, with the opportunity to get muddy from head to toe. This experience seemed to be particularly prevalent at Setting B. In addition to the ‘play cooking’ activities (described above), the notion of immersion was evident on many occasions:

*B2: I had actually put the table in the mud pit, because she wanted to have her bowls and things and she wanted to mix the mess right in the mud pit.*

**Field Note: Setting B, 14th May am, 22°C, 97% humidity, fully cloudy**

*The children here ran all around the playground in their bare feet - on grass, mud, bark and sand and up and down the wooden climbing frame. They leapt deftly up and down the tyres and ran through bushes of shoulder height (for them).*

Researcher: Why do you like having no shoes on [outside]?
Dr. K: Because then we can feel the stuff on our feet.
Field Note: Setting B, 14th May am, 15°C, 96% humidity, raining

Dr. F is playing in the dry creek bed. Rain is streaming through a gap in the sunshade overhead. He stands under it laughing, appearing to enjoy the water pouring onto his head and down his face.

Field Notes: Setting B, 21st May am, 12.9°C, 75% humidity, cloudy

Dr. K and Dr. J. were playing on the swings. Dr. J. swung with her head back, letting her hair trail through the new bark. “Your hair is touching the ground!” Dr. K. squealed with laughter. “I don’t care,” Dr. J. said laughing.

For adults, sometimes such nature-based play could appear to be damaging to the natural features immediately present in the playground:

Field Notes: Setting B, 21st May am, 12.9°C, 75% humidity, cloudy

Dr. E. and a group of boys used plastic spades to hack off branches from a coppiced tree in the bush corner. The vegetation smelt wonderful. “We’re making a nest for the big bad wolf,” they said. “We’re chopping these bits.” “Is it ok to do that?” I asked. “Yes, they [the educators] said we could,” they replied. One boy was curled up in the big nest of soft branches. “This is the egg,” he said, “She laid it,” pointing at Dr. E.

A key aspect of immersion in nature-based play, as understood in this study, is the opportunity to get muddy from head to toe. Although I observed many children playing in this way, this did not mean that all of the children liked to get muddy, and they offered some interesting perceptions about this at both centres:

Spiderman: I don’t mind if I get [muddy], I just get changed.

Superman: No, I do mind because I don’t want to get any dirt on me, but it was a long, long time ago when you used to not come [when the mud pit was there].

Dr. E: I don’t play in the mud, because it’s too dirty.
Dr. K: And it’s too muddy with the water.

Educator: Oh I have seen you all playing in here a lot!

Dr. K: I haven’t played in here for a while because I don’t like getting muddy, because I go to dancing after pre-school.

[...]

Dr. E: Well, I’ve nice clothes and I don’t want them to get muddy.

Research: OK. Sometimes if you wear old clothes, is it ok? Do you feel ok about it?

Dr. E: No. I don’t like it.

[...]

Dr. F: Or maybe the clothes that you throw away that you don’t like you could just put them on and use them for getting muddy... [this is] my pre-school T-shirt and these are really old shorts so I can get these shorts muddy.

Between the two narratives it can be seen that not wanting to get muddy was not a gender issue, with both girls (Dr.K and Dr.E) and boys (Superman) indicating that they did not like to get dirty. Interestingly though, at both centres, these were the children that I observed often getting the most hands-on with their play and at times very messy! For instance, part of the conversation with Dr.K, Dr.E and Dr.F was conducted whilst they did some self-initiated painting, in which Dr.K decided to completely smudge the paint with the palms of her hands:

Researcher: So you don’t mind getting covered in paint?

Dr. K: We can always just wash the paint off, but if we get mud on our feet then I can’t go to ballet because I’m not allowed to get dirty.

Their educator (B2) was quite shocked when the girls told me that they didn’t like getting muddy as “just the day before” she had put the “put the table in the mud pit” because Dr.K had wanted to “mix the mess right in the mud pit.” She followed up the comments with Dr.K’s family and it turned out she did not actually go to dancing classes after pre-school!
These kinds of encounters highlight the subtleties and complexities of entering the child's world in research, and interpreting their meaning within the constructs of adult-child power relations:

*B2: I think that she [Dr.K] thought that was what she should say. After I thought about it that was all I could think of. I thought maybe she was expecting you to say, “Oh no, you don’t get dirty.”*

If educator B2’s rationale is correct, it suggests that despite the strong nature-based play ethos of the pre-school, the children were aware that getting muddy might be less socially desirable in other circumstances. Many societal pressures, such as a prevalence towards gender stereo-typing or the influence of commercial media characters on the children’s play seemed less evident at Setting B, where the children often played in mixed gender groups and used polymorphic natural materials as props.

Therefore, although the children at both settings of course became immersed in nature-based play some of the time, it seemed to be more readily offered to, or chosen by, the children at Setting B. At this setting, immersion in nature-based play appeared to be more widespread amongst the children, and more purposeful and sustained. Therefore, I now turn to dominant experience for the children at Setting A.

*Nature as a Backdrop*

As nature was a visible feature of both settings, rather than immersion in nature, I describe the dominant situation at Setting A as ‘nature as a backdrop.’ As before, nature was sometimes a backdrop to the children's play at both centres, depending upon the activity they were engaged in. However, at Setting A in particular, the children largely seemed to experience their play within the boundaries of nature as a backdrop. The following extracts and field notes illustrate this idea in an attempt to explain it more clearly:

*(At the frog hotel) Researcher: So do you ever use these in your play?*
Superman: No, we have to look at it.

A2: The boys in our room are quite interested in their card games, so we quite often take cards or board games outside for them if that’s what they want to do.

Researcher: And have you seen any of the kids playing on them [the hay bales]?
A2: No, they do sit on them, but I haven’t seen anyone [play on them].

Field Notes: Setting A, 18th May am, 15°C, humidity 65%, cloudy
A boy filled a bucket with water from the outside tap and carried it towards the sandpit. “Put that down, empty that out,” he was told by an educator, although it wasn’t clear why he wasn’t allowed to do it.

Cat Woman: We can’t pull them out. We can’t pull the, the things out.
Researcher: What things? The plants?
Cat Woman: Yeah, we can’t pull them out...because they have to grow.

Researcher: But even with their superhero play, would they be using nature for any props?
Researcher: Are they allowed to, or not really?
A1: Not really, because they tend to start whacking each other with them.

At Setting A, there tended to be more toys available and so I observed less confident use of polymorphic natural materials as described in these field notes:

Field Notes: Setting A, 18th May am, 15°C, 65% humidity, cloudy
The Bead One and her friends were collecting ingredients to make dinner in the cubby house. She told them to collect only green leaves specifically. They were having trouble locating the plastic plates from around the garden. I found a plastic moulded lump of spaghetti lying on
the ground. Upside-down the bottom was flat a bit like a plate. Could you use that for another plate? The Bead One looked at me, “No, of course not, its pasghetti.”

Field Notes: Setting A, 25th May am, 14°C, 87% humidity, no wind
[When discussing with Cat Woman the new cooking toys she wanted to buy for the cubby house]... she acknowledged they could collect “leaves and grass” for ingredients as “there is a white thing in there that we could use as an oven.” Then she added, “We could use sticks for sausages” but lamented that she would then need to buy a BBQ.

Further, I observed much less socio-dramatic play, with the children tending to engage in physical play on the equipment, in rule-bound games with the educators or to sit around chatting to one another.

However, I had assumed, given the presence of nature in both playgrounds, that individual children’s interests and choices would be a strong influence on the degree to which they experienced nature-based play. However, for eleven of the children, their engagement with nature-based play seemed to match the dominant experience that appeared to be offered by their centre. At Setting A, The Bead One offered an exception to this. She showed a particular interest in nature and desire to engage further in nature-based play:

Field Notes: Setting A, 18th May am, 15C, humidity 65%, cloudy
The Bead One had initiated a game collecting ingredients to make dinner in the cubby house, she wanted her friends to only collect the green leaves specifically.

The Bead One: I use them [sticks], for unicorn horns! (She loves unicorns).

The Bead One: (Collecting materials for our picture together) We could put some clovers in. Clovers. I like clovers.
However, developing and extending these interests and encouragement of deeper engagement in nature-based play did not appear to be offered to her at her setting. Indeed, as mentioned earlier, the project ended with her confiding in me: “I’m getting kind of bored at playing outside... I’ve been here [at this centre] for a very long time now.”

When this data is considered in the context of other data presented under the earlier themes, nature as a backdrop can be understood as not being a physical state, but rather as emerging from the pedagogy of the educators. Instead of building upon the children’s interests and encouraging immersion in nature-based play, the room leader at Setting A (A1) preferred to focus upon organising planned science or sustainability activities for the children with a defined outcome. These were moments when nature was brought out into the spotlight, but could be described as being objectified and controlled. This notion of controlling nature is further evident in her wish for the future:

A1: I’d like to see more landscaping, but natural landscaping - more adventure within that backyard. Staff do what they can, and it looks great, but I’d actually like it to go to another level. I think you need a professional or something to look at it and say, “Ok we can do this, and create a hill there, and tunnels there,” and that sort of stuff. I’d love that. That would be so good.

This dialogue captures her enthusiasm about nature. However, looking for a professional’s assistance suggests a desire to control or manufacture more ‘nature.’ Whereas, a shift in mindset and practice may maximise the many natural features already present in the grounds and bring them to the foreground for more immersive play.

Therefore, given the comparability of the grounds, the children’s experiences of nature-based play at pre-school appeared to be determined largely by the
educators’ pedagogy rather than by the children’s personal interest. Of course, the children’s experiences between and within the two centres should not be over-generalised and, certainly, across the centres different children, at different times, chose to be more or less immersed in nature-based play. However, it did appear that compared to Setting A, the children at Setting B seemed to have greater opportunity to become more deeply immersed in nature-based play if they chose to.

In concluding the data presented throughout this section on nature, two significant findings can be articulated:

**Finding 5:** Educators’ personal nature relatedness appears to influence their motivation for nature-based play.

**Finding 6:** Educators’ pedagogy influences whether children experience immersion in nature-based play, or play against a natural background.

This last finding (Finding 6) draws together each of the earlier findings to directly inform research question 1 by proposing how, within the confines of this small study, the pre-school children experienced nature-based play within the naturalised playgrounds of their ECEC centre. I now shift to the data relating to my second research question and present my findings pertaining to the educators’ and children’s perceptions of the risks of nature-based play.

### 5.5 Risk

This section aims to directly inform Research Question 2: how do pre-school children and their educators perceive the risks of nature-based play in the Australian ECEC context? Drawing upon the attitudes, values, pedagogies and relationships illuminated throughout the previous sections the educators’ perceptions are explored first. This will be followed by elucidation of the children's perceptions of nature-based play risks in the pre-school play context.
These explorations are organised under the following four themes:

- Educators’ perceptions of nature-based play risks;
- Risk as a learning opportunity;
- Children’s knowledge of nature-based play risks; and
- Children’s perceptions of nature-based play risks.

**Educators’ Perceptions of Nature-Based Play Risks**

I will first address the educators’ perceptions of the risks from the hazards particular to Australia’s natural environment, such as snakes, spiders and the strength of the sun, before then considering the educators’ perceptions of more generic nature-based play risks.

At both settings in this study, policies or procedures were in place to check daily for natural hazards such as snakes and dangerous spiders:

_A2: The person that’s on ‘earlies’ is meant to go through and check the garden and everything and make sure there’s no snakes, spiders or anything like that. And we’re meant to do it [again] when we go back outside._

_B2: In the past we have had snakes here, and we have a snake man who comes and removes them. So we have strategies in place. When it is hot weather, before the children are taken out, we go and do a snake patrol. So we watch for snakes._

As a result, all of the educators at both centres, stated explicitly that snakes and spiders were not something that they were particularly worried about in their daily work:
A1: Not really to be honest...here...I’m not really worried about us being in danger from any of those things.

A2: Well, I don’t think there is that much risk in playing in nature. As long as it is always being checked every morning before the kids come out to make sure there isn’t any snakes or spiders. I think it’s very rare that they have accidents due to natural things that they’ve found in the yard.

B1: It’s difficult as the nominated supervisor not to be concerned about that bigger picture of litigation and legislation and workplace health and safety. However, in saying that, I feel fairly relaxed about the opportunities in nature.

B2: I really don’t [worry].

Similarly, both centres had routines and policies around protecting children and staff from the strength of the Australian sun. Therefore, instead of worrying about risks associated with Australia’s unique natural environment, the educators explicitly drew attention to the generic risks of nature-based play, citing these as being more prominent in their minds on a daily basis:

A1: I just worry more about them falling and breaking something, or concussion, rather than bites or injuries from bugs and beetles or whatever.

A2: They’re probably more likely to get hit by a branch falling out of a tree I reckon! (laughs) But you can’t be worried about that! ...If they have an accident it’s normally on the equipment... falling off the balancing obstacle course or something, instead of being hit with a stick or something like that.
Other things are probably more of a daily concern, just things like the safety of the materials and you know the fences, that sort of thing, or say the [bark] softfall. [It’s] just making sure that those risks are addressed so that the children can climb, and if they fall they are not going to hurt themselves.

Both centres also mentioned tree climbing, which they allowed to varying degrees, something that seemed to be influenced by the personal risk threshold of the educator:

We are supposed to be letting them take some risks but managing the risks at the same time. So if you are in the back yard you will find some staff members who aren’t comfortable with them climbing trees and will say “No, hop down from there.” And you find some who will say, “Ok you can climb that far, don’t go past there, if you go past there you’ll have to come down.”

You know we just let the children climb the trees, mostly there is grass or [bark] underneath where they climb. I guess it’s really a matter of supervision, I think, as long as you are there and you’re watching and assisting and you know aware.

I guess it is my job to have those over-arching concerns about risk, but at the same time, you have to really, what’s the word? Challenge, challenge [yourself and] not let yourself get too caught up in that.

Therefore, it appears that all of the educators in this study had fairly similar perceptions about the risks of nature-based play. Notably, they did not seem to worry unduly about Australian-specific risks, but rather were more concerned with the generic risks of outdoor, physical play such as slips and falls.

Risk as a Learning Opportunity
The apparent uniformity of the educators’ risk perceptions (as described above,) is challenged by closer analysis of the way in which they approached risk as a learning opportunity for the children. Indeed, consideration of their approaches to risk education may provide a more meaningful interpretation of the educators’ perceptions of the risks of nature-based play at pre-school.

That risk provides opportunities for learning was evident in the data from both centres. To be specific, both centres offered opportunities for children to learn about the risks from natural hazards:

> A1: I just generally teach them if they don’t know what spider it is then they just have to assume that it is dangerous and don’t touch it.

> A1: You literally use an adhesive and you catch [the spider web] on paper [for the kids] ...And hopefully teaching them not to touch spiders outside somewhere in amongst that.

> B2: If a plant was going to be prickly or sharp or anything then we’d talk about that.

> B2: We also have somebody involved with WIRES, the wildlife carer, and she comes in and talks about snakes and safety around that time of year.

However, consistent with the differing pedagogical approaches of the two centres the way in which they taught the children about the risks was also divergent.

As educator A1’s comment above describes, at Setting A the educators arranged planned science activities through which to pass on messages such as “not to touch spiders outside.” Yet, during outdoor playtime, A1 described not trusting that the children would have the capability to identify them or to control themselves:
A1: They actually react differently at home with Mum and Dad than they act in school with their peers, even at this age group. Like, when they chased the rabbit in the backyard - at home they are more likely to sit down and actually watch the rabbit and try to feed the rabbit with their parents, whereas here it is a herd of children, they are going to chase that rabbit! (Laughs) “Go get the rabbit!” It’s kind of the same with risk I think.

A1: We’ve got legless, blind lizards here - they look like snakes. The children have always tried to catch them. They don’t know that they are not snakes because they actually do look like snakes they are just shorter.

As such, she seemed to prefer to tightly supervise the children: “No, no, don’t go past that branch, no that one down there” (A1). This created an atmosphere that ethnographically felt very adult-ordered and seemed to create feelings of stress for the staff:

A1: I’ve actually scared myself gardening with the kids...“Oh god, oh it’s only a lizard,” but your heart goes so fast... And we’ve had them try to catch the blind lizards and it has freaked me out...

In contrast, at Setting B, B2 appears to take the view that children are capable of learning how to respond appropriately to hazards: “And they know, they can identify them, and they know that they get an adult.” Therefore, she seemed to want to offer them the opportunity not just to learn about risks but about how to self-assess risk:

B2: I think it is a shame that they can only go to half a metre in height and things like that. I suppose we’re all conscious of the risk, but I think if they get to experience it and learn about it too, then the children have the knowledge of it as well.

In fact, this skill seemed to be evident in the children’s dialogue with one another:
Field Notes: Setting B, 14th May am, 22°C, 97% humidity, fully cloudy

Dr. F. tried to pick it up [the baby cane toad], and was then worried when his friend told him “they are poisonous, don’t touch it.” Dr. F. smelt his fingers, “I can’t smell poison,” he said.

... 

Standing on the edge of a tyre on the tyre mound climbing area after rain, Dr. F said to a friend, “You shouldn’t do this, it’s slippery.”

Further, B2 described the benefits to children of learning through experiencing risk:

B2: Did I tell you about the chillies in the garden? It was an interesting thing. Dr. E and Dr. K they were harvesting the chillies but they knew exactly what to do and how to do it, and wash their hands and everything. But ...there was one child in the centre that didn’t, and her fingers burned and her eyes started to water. We talked about why that happened and she learned about the chillies that way. And I mean it wasn’t anything that was going to be detrimental to her. And I just think if they experience - you don’t want them to be hurt - but I think if they get to touch and do things then they’ll learn how to do it.

Consequently, at Setting B, risk seemed to be something to discuss and collaborate around rather than a source of stress for the educators:

B1: For every brown snake that you see, there is another dozen that you don’t see so they’re all around us all the time. So like I said, it’s taking the opportunity to talk to the children about that.

B1: If there are bees around, it’s an opportunity to talk about risk, but there is a much bigger opportunity to talk about all the other things that are of value.
B2: The benefits are far more, far more than what the risk is. They get so much out of it.

It is notable that the educators’ approach towards risk education appears to link to the beliefs, pedagogy and relationships elucidated earlier. Therefore, in the context of this study, I would argue that the educators’ perceptions of risk go beyond superficial similarities and how they approach risk as a learning opportunity may offer a more illuminating understanding of their risk perception in the pre-school context. I now turn to the children's data.

**Children’s Knowledge about Nature-Based Play Risks**

Before examining the children's perceptions of the risks of nature-based play at their pre-schools, it is useful to consider their knowledge and experience of such risks.

All of the children had knowledge about generic risks associated with outdoor play, developed largely through experience:

**Dr.J:** Like tripping over stuff! ...Because you have to be careful to watch where you’re going...

**Superman:** Like things that come off sticks...you can get splinters and you have to take them out...

**Dr.E:** You can’t run on the mud, because it will be slippery.

**Dr.K:** Wattle-pottle needs to be careful of falling over on cement by not running.

As such, they seemed to feel confident in their capabilities or that they could self-assess these risks:

**Dr.K:** Yeah we do run but we don’t fall over, we be careful.
Researcher: Do the teachers have to say, “Watch where you’re going” all the time?

Dr.L: No, no I do watch where I’m going.

Me: You do?

Dr.L: Yeah, because I know it.

However, not all of the children had yet encountered snakes or spiders in their life, either at home or at pre-school. This meant that for many of the children, their knowledge about the risks associated with these hazards derived less from experience, and more from being taught about them.

Earlier, I illustrated the interest in minibeasts of the room leader at Setting A (A1) with the dialogue, “I told them that daddy long legs actually can’t bite them...” She told me that the children, “Remember that, and they remember the red one, don’t touch the red one [the redback spider].”

Actually, this dialogue is typical of what a number of the children recalled:

**Ninja Turtle:** Excuse me Julia, do you know that daddy long legs don’t bite? They eat red wombats.

**Cat Woman:** No they don’t eat red wombats. They eat red, em, bats...because daddy long legs they save you.

In contrast, the following dialogue between two of the children at Setting B demonstrates clear conceptual understanding of the habits of snakes:

**Dr.K:** We need to watch out up in the trees... because if we are up high and the leaves are outside and you are in the leaves, there could be a snake in there...

**Dr.F:** A tree snake.

**Dr.K:** Yeah, and you don’t realise because it is the same colour as the leaves.
These differing knowledge bases may have been derived partly from the differing dominant experiences of nature-based play. Through their experiences of immersion in nature-based play, the children at Setting B may have had more of a framework upon which to hang new scientific knowledge about natural risks something which may in turn influence their risk perceptions.

**Children’s Perceptions of Nature-Based Play Risks**

The children's perceptions of nature-based play risks broadly clustered around 2 ideas: perceiving risk as something fearful, or alternatively as something that they needed 'to be careful of.'

The dialogue of the children at Setting A suggest that, although they had recently been learning about spiders, they perceived them as something scary:

*Superman:* If you see one of those, I have to tell everyone, I have to yell out, just because it is there, a spider.

*Researcher:* Yeah? A dangerous one?

*Superman:* Yeah. It's every spider. Every spider.

*Researcher:* Every spider is dangerous?

*Superman:* Yeah.

*Superman:* If you ever see one of these [spiders], if you ever see one of these, or these, or these [pointing them out in a minibeast book popular in the class] they are deadly and you need to look out for them, and lock all the doors.

*Researcher:* If you saw one here in the garden, if you saw a spider?

*Ninja Turtle:* It will hurt you...we have to run away!

Indeed, all of the children at Setting A reiterated many times that if you saw a spider at pre-school you had to “Run away!”

This sensationalist narrative was also evident in their descriptions of the risk of sticks:
Researcher: *Do you ever do anything with the sticks when you are playing?*

Spiderman: *No.*

Researcher: *No?*

Spiderman: *Because they’ll stick in your eye.*

Researcher: *Oh you’re not allowed to?*

Superman: *Yeah because you poke them in your eye.*

Spiderman: *And it’ll hurt and you’ll have to go to hospital and stay there.*

Further, Superman seemed to perceive nature itself as a scary place:

*Superman: Sometimes baddies are in forests. When there’s lots of trees and plants, they hide from you, in a very good place, so you can’t even find them. And they start to walk over to you and they’ll be very close to you but you can’t even see them and then you hear a noise…*  

On the other hand, instead of something to fear, sometimes the risks in nature emerged as something the children felt they could be careful of. This perception was particularly common in the narratives of the children at Setting B, even if they had had a bad experience:

*Dr.L:* You have to be careful of plants…

*Dr.J:* I picked a plant, but then I didn’t wash my hands. [Perhaps referring to the chilli incident.]

Indeed, they tended to speak more from experience, although often these experiences were from home rather than pre-school:

*Dr.L:* You have to be careful of … poison mushrooms in our garden [at home]…it’s good to be safe…and not touch anything that’s poison. I stepped on one with my shoes but mum says it is ok because I’m not going to get poison through my feet.
Dr. F: I just stanced still like a statue, then he wriggled away and then I just went to get into my cubby.

Nevertheless, their conversations tended to focus on dangerous living things, rather than natural play resources such as sticks or stones or abstract fears of nature:

*Dr. F:* Well, I was thinking about the brown snakes...and some, some bad things around. *Researcher:* What other bad things?

*Dr. F:* Like...Spiders.

*Researcher:* Yeah.

*Dr. E:* Or red back spiders.

*Researcher:* Yeah.

*Dr. F:* Or snakes or sea-snakes, or giant eels. Eels are dangerous, sea-snakes are dangerous.

*Dr. E:* Everything in the jungle!

*Dr. F:* Not everything.

*Researcher:* Not everything, that's right.

*Dr. K:* Because birds are not dangerous.

*Dr. E:* Some birds are dangerous though.

Additionally, within the pre-school context they often mentioned the hazard and what they could do to protect themselves:

*Dr. F:* The brown snakes might be in there, and ... if I find a branch ... I might climb it. I would be really scared if I saw something there in the tree - I'd just climb down really quickly.

*Dr. E:* If we haven't [got shoes on] and it's a hot sunny day then we'd get bitten by a snake.

This suggests that although the hazards may be scary, rather than feeling fearful the children felt they had the capability or the knowledge to keep themselves
safe. Whilst many of the children at Setting B drew upon experiences from home, it seems that their educators’ collaborative approach to risk education helped them to rationalise hazards and empowered them with the capability to be careful in the pre-school context. In a parallel way it would appear that some of the fearful perceptions held by many of the children at Setting A were compounded by their risk education at the centre.

Therefore, the data presented throughout this section on risk offers three final findings. In combination, these proffer a response to my second research question, regarding pre-school children and their educators’ perceptions of the risks of nature-based play in naturalised, Australian ECEC playgrounds.

**Finding 7:** On a daily basis, educators are more concerned about general childhood risks such as trips and falls, rather than Australian-specific, nature-related risks such as snakes or spiders.

**Finding 8:** Educators approach risk education in different ways, depending upon their pedagogical approach.

**Finding 9:** Pre-school children perceive risks in nature-based play as either something to be feared, or something they are competent enough to negotiate.

**Conclusion**

Throughout this chapter I have drawn attention to nine findings based upon the data collected to explore nature-based play at the two Australian pre-schools in this study. These findings centre around notions of childhood (Finding 1), family partnerships (Finding 2), outdoor pedagogy (Findings 3 & 4), nature relatedness (Finding 5), the nature-based play experience (Finding 6) and risk perceptions (Findings 7, 8 & 9).

Collectively, these findings are significant in responding to the two research questions for this study, which I now briefly summarise:
1) How do pre-school children experience nature-based within naturalised ECEC playgrounds?

Children in this study appeared to either have the opportunity to experience immersion in nature-based play or, alternatively, to play against a natural backdrop. The predominant experience offered to them seemed to depend upon the beliefs, relationships, pedagogies and nature relatedness of their educators.

2) How do pre-school children and their educators perceive the risks of nature-based play in the Australian ECEC context?

On the surface, educators were not worried about Australia's unique natural risks, instead other risks generic to childhood appeared more prominent in their mind. However, the beliefs, relationships and pedagogies illuminated in relation to the first research question seemed to influence how they approached risk education, which was perhaps more indicative of their deeper perceptions of the risks of nature-based play.

The children perceived the risks of nature-based play at pre-school either fearfully or as something they felt competent to negotiate. These perceptions appeared to be linked, at least partly, to the way in which risk was presented as a learning opportunity and whether they experienced immersion in nature-based play or ‘nature as a backdrop.’

In the following chapter these nine findings and their significance to the research questions will be critically discussed in light of my theoretical framing (Chapter 3) and existing research as reported in my literature review (Chapter 2).
Chapter 6: Discussion

Introduction

In the previous chapter I presented the results of this research and elucidated 9 findings significant in addressing the two research questions for this study. I noted that these findings centred around notions of childhood (Finding 1), family partnerships (Finding 2), outdoor pedagogy (Findings 3 & 4), nature relatedness (Finding 5), the nature-based play experience (Finding 6), and risk perceptions (Findings 7 & 8, 9). In this chapter I now discuss these findings in more detail, considering them in the context of the existing research evidence and my theoretical interests. I will consider each finding sequentially.

6.1 Constructions of Childhood

Finding 1: Differing beliefs about childhood appear to influence the trust educators afford to pre-school children regarding access to 'riskier' materials for nature-based play such as sticks and stones.

This first finding suggests that the nature-based play opportunities that the educators provided cannot be uncoupled from their beliefs about childhood. This notion is drawn from Childhood Studies theory in which childhood is understood and conceptualised as a social construct (Jenks, 2005; Woodhead, 2009). Until the adoption of the EYLF, the social construct dominant within early childhood education in Australia was one that based children's capabilities upon linear milestones related to ages and stages of development (Edwards, 2003, 2005c; Fleer, 2005; Fleer & Robbins, 2007). This understanding of development appears evident in the narratives of the educators at Setting A, who frequently attached age-related caveats to their perceptions of the children’s capabilities.
By contrast, the educators at Setting B appeared to take a sociocultural approach towards the capabilities of the same-aged pre-school children in their care. Reflecting the philosophy of the EYLF, their beliefs seemed to have “move[d] beyond pre-conceived expectations about what children can do and learn” (DEEWR, 2009a, p. 9). This aligns with the more contemporary Childhood Studies theory, which points towards the individuality of the childhood experience, and the idea that varying social and cultural expectations can result in a broad range of capabilities largely unrelated to age (James & James, 2008).

This paradigmatic shift in thinking at Setting B had not been without challenge and educator B2 described initially feeling uncertain about the approach. This uncertainty echoes existing research evidence about the difficulty of shifting from taken for granted developmentalist beliefs and particularly reflecting changes in thinking in practice (Avgitidou et al., 2013; Edwards, 2005b, 2005c, 2006, 2007a, 2007b; Fleer, 2005; Fleer & Robbins, 2007). Educator B2 pointed towards the implementation of the EYLF as having been an instigating factor for her. The EYLF information pack for educators identifies that the “Principles and Practices of the Framework are founded on beliefs that children are capable and competent” (DEEWR, 2010, p. 14), and it actively encourages educators to have the “courage to question taken-for-granted practices and assumptions” (p.7). However, it may not be a clear advocate for bringing about a paradigmatic shift in thinking in all settings, as it also states that there is “no one right approach,” and lists several informing theories including both developmental and sociocultural theory (DEEWR, 2010, p.7). Further, nowhere in the EYLF document itself are educators explicitly encouraged to conceptualise children as competent and capable.

In their insider perspectives on the creation of the EYLF, Sumsion et al (2009) highlight that this lack of cogence arose from the need to “appear innocuous to political risk detectors” (p.8). The idea that children are active agents in their learning (Theobald et al., 2011; Woodhead, 2009) proved to be particularly politically sensitive, because it required challenging “one of the most enduring myths of childhood—that of the innocent child” (Sumsion et al., 2009, p. 10).
Therefore, Sumsion et al describe trying to use words that would speak “powerfully 'in code' to practitioners seeking legitimate ways to push boundaries of what might currently be considered possible” (p.8).

Despite this intention, it will be recalled from the literature review that Edwards has shown that many educators have not been privy to the shift in theoretical thinking (2006). Elaborating on this, she notes:

\[
\text{The situation is one in which theoretical discussion has advanced, and in some cases served to inform the development of state-mandated curriculum documents, and yet educators themselves may not necessarily have had access to the theory; let alone the history of the discussion that informed the movement from one theoretical perspective to another (Edwards, 2006, p.240).}
\]

Therefore, perhaps without the background to the paradigmatic shift, it may be that the educators at Setting A missed the hidden messages in the EYLF (Edwards, 2006). As such, the educators’ existing beliefs may have acted as a filter through which they interpreted the Principles and Practices (Richardson, 2003). By contrast, it is possible that the educators at Setting B may have had greater opportunities to attend professional development workshops that may have challenged prevailing beliefs (Fenech et al., 2010; Tonyan et al., 2013). Alternatively, they may have experienced more collegial discussion (Edwards, 2006; Fenech et al., 2010; Tonyan et al., 2013), perhaps as a result of the smaller size of their centre and standardised, shorter working hours. Either way, the implied, rather than explicit, connection between conceptualisations of childhood and practice appears to leave it to chance whether educators make the connection (Stephen, 2010).

The significant dichotomy in the educators’ beliefs may have been particularly evident in this study because of the focus upon nature-based play. Trusting children’s capabilities may be especially challenging when greater risks are present. Indeed, studies focusing on increasing opportunities for active and risky play in Australian pre-school and school playgrounds indicate that educators’ concerns for safety largely influence their decision-making (Bundy et al., 2009;
Bundy et al., 2011; Hill & Bundy, 2012; Little, 2010; Little et al., 2011; Sandseter, 2013). Therefore, had this study been focused on the indoor classroom, the differences in educators’ beliefs about childhood may not have been so apparent.

Although only a small scale study, the illumination of these dichotomous beliefs highlights that, even five years after the launch of the EYLF, a ‘shared vision’ for approaching children's learning does not exist in practice. Importantly, the educators’ divergent beliefs appear to significantly influence the children's experiences, in this case specifically relating to nature-based play. However, despite considerable literature around the paradigmatic shift from developmentalist to sociocultural approaches, very little research has directly explored the underlying beliefs about childhood that Australian ECEC educators hold. In Chapter 2, I pointed toward one Greek study by Avgitidou et al (2013) in which beliefs about childhood were the specific focus. However, their participant cohort were pre-service students who had yet to be exposed formally to sociocultural theory. Beliefs about childhood were also touched upon in Maynard’s (2007a) Foucauldian analysis of the tension between teachers and Forest School leaders working together in a forest in the UK:

> Within the discourses spoken by the teachers, children were positioned as weak: they needed to be protected and to be taught predetermined, officially sanctioned knowledge and skills. The Forest School workers, however, positioned children as strong: they were perceived to be individuals who were capable of looking after themselves and of directing their own learning (p.338).

It may have been the focus on the outdoors that again made the conflicting conceptualisations of childhood particularly evident here, although Maynard’s Foucauldian approach focused upon the friction between the dominant school culture and the alternative ideas of Forest School. Therefore, although a number of studies have investigated how teachers’ or parents’ attitudes towards risk influence the outdoor play experiences they allow (Little, 2010; Little et al., 2011; Sandseter et al., 2012; Stephenson, 2003; Waters & Begley, 2007), little literature appears to have explicitly approached nature-based play, risk, or outdoor pedagogy from a Childhood Studies angle. However, Finding 1 suggests that educators’ beliefs about childhood, although possibly subconscious, may be
particularly influential to children's nature-based play experiences at pre-school.

6.2 Family Partnerships

**Finding 2:** The quality of reciprocal trust in the relationships between educators and the children's families seems to impact upon the nature-based play opportunities educators provide for pre-school children.

Finding 2 links to the internationally recognised importance of involving families in their children's education, an understanding that is based upon Bronfenbrenner's ecological perspective of human development (1979, 1986). This focus upon relationships, points towards the importance of sociocultural theory in understanding children's experiences of nature-based play. Within the context of nature-based play, building trust within family partnerships seemed to be particularly important. At Setting B the educators appeared to have a strong engagement with families and their relationship was characterised by closeness and trust. However, the narratives of the educators at Setting A, particularly the room leader (A1), concur with the assertion by Adams et al (2009) that it is not always easy to create such a ‘relational utopia’ with families.

Educator A1 suggests that relationship building may have been hampered at her centre by the shiftwork required by the staff. This is supported by Hughes and MacNaughton (2001), who suggest that open, warm communication at the beginning and end of each day is an important way in which to try to build reciprocal trust between educators and families. Similarly, the wider literature on family partnerships emphasises that building effective, collaborative relationships with the wide range of families attending an ECEC centre requires time, effort and on-going maintenance (Adams et al., 2009; Hedges & Gibbs, 2005; Hedges & Lee, 2010; Hughes & MacNaughton, 2001; Knopf & Swick, 2007; Souto-Manning & Swick, 2006).

Having said that, a degree of frustration with families, and subsequent
resignation, is also evident in the narratives of both educators at Setting A. This suggests a lack of responsibility or commitment to tackling the difficulties of engaging in family partnerships (McGrath, 2007). Indeed, families make an initial investment in trust by placing their child at an ECEC centre (Hedges & Gibbs, 2005; Kikas et al., 2011; Souto-Manning & Swick, 2006; Sumsion, 1999; Woodrow, 2012). Therefore, current academic discourse advocates that, although challenging, the responsibility for building reciprocal trust rests with the educators (Adams et al., 2009; Billman et al., 2005).

Having not appeared to accept this responsibility, educator A1 described considerable anxiety in her relationships with families, something Dirks and Ferrin (2001) suggest is characteristic of low trust relationships. Indeed, in theorising trust, they almost exactly echo A1’s words when they note, “the same action could be interpreted and reacted to differently, depending upon the level of trust that one has in the other party” (p.459). By contrast, the educators at Setting B appeared to have made a commitment to reciprocal trust. They described feeling trusted by the children’s families and in turn felt comfortable that they could trust the families not to overreact in the event of minor accidents. This investment appeared to lead to a source of pleasure and support, and in turn to a feeling of empowerment.

This empowerment gestures towards a strong sense of professional identity, something that often emerges in discussions about trust and family partnership building (Alasuutari, 2010; Fenech et al., 2010; Rentzou, 2011; Sumsion, 1999). In the context of nature-based play, the educators at Setting B appeared to have positioned themselves as activist professionals (Fenech et al., 2010; Woodrow & Busch, 2008). Woodrow and Busch (2008) frame the activist professional as an educator who embraces “conflict and difference to facilitate change and growth in relationships” (p.90). They advocate that this is an everyday, relational form of leadership, and one within reach of all educators in their relationships with families. This activist style of professionalism may be particularly relevant for nature-based play given that educators often have to work hard to convince families of the value of the outdoors for their child’s development (Blanchet-
Cohen & Elliot, 2011) and to challenge the risk anxiety surrounding childhood (Jackson & Scott, 1999).

Fenech et al (2010) suggest that this activist style of professionalism demonstrates trust through the openness to collaboratively debate and reflect upon philosophical approaches and values. This was evident in the changed relationships between educators and parents at Westgarth following their Bush Kinder pilot (Elliott & Chancellor, 2012). The confidence of the educators at Setting B to do this within the pre-school playground may have been enhanced through increased opportunities for continuing professional development (Fenech et al, 2010) and their deeper engagement with contemporary educational theory (as discussed in Finding 1). Importantly, this activist professional approach and reciprocal trust in their relationships with families appeared to offer them the freedom to position their centre as a key site for nature-based play. Framed theoretically, they were able to create a conducive sociocultural environment for the children to experience nature-based play. Adams et al (2009), building upon the theorisations of Dirks and Ferrin (2001) suggest why this might be the case:

[T]rust functions as a type of social control that mitigates reliance on formalized rules and centralized structures to guide behavior. Trusting organizations depend more on personal autonomy and professional choice than standardized processes (p.6).

In contrasting Setting A with Setting B, it may be that the educators at Setting A were less confident in their professional identity. Indeed, it has been shown that uncertainty around professional identity can lead to unwillingness to work collaboratively with families (Sumison, 1999). The ECEC profession has never held the same professional identity as school teachers, and therefore although the profession is in a process of evolution (Dalli, 2008; Fenech et al., 2010; Rockel, 2009; Woodrow, 2008; Woodrow & Busch, 2008), some educators may still feel viewed as babysitters rather than professional educators (Ortlipp et al., 2011; Rentzou, 2011). This feeling may be compounded at Setting A through its status as a long day care. The families may largely have selected the centre on the
basis of providing childcare and therefore their mentality may be more focused upon protection in their absence – or at least this may be perceived by the educators. By contrast, families attending Setting B may be more focused on the opportunities for education and development and therefore may hold the educators in higher regard and be more interested in developing working partnerships.

Finding 2 has reiterated the importance of reciprocal trust in family partnerships, something already prominent in existing literature. However, it may be even more important in relation to nature-based play because of the increased risks and challenge to protectionist views about childhood. The discussion of this finding has reinforced the connection between reciprocal trust and professional identity, demonstrating the way in which this can provide the opportunity for educators to position their centre as a key site where children can experience nature-based play. On the other hand, it also highlighted the anxiety that can result when reciprocal trust is absent and suggested that this may limit children’s opportunities to become immersed in nature-based play at pre-school.

6.3 Outdoor Pedagogy

Finding 3: Pedagogical approach influences conceptualisations of the outdoor play space.

Finding 4: Pedagogical approach appears to significantly impact upon children’s engagement in, and enjoyment of, their play outdoors.

The discussion of Finding 1 drew attention to the divergent conceptualisations of childhood held by the educators and their contrasting levels of engagement with contemporary theoretical thinking. Findings 3 and 4 build upon this to focus upon the educators’ outdoor pedagogy. In the context of nature-based play, pedagogy emerged as influencing centre-specific cultural conceptualisations of the outdoor area. In addition, pedagogy influences whether and how educators
involve children in their learning (Avgitidou et al., 2013; Edwards, 2005c; Pramling Samuelsson & Asplund-Carlsson, 2008; Pramling Samuelsson & Johansson, 2009; Stephen, 2010). Therefore, I draw upon the concept of flow to consider how the educators’ pedagogy appears to impact upon the children’s engagement in, and enjoyment of, their outdoor play.

Having challenged themselves to view children capably (Finding 1), the educators at Setting B had made a conscious effort to support children to take joint leadership of their learning, by making learning explicit to the children, and collaborating with them in a meaningful way. In this way, they seemed to have embraced the notion of sustained shared thinking, which Siraj-Blatchford advocates “can be considered a form of ‘pedagogy’ in the sense that it is something adults consciously do to support and engage children’s learning” (2008, p.7). Educator B2 described with excitement the creativity such collaboration with children offered, something echoed in a study at the Australian renowned Mia Mia pre-school where the director commented, “Collaboration stops working with children being a job” (Fenech et al., 2010, p. 98). Therefore, the educators at Setting B appeared enthusiastic about the process of learning, willing to explore new topics with the children, and to add to their own knowledge if required, aspects Fleer & Raban (2006) and Hedges (2000) advocate are integral to a collaborative mindset.

This collaborative mindset was less evident at Setting A, where, for example, educator A2 describes the children’s collection of many jars of ‘those little nut seedy things’ that ‘just sat in the jars.’ Similarly, although educator A1 was enthusiastic about organising creative activities to share her interest in minibeasts, akin to findings by Fenech et al (2010) she seemed to value the product (knowledge or craft construction) over the process of learning. Indeed, within the time frame of this short study, sustained shared thinking was not alluded to, nor observed at Setting A. Instead, a more bilateral approach towards play and learning emerged. This may perhaps have arisen as a result of the length of time the children spent at the centre, prompting educators to offer opportunities for children to play for recreation as well as to play for ‘work’ or
learning. However, whether this is the case or not, the fact that such ‘recreational play’ predominated outdoors is of significance to this study.

The literature suggests that conceptualising the outdoors as a primarily recreational rather than learning space is not uncommon amongst ECEC educators (Blanchet-Cohen & Elliot, 2011; Davies, 1997; Gurevitz, 2000; Maynard et al., 2013; Renick, 2009; Waite, 2007, 2010, 2011). It has been proposed that this is because educators receive little training in using the potential of the outdoors for learning, and are therefore educated towards a recreational conceptualisation (Davies, 1997; Davis & Elliott, 2009; Maynard & Waters, 2007). Alternatively, some studies have found that educators hold romantic and precious memories of outdoor play, and as such feel that they should not interfere with children’s play outdoors (Davies, 1997; Gurevitz, 2000; Maynard et al., 2013; Melhuus, 2012; Renick, 2009; Waite, 2007). Either way, the data from Setting A aligns with a predominant worldwide approach: many educators consider the supervision of energetic and free play as their primary responsibility outdoors (Davies, 1997; Renick, 2009). However, as the children at Setting A indicate, if educators take a detached, supervisory role, even outdoor play in a natural setting can become repetitive, lack purpose and creativity.

A number of studies have gestured towards this by pointing to the important role of the educator in the ECEC outdoor play context (Blanchet-Cohen & Elliot, 2011; Dowdell et al., 2011; Fletcher, 2006; Ghafouri, 2012; Maynard & Waters, 2007; Maynard et al., 2013; Waite & Rea, 2008; Waller, 2011). This study builds upon these further, because the comparability of the two playgrounds focuses greater attention on how differences in pedagogy specifically, rather than environment, influence the children’s experiences. For instance, several children at Setting A described feelings of boredom during their outdoor play and I observed the children frequently changing activities and seeking attention and approval from the educators. This adds a layer of nuance to research suggesting that simply being in the outdoors is restorative and that children show greater attention and engagement in natural environments (Bagot, 2005; Berman et al., 2008; Bowler et al., 2010; Kaplan & Kaplan, 1989; Mårtensson et al., 2009;
Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2009; Roe & Aspinall, 2011). Therefore, in this section of the discussion I focus upon how the educators’ pedagogy appeared to influence the children’s engagement and enjoyment of their outdoor play in a general sense. This will form a platform for considering their nature-based play specifically in a later section.

The Bead One drew attention to the length of time she had spent at her preschool, something that may have been compounded by it being a long day care centre as she may have attended for several years and for many hours per day. Therefore, over time the limited confines of the pre-school playground could become overly familiar. The polymorphism of natural environments and materials may help to offer scope for continued creativity (Dowdell et al., 2011; Melhuus, 2012). However, the restrictions the educators’ placed upon playing with sticks and other natural materials, may have added a further constraint upon the children’s creative play. Therefore, our fond recollections of outdoor free play may consist mainly of instances when we were in a flow-like state - absorbed, intrinsically motivated, in control and with a degree of risk and adventure (Csikszentmihalyi, 1990) - and correspondingly are recalled as particularly memorable (Chawla, 1990; Sebba, 1991; Waite, 2007, 2010). However, within the supervised, familiar confines of the pre-school playground, it may become difficult for children to continually find the conditions necessary to achieve a state of flow, even in self-directed play.

Nevertheless, the children at Setting B regularly appeared to experience flow-like states in their outdoor play. This may be partly accounted for by the greater freedom offered to them to creatively manipulate natural materials and use them as polymorphic play props. However, often they used leaves, grass or bark, which were also readily available to the children at Setting A. This suggests that the difference was not solely in access to materials but that the educators’ pedagogy at Setting A acted to further constrain the children’s creativity and flow in their play. For instance, recognising the children’s boredom the educators at Setting A would often lead the children in directed games outdoors such as ‘What’s the Time Mister Wolf,’ card games such as ‘Uno’ or read stories in
different outdoor locations. The children usually joined in with these activities, appearing to seek this direction. They may have felt a degree of flow in these activities, such as the excitement of whether the wolf will catch them. However, this directed approach may largely have served to reinforce the power hierarchy, increasing the children’s reliance on adults, and reducing the conditions for intrinsic engagement in flow.

By contrast, rather than ‘entertaining’ the children, the educators at Setting B offered the children many more opportunities to initiate activities and then built upon these with them. For example, they offered children autonomy to collect produce from the vegetable gardens at any time and then used this for shared cooking activities. Similarly, they also engaged and extended the children through sustained shared imaginary conversations, although generally in the role of “interested observers of children’s play” (Fleer & Peers, 2012, p. 423). Indeed, it was the subtle effects of their collaborative approach that seemed to be most powerful in scaffolding children’s flow in their play.

This sense of flow was most evident in the self-directed, largely social, play of the children at Setting B. It was evident through their creativity, deep and purposeful engagement and enjoyment of this play. However, this seemed to be facilitated by the children’s absorption and reconstruction of educator-modelled mature, collaborative social skills. Therefore, whilst the educators did engage directly with the children in sustained shared thinking, it appeared to be the children’s reconstruction of this process that most commonly resulted in flow. This appropriation of collaborative skills aligns with Rogoff’s notions of the three planes of sociocultural development (2003). This process served to enhance the children’s abilities, resonating with Pramling Samuelsson and Johansson (2009) belief that “problematising, challenging and communicating with children fortifies their competence” (p.89). This indicates the impact of the centre itself, “as a context or institution comprised of particular cultural practices,” on the children’s development and learning (Edwards, 2006, p. 246).
Through more regularly appearing to be deeply and purposefully engaged in their play – in a flow-like state – the children at Setting B correspondingly seemed to experience greater enjoyment. Graham and Fitzgerald (2011) believe that when children actively participate this enhances their wellbeing. Whilst their research did not refer to educational pedagogy specifically, it does appear to have resonance to this context. Constrained from active participation and agency in play and learning several of the children at Setting A seemed to be bored or frustrated. By contrast, driven by intrinsic motivation, the children at Setting B regularly appeared engaged and empowered in their play. The sense of control that the children retained over much of their play suggests that they likely also retained a subjective sense of the activity as play, which may have further contributed to a sense of wellbeing (Howard & McInnes, 2013; Lowe, 2012; McInnes et al., 2011; Pramling Samuelsson & Asplund-Carlsson, 2008; Sandberg & Ärlemalm-Hagsér, 2011). Therefore, rather than impinging upon children's freedom to play, effective, considered collaboration may offer children the autonomy for continued engagement and enjoyment of their outdoor play at ECEC.

This discussion has considered the link between the educators' pedagogy and the children's engagement and enjoyment of their outdoor play, as a precursor to later considering nature-based play more specifically. It has suggested that collaborative pedagogy may help children to experience flow-like states in their outdoor play by extending them, both through the co-construction of content, as well as by the modelling of mature play and social skills. However, before considering this in relation to the children's experiences of nature-based play, I first consider the educators' nature relatedness. Although a commitment to a collaborative pedagogy in some respects removes the need for educators to have a special interest in or affinity with nature, it does seem likely that nature relatedness will in some way influence their practice.

6.4 Nature Relatedness
**Finding 5:** Educators’ personal nature relatedness appears to influence their motivation for nature-based play.

Finding 5 begins to funnel the discussion from a broader focus on childhood, play and pedagogy towards a more specific focus on nature. The underlying theoretical interests of this research (Childhood Studies, sociocultural theory and flow) have been strongly evident in the discussion so far, however, Finding 5 connects to the likelihood that educators’ motivation and support for nature-based play specifically is also influenced by their own relatedness to nature and environmental beliefs (Cutter-Mackenzie, Edwards, Moore, & Boyd, 2014). Whilst this interest may ripple through their relationships, in the discussion of this finding I draw largely upon the body of research on nature connectedness and pro-environmentalism, which I outlined in the literature review (Schultz et al., 2004).

The educators in this study appeared to feel differing degrees of connection to nature, with the educators at Setting B appearing to be more related to nature than the educators at Setting A. Although a number of nature connectivity and relatedness scales have been designed (Mayer & Frantz, 2004; Nisbet, Zelenski, & Murphy, 2009; Perrin & Benassi, 2009; Schultz et al., 2004), I did not use these in this study. However, to a certain extent, Schultz et al (2004) validate this non-direct approach, arguing that nature connectedness is “implicit, and exists outside of conscious awareness” (p.31). Similarly, Waite (2011) described the benefit of drawing upon actual examples “rather than statements of belief” in enabling access to “values as embodied rather than rhetorical” (p.69).

From the educators’ narratives, their nature relatedness can be considered in relation to notions of biophilia and biophobia (Kellert & Wilson, 1993; Orr, 1994). Whilst it would be straightforward to suggest that the educators at Setting A were biophobic and those at Setting B biophilic, this does not reflect the ambiguity in nature relatedness apparent at Setting A, particularly in the narratives of educator A1. However, in conceiving biophilia as an innate affiliation with nature, rather than a love of nature, Wilson suggests that...
biophilia encompasses a spectrum of emotions, “from attraction to aversion, from awe to indifference, from peacefulness to fear-driven anxiety” (Kellert & Wilson, 1993, p. 31).

Therefore, it seems to be more illuminating to consider the educators’ nature relatedness through the values they attribute towards nature (Kahn Jr., 2002; Kellert, 1996). Their values were particularly evident in relation to their rationale for nature-based play. For the educators at Setting A, nature appeared to be valued mainly as something to make use of, for example, to allow the children to let off steam or for the children to use in their imaginary play. This was combined with a strong narrative that nature needed to be controlled. Therefore, whilst the educators at Setting A were not necessarily biophobic, they could be described as holding anthropocentric or egoistical values towards nature (Cutter-Mackenzie, 2010; Kahn Jr. & Kellert, 2002; Stern, 2000). By contrast, the educators at Setting B appeared to appreciate nature for its intrinsic value and wanted to foster this connection in the children, in addition to facilitating environmental stewardship. Therefore, the combined narrative of the educators at Setting B had greater eco- or biocentric content (Cutter-Mackenzie, 2010; Kahn Jr. & Kellert, 2002; Stern, 2000), which suggests stronger nature relatedness.

Influenced by their degree of nature relatedness, the educators at Setting B displayed strong concern for the environment and beliefs in the importance of Education for Sustainability (Department of the Environment and Heritage, 2005; DEWHA, 2009, 2010). Whilst notions of sustainability were not absent from the narratives of the educators at Setting A, they were conferred as an interest of the current owners rather than the educators’ personal beliefs. These differences in the conviction of the educators’ environmental beliefs emerged as influencing their personal motivation and behaviour in relation to nature-based play.

This aligns with the large body of research on factors influencing the formation of pro-environmental beliefs, behaviours, and environmental life paths (see Asah
et al., 2012; Chawla, 1999; Chawla, 2007; Nisbet et al., 2009; Schultz et al., 2005; Wells & Lekies, 2006). In particular, the theory of environmentally significant behaviour, proposes that environmental beliefs mediate the connection between values and environmental behaviours (2000). In line with this, Gosling and Williams (2010) found that biospheric concern mediated the land management behaviour of Australian farmers. Gosling and Williams developed a simple schematic diagram to represent these links, which I have adapted in Figure 6.1 for the purpose of this discussion.²

![Figure 6.1 Schematic representing links between nature relatedness, environmental beliefs and motivation for nature-based play.](image)

This has been adapted from a similar one by Gosling & Williams (2010 p.299), which related nature-connectedness to the land management practices of Australian farmers.

Corroborating Figure 6.1, the findings of Ernst and Tornabene (2012) indicated that educators’ personal nature relatedness and the value they place on experiences in nature to enhance children’s health and wellbeing influence their intentions to use natural spaces for learning. However, beyond intention, the data from this study suggests that the values and beliefs of the educators at Setting B provided them with the motivation and determination to position their centre as a key site for nature-based play. This motivation and determination may have fuelled their professional activism (as discussed in relation to Finding 2 family partnerships) to mediate policy, safety concerns and collaborate with families to facilitate nature-based play opportunities (Blanchet-Cohen & Elliot, 2011; Ernst & Tornabene, 2012; Waite, 2011). By contrast, it will be recalled that the educators at Setting A generally submitted to the concerns and difficulties raised by the families, particularly relating to the weather and dirt.

² Given the breadth of my earlier findings, I am not suggesting that these are the only variables influencing educators’ motivation or propensity for nature-based play.
This resonates with a study by Asah et al (2012) in which they consider factors influencing adult participation in nature-based experiences. They qualify that whilst values and beliefs cannot eliminate barriers to participation, nor the perception of some constraints, they are important in reinforcing “adult motivations to participate as well as adult efforts to overcome constraints and thus increase participation” (p560). Therefore, whilst all of the educators felt positive towards nature-based play, the nature relatedness and beliefs of the educators at Setting B may have been a significant factor in motivating them to overcome any difficulties associated with actualising opportunities for immersion in nature-based play.

In addition, at Setting B there appears to be an almost inseparable fusion between nature-based play, Education for Sustainability and collaborative pedagogy. Through this fusion, they appeared to be able to integrate nature-based play alongside the guided socialisation of children towards daily sustainable routines. In this way, they seemed to cut across the tensions between beliefs about childhood and beliefs about the environment that have sometimes created friction between nature-based play and Education for Sustainability in the literature (Davis, 2009; Davis & Elliot, 2004; Duhn, 2011; Elliott & Davis, 2004; Kahn Jr., 1997; Kellert, 1996; Lewis et al., 2010; Liefländer, Fröhlich, Bogner, & Schultz, 2012; Malone & Tranter, 2003; Orr, 1992; Pramling Samuelsson, 2011). In doing so, they appear to have embraced the deeper values of contemporary Education for Sustainable development (Department of the Environment and Heritage, 2005; DEWHA, 2009, 2010) and Orr’s notions of a post-modern eco-literate society, one which “protects individual rights while protecting the larger interests of our planet and our children who will live on it” (1992, p.ix).

This discussion therefore reinforces the important role played by educators in facilitating nature-based play. It builds upon the earlier discussions by suggesting that the nature relatedness of educators, and their resultant values and beliefs, influenced their motivation to overcome barriers to facilitate nature-based play experiences. Collectively, the discussion of the five findings so far suggest why the children at the two centres appeared to experience nature-based
play differently, despite the apparent similarity of their playgrounds. Therefore, in the following discussion, I now turn to focus upon the children’s experiences.

6.5 The Nature-Based Play Experience

Finding 6: Educators’ pedagogy influences whether children experience immersion in nature-based play, or play against a natural background.

The previous five findings have indicated that the nature-based play experiences of the children in this study are likely influenced by their educators’ beliefs, relationships, pedagogy and nature relatedness. By and large, if pedagogy is understood as an enactment of beliefs and values, these factors can all be encapsulated within the educators’ outdoor pedagogy. Thus, Findings 1 - 5 suggest that the children’s nature-based play experiences cannot be uncoupled from their educators’ outdoor pedagogy. In discussing Finding 6 I will explore the two dominant experiences of nature-based play, considering them in the context of sociocultural theory and flow.

The influence of outdoor pedagogy rather than physical affordance, resonates with Kyttä’s recent work on affordance (2002, 2004), in which attention is drawn to how socio-cultural contexts or factors may constrain opportunities for children to engage with any potential affordances for play. A specific focus on pedagogy has been prominent in UK outdoor learning projects for pre-school children (Maynard, 2007a; Maynard & Waters, 2007; Maynard et al., 2013; Waite, 2011; Waite & Rea, 2008; Waters & Begley, 2007). However, with the exception perhaps of studies by Waller (2006, 2007) the focus has largely been on changes to the educators’ pedagogy rather than how pedagogy influences the children’s nature-based play experiences. A connection between the two has been touched upon in Fletcher’s Australian study (2006) and is also important in understanding the children’s differing engagement between the two experiences in Ghafouri’s study (2012). However, this study expands upon these works because the similarity of the two playgrounds directs attention more closely to
the connection between pedagogy and experience, helping to elucidate the subtleties of the children’s lived experiences in the pre-school grounds.

Childhood Studies reminds that care must be taken not to over generalise the children’s experiences, in this case between the two centres. However, it did appear that sociocultural constraints and influences acted to restrict or enhance children’s agency to engage in nature-based play between the centres. For instance, the children at Setting A experienced greater restrictions in using natural materials because of their educators’ beliefs about childhood and concerns for safety within the group context. This seemed to somewhat reduce their scope for what Vadala et al (2007) refer to as ‘child-child play in nature.’ In addition, the children at Setting A did not appear to commonly engage in child-nature play activities compared to the children at Setting B. It is less clear why this may have been, but perhaps it was influenced by differing biophilic or biophobic cultural modelling by their educators (Asah et al., 2012; Hyun, 2005; Rogoff, 2003). Regardless, it appears that the children at Setting A seemed to be socioculturally constrained from the potentiality of engaging in nature-based play (Gurevitz, 2000; Hyun, 2005; Sebba, 1991). The limits of this seemed to be particularly felt by The Bead One, who demonstrated a particular interest in nature, imaginative play and creativity (including as evidenced by her choice of name, compared to the more commercial choices of many of her peers).

In characterising the lived experiences afforded by the educators’ pedagogy at each centre, I used the phrases ‘immersion in nature-based play’ and ‘play against a natural backdrop’. The notion of a ‘backdrop’ plays upon Sebba’s assertion that children experience nature in a “deep and direct manner, not as a background for events” (Sebba, p. 395), and the adultist perception of nature as a presence rather than potentiality (Gurevitz, 2000). The choice of the word immersion is a little more in-depth as the reasoning is two-fold. Firstly, the word immersion is mentioned in the EYLF in relation to children’s involvement and engagement in their play: “Children’s immersion in their play illustrates how play enables them to simply enjoy being” (DEEWR, 2009a, p. 15).
In this way, immersion is regularly used to describe being in a state of flow (Brown & Cairns, 2004; Csikszentmihalyi, 1997; Emri & Mayra, 2007; Jennett et al., 2008). I therefore chose immersion in recognition of the way in which children can become immersed in their play. Secondly, I chose immersion to distinguish a particular depth and quality of experience in nature. I hoped to convey the notion of something deeper than just being physically present in a naturalised space. Therefore, the two-fold reasoning for the choice of the word immersion suggests that the concept is simultaneously a subjective and physical experience. As such, I defined immersion for this study as a deep and purposeful engagement, and a full sensory experience, with the opportunity to get muddy from head to toe.

This somewhat resonates with Kellert’s concepts of direct and indirect nature experiences (2002), which also appear to have partially subjective as well as physical definitions. Kellert, along with several others (see Chawla, 1990; Duerden & Witt, 2010; Elliott & Davis, 2004; Malone, 2004), do occasionally use the word immersion in an attempt to advocate for children’s direct experiences in nature. However, the word appears only briefly. Despite extensive theorisation around experiential education and embodiment in environmental education discourses, the notion of immersion, as a simultaneous subjective and physical experience, does not appear to have been particularly defined or theorized in the context of nature.

Somewhat paradoxically, I found that immersion has been increasingly analysed as a fundamental component of what makes playing computer games3 so popular and enjoyable (Emri & Mayra, 2007; Jennett et al., 2008). Akin to my attempts to articulate immersion above, Brown & Cairns (2004) describe immersion in computer games as being more than merely directing attention, but actually becoming physically (or virtually) part of the experience. By drawing parallels between theorisations of immersion in computer games and my ideas about the

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3 I use the term computer games here to encompass all digital, video games regardless of the console.
children's experiences in this study, I was able to better conceptualise immersion in nature-based play.

In Emri and Mayra’s analysis of immersion in game play (2007), the child participants described the interactive quality of games as offering a different style of immersion to that of books or movies. Therefore, they developed a model of immersion in computer games with three dimensions: challenge-based immersion, imaginary world / fantasy immersion, and sensory immersion. Brown and Cairns (2004) have also tried to characterise immersion and suggest that total immersion requires two conditions to be met: empathy (with the character and their scenario) and atmosphere (the relevance of the constructed world to the scenario). By considering these ideas and my own findings in the context of nature-based play, I came to better understand the dual aspects of immersion that I was trying to decipher.

It seems that immersion can be understood as occurring across both subjective and physical dimensions in computer games and nature-based play. For instance, computer games offer a sense of immersion in the challenge of the game (subjective immersion), plus escapist or sensory immersion into a virtual world ('physical’ immersion). Similarly, immersive nature-based play experiences can be understood as requiring subjective immersion in the activity of play and physical immersion in the experience of nature. I have represented this understanding of nature-based play as a model in Figure 6.2, with immersion in

Figure 6.2 Model of children's experiences of nature-based play.

Immersion in nature-based play occurs at the intersection between immersion in the experience of nature and the activity of play.
nature-based play occurring at the intersection.

In unpacking this model, I will first consider the children’s immersion in the experience of nature. Earlier, Findings 1, 2 and 5 highlighted differences in whether the children were allowed to play outside in the rain or mud, whether educators modelled sustainability, and whether they positioned their centre as a site for nature-based play. In addition, I described above how, despite the presence of nature, the children at Setting A were somewhat constrained by their educators’ pedagogy from the potentiality of nature for play and thus seemed to be restricted from engaging in a deep and direct manner (Gurevitz, 2000; Hyun, 2005; Sebba, 1991). Therefore, at this setting, nature appeared to be presented in a more structured or controlled way – they had to look at the frogs and could not pull the plants - resonating with concerns about the museumification of nature (Gobster, 2007; Sobel, 2012). By contrast, Setting B was positioned as a key site where children could engage in a deep and direct manner with nature. As such, the children seemed to have greater opportunities to become immersed in the experience of nature, for example being allowed to cut and manipulate fresh branches to create a ‘nest’ for the big bad wolf to lie in.

In turning to the second component of the model, I refer back to Finding 4. The data relating to Finding 4 indicated that the children at Setting B appeared to be more deeply, socially and purposively engaged in sustained play episodes outdoors, whereas the pre-school children at Setting A regularly changed activities and engaged in more attention-seeking behaviour. Articulating this in relation to immersion, it could be asserted that the children at Setting B appeared to be more regularly immersed in the activity of play than the children at Setting A. In the discussion of Finding 4, I connected this sense of immersion in play to the children’s enjoyment and, by extension, to flow.

As mentioned earlier, the concept of immersion is often used to describe the experience of flow. Continuing the parallel with computer games, computer game research seems to be a burgeoning area of contemporary flow theory development (Brown & Cairns, 2004; Emri & Mayra, 2007; Jennett et al., 2008).
Computer games are understood as scaffolding flow by offering sequential challenge, packaged in a sensory and emotionally captivating virtual world and offering the player a feeling of active participation with immediate feedback. However, whilst mirroring flow might be a desire of computer game manufacturers, research acknowledges that video games may not correspond to Csikszentmihalyi’s concept of optimal experience (Jennett et al., 2008). Nevertheless, given the popularity of computer games (ARACY, 2010; Australian Government & ACMA, 2007; Bittman & Sipthorp, 2011), it may merit considering whether children’s exposure to these manufactured flow-like experiences raise expectations for the immersion and flow of nature-based play experiences.

Before concluding this section, it is important to consider the way in which the children’s differing lived experiences seemed to influence their perceptions of nature in their playground. As indicated in the results chapter, the children’s perceptions must be carefully interpreted due to unfamiliarity with the word nature. Nevertheless, there seems enough evidence to posit that for many of the children at Setting B the concept of nature was interchangeable with social play, whereas at Setting A some children made more of a clear distinction between play and nature. The intertwined conceptualisation of sociality, play and nature put forward by the children at Setting B suggests a strong level of nature relatedness (Frantz et al., 2005; Hales, 2006; Schultz, 2002) and the conceptualization of themselves within an integrated human-nonhuman system. However, some of the children at Setting A appeared to objectify nature as something discrete from themselves, a view which, it is argued, is becoming increasingly common in contemporary commercial societies (Frantz et al, 2005; Hales, 2006; Schultz, 2002).

It seems likely that had this study involved more settings, a range of lived experiences would have filled the continuum between immersion in nature-based play and nature as a backdrop. However, the discretely different experiences illuminated in this study seem particularly pertinent in light of current trends towards greening and naturalising pre-school grounds and the establishment of bush kindergartens (see Facebook Group, n.d.; Jacaranda Pre-
School, 2012; Petersen, 2012; SA Dept of Education and Children’s Services, 2010; Westgarth Kindergarten, 2011). Indeed, Finding 6 has highlighted that beyond physical changes to the grounds, it is critically important to unpack the assumptions and values contributing to educators’ outdoor pedagogy to ensure that children are afforded opportunities to actually experience immersion in nature-based play.

Perhaps the most challenging aspect of this relates to the risks surrounding nature-based play, thus risk perception is examined in the final section of this discussion in relation to Findings 7, 8 and 9.

6.6 Risk Perceptions

Finding 7: On a daily basis, educators are more concerned about general childhood risks such as trips and falls, rather than Australian-specific, nature-related risks such as snakes or spiders.

Finding 8: Educators approach risk education in different ways, depending upon their pedagogical approach.

Finding 9: Pre-school children perceive risks in nature-based play as either something to be feared, or something they are competent enough to negotiate.

The discussion of Findings 7, 8 and 9 connects with notions of the risk society and the growing body of research surrounding risky play. The influence of the educators’ pedagogy, as elucidated earlier, is again prominent and is crucial to the connection between the three findings discussed in this section. I begin by considering why the educators may not have been particularly concerned about Australian-specific risks, before tempering this apparent uniformity through consideration of their approach to risk education. I then examine how explicit approaches to risk literacy education combined with sociocultural modelling appear to influence the children’s perceptions of nature-based play risks.
In the literature review section on risk, I highlighted that the burgeoning field of risky play research largely failed to acknowledge Australian-specific, nature-related risks, even in Australian-based studies (Bundy et al., 2009; Little & Wyver, 2008; Little et al., 2011; Sandseter et al., 2012). However, Finding 7 indicates that educators do not worry unduly about these risks within naturalised ECEC playgrounds. The centres had adopted clear policies and practices and the educators appeared to feel confident that these were robust.

The implementation of these procedures may be made possible for two reasons. Firstly, in relation to snakes and spiders, it seems likely that both the magnitude and likelihood of such risks are easily defined and agreed upon (Fox, 1999). For instance, there is likely little contention over the potential danger of a poisonous snake and yet the rarity of an occurrence in most ECEC playgrounds. Secondly, the procedures implemented to reduce these risks are not particularly onerous or contentious, being unlikely to detract from the children's nature-based play experiences (Little & Wyver, 2008; Sandseter, 2009c; Sandseter, 2013; Stephenson, 2003; Waters & Begley, 2007). Therefore, akin to the high-group, high-grid quadrant of Douglas’ grid-group model (2013), the greater cultural conformity in the perception of these risks, may have allowed for acceptance and trust in the policies and procedures (Fox, 1999). In turn, the existence of these policies, may have helped the educators to feel supported, demoting these risks from their daily concerns (Fox, 1999; Jackson & Scott, 1999).

The slight exception to this analysis, are the risks associated with the strength of the Australian sun, which represents a daily risk for much of the year in the locality of the two centres. Whilst, in Australia in particular, the sun and its associated risks may also be widely agreed upon, there is an additional childhood caveat, with sun exposure considered significantly more damaging during the early childhood years (Cancer Council Australia, n.d.; Cancer Council NSW, 2013; Ettridge et al., 2011). Further, SunSmart guidelines recommending indoor play from 10am to 3pm during the summer months, may carry a slight degree of contention with concerns about Vitamin D and potential impact upon children’s
activity levels (Boldemann et al., 2006; Cancer Council Australia, 2007). However, the educators did not mention any risks associated with the sun in this study. This suggests that sun-related risks were not prominent in their mind and, as SunSmart guidelines were in operation at both centres, it can be assumed that this expert advice offered them feelings of support in a similar way to their snake and spider policies.

On the other hand, as the educators indicated, the majority of nature-based play hazards are not unilaterally high risk for children. This lower risk means there are no equivalent SunSmart guidelines for taking children outside to play in the rain. Similarly, tree climbing, or playing with natural features such as rocks or sticks, are generally not covered by legislation governing safety standards for playground equipment (Kidsafe WA Inc., personal communication, 2013). This may elevate these risks in educators’ minds, as negotiating them becomes highly personal and contextual, and saddles individual educators with accountability for their duty of care (Bundy et al., 2009; Fox, 1999; Jackson & Scott, 1999; Little, 2006; Nikiforidou et al., 2012; Sandseter, 2012).

Of course, the fact that these minor risks more frequently cause injury may also account for why they were more prominent for the educators. However, the greater concern towards these risks, compared to the Australian-specific risks discussed above, suggests that a lack of support in professional decision-making is also a contributing factor. Indeed, educator A1 described how staff members demonstrated different risk tolerances towards these risks, with some educators being more willing than others to challenge their own comfort levels to extend the children. This resonates more closely with an individualised lower grid, lower group situation (Douglas, 2013).

The data underpinning Finding 8 suggested that how educators approach risk education may illuminate their individualised responses to children’s risk taking and, in fact, may be more insightful of their risk perceptions than the apparent uniformity they explicitly express. As in Finding 6, this is premised on the understanding that pedagogy, as a form of behaviour, is an embodiment and
enactment of intrinsic beliefs and values (Fox, 1999). Waite (2011) similarly suggests that observed behaviour may be more insightful than educators’ descriptions of their attitudes in an outdoor learning context, because they are less imbued by what they feel they should do or would like to do.

At Setting B, the educators taught the children about specific risks such as snakes, but also placed strong emphasis on developing what Nikiforidou et al. (2012) refer to as the children’s own ‘risk literacy.’ The educators did so by collaborating with the children, particularly around the low level risks inherent within nature-based play, to support them to develop their own capacity to manage these. According to other studies this approach may be more unusual in Australia, particularly when compared to Scandinavia (Sandseter, 2009c; Sandseter, 2012; Sandseter et al., 2012). However, by adopting a collaborative approach and negotiating risk in the context of relationships with the children, the educators at Setting B seemed to be able to build their trust in the children (as discussed in Finding 1). This, in turn, likely helped them to offer the children further responsibility. This positive feedback cycle seemed to help the educators to feel more relaxed and tolerant of the riskier aspects inherent in immersive nature-based play.

At Setting A, aside from educating children about rare risks such as dangerous spiders, the educators appeared to operate from within a frame of control outdoors (Stan & Humberstone, 2011). Their approach focused on setting blanket rules (such as not playing with big sticks) and tight supervision. This micro-management of everyday nature-based play risks suggests greater discomfort towards these risks. Indeed, despite initial similarities in relation to the stated risk perceptions of the educators across the centres, for educator A1, this age group could not be trusted with these risks in the collective pre-school context. This developmentalist perspective and conceptualisation of children as lacking in competence places the full onus for protection upon the educators (Jackson & Scott, 1999). This appeared to reinforce their anxiety and the children’s perceived vulnerability. Thus, consideration of the educators’ approach to risk education sheds deeper light on their perceptions of nature-
based play risks (Finding 8) and reiterates that these perceptions cannot be uncoupled from their beliefs about childhood (Finding 1).

Resonating with sociocultural theory, the risk perceptions of the educators appeared to influence those of the children. For instance, the children at Setting A focused upon worse-case scenarios such as poking their eye out with a stick, or sensationalist reactions such as running away from spiders and locking all the doors. This may have been a case of playful, fantastical research contributions (von Benzon, 2013). However, the proliferation of these stories and the contrast with Setting B suggests that they deserve due reflection. Indeed, by teaching children about rare, high level risks and yet modelling anxiety towards daily, lower level risks, the educators at Setting A likely influenced these fearful perceptions (Rogoff, 2003). Further, the children’s fears may also have been perpetuated by their reduced opportunities for immersion in nature-based play and to self-assess risk. Indeed, Fox (1999) draws attention to the way in which risk assessment requires a level of judgement based upon scientific sources, common sense or experience otherwise “analysts would forever be suggesting the most far-fetched, though potentially fatal, events” (p.20). This was evident in the Forest School study by Ridgers et al (2012) in which a child described being initially afraid of the bee.

Thus, the children’s fears somewhat support concerns that if children do not have the opportunity to experience risk they may become overly risk averse or behave in inappropriate or dangerous ways (Gill, 2007; Greenfield, 2003; Little, 2006; Little & Wyver, 2008; Stephenson, 2003). This is the modern paradox of attempts to keep children safe (Ball et al., 2008; Gill, 2007). Further, in attempting to protect the children by controlling risk on their behalf, the educators appeared to be reinforcing the children’s childlikeness, their fears and dependency (Jackson & Scott, 1999).

Before turning to Setting B, it also seems important to consider any resonance between the children’s fears and the biophilia discourse. Kellert and Wilson (1993) might suggest that the negative attitudes towards nature of the children
at Setting A would have previously been evolutionarily advantageous for children. However, Kellert’s typologies of values towards nature are based upon a strongly developmentalist structure (2002), which appears to be disputed by the children at Setting B. Therefore, the fears of the children at Setting A seem more compatible with Orr’s notions of biophobia and his concern that, “If by some fairly young age...nature has not been experienced as a friendly place of adventure and excitement, biophilia will not take hold as it might have. An opportunity will have passed, and thereafter perception and imagination” (1994, p. 143).

For the children at Setting B, their immersive nature-based play appeared to offer them a degree of ‘adventure and excitement,’ through opportunities to directly experience and manipulate risky natural play materials. In addition, rather than anxious, protective reflexes, their educators took the time to discuss and negotiate risk with them, presumably modelling a calmer, more measured response. Therefore, through this combination of direct experience and guided participation in risk literacy, the children did not appear to perceive nature-based play risks so fearfully. Instead, like the older children in Christensen and Mikkelsen’s (2008) study, they seemed empowered by their capabilities to be careful. This empowered sense of autonomy and agency, and the more relaxed attitude of their educators, seemed to offer the children at Setting B greater opportunities to be creative and challenge themselves in their nature-based play. Thus, as discussed in relation to earlier findings, the children at Setting B seemed to find greater enjoyment rather than boredom in their outdoor play. This suggests that educators’ risk perceptions and associated pedagogy are significant not only for the children’s perceptions and development of risk management skills, but also for the experience of pre-school.

**Conclusion**

The discussion in this chapter has highlighted that the educators’ pedagogy is crucial to pre-school children’s nature-based play experiences within naturalised ECEC playgrounds. It explored some of the beliefs and values contributing to the
educators’ pedagogical approaches, finding that the educators’ assumptions about childhood were particularly significant, something largely absent from much early childhood research to date, even in discourses of outdoor play and risk. Although the EYLF is premised on the view that children are capable and competent, quite a continuum of beliefs was evident between the two centres in this study. Educators’ beliefs about childhood influenced nature-based play directly, through restrictions around playing with riskier natural materials. It also influenced nature-based play in a more indirect way, by affecting whether children are recognised as a competent partner for collaboration. When children were restricted from active participation in inter-generational relationships and learning, this appeared to impact upon children’s opportunities to experience self-motivated flow in their play, immersion in their nature-based play and development of risk literacy.

The sociocultural links between the educators’ approach to risk education and the children’s risk literacy and fears adds a new dynamic to research on risky play and children’s risk-taking. Whilst the children at Setting A did not seem to be biophobic, their fears and responses suggest that risk literacy in relation to natural risks may influence whether children react in appropriate ways. Risk literacy and experiences of nature-based play may therefore influence whether the children become risk averse or biophobic in the future.

The discussion also indicated the importance of investing in family partnerships since these relationships can support or undermine the educators’ professional identity. In this study, the relationship between family partnerships and professional identity seemed to be mediated by educators’ personal nature relatedness. This appeared to provide them with the motivation necessary to overcome barriers and challenge beliefs about childhood to position their centre as key site for nature-based play.

Overall, the results of this study suggest that despite the growing interest in naturalising the playgrounds of ECEC centres, making physical changes alone may not afford the desired outcomes and experiences. Whilst a natural setting
undoubtedly plays a part, the results of this study suggest that it is the educators’ pedagogy that constrains or enhances how pre-school children experience nature-based play and risk within naturalised ECEC playgrounds.
Chapter 7: Conclusion

7.1 Summary of the Findings

Pre-school children’s immersion in nature-based play arguably begins by introducing naturalised features into the ECEC playground. However, the overarching finding from this research is that children’s immersion in nature-based play within ECEC playgrounds requires more than simply installing vegetable patches, planting trees and introducing interesting items such as hay bales or frog hotels. Instead, pedagogy plays a critical role in affording children the opportunity to really engage with these features and to incorporate them as an integral component of their play.

This study then aimed to uncover the educators’ beliefs, values and practices – the components of pedagogy that appeared to have a particular influence on the children’s experiences of nature-based play. Whilst educators’ nature relatedness and their relationships with the children’s families emerged as important features, the aspect most critical to the children’s experiences appeared to be educators’ beliefs about childhood. As summarised in the previous chapter, beliefs and assumptions influenced children’s experiences of nature-based play in direct and indirect ways: impacting upon opportunities to play with risky natural materials; the degree of active participation offered to the children in their learning; their appropriation of mature social skills and consequent immersion and flow in play; their enjoyment of nature-based play; and their fear or empowerment in relation to natural risks. This broad impact points towards the need for professional development opportunities that challenge educators’ underlying assumptions about childhood and offer opportunities to explore the kind of pedagogical approaches that might best afford children the opportunity for active participation and flow in their play and learning.
I consider this need for professional development by reflecting upon the development of my own thinking and my own learning journey during the process of undertaking this thesis. This approach to this final chapter aligns with the personal style that I adopted in Chapter 1, in which I outlined my personal orientation, describing my background and the motivations that brought me into this research endeavour. In this final chapter, therefore, I reflect upon the significance of the findings as well as considering the limitations and future directions of the research.

7.2 Reflections on the Findings

It is notable that risk was the predominant focus of my introductory chapter, and yet it is pedagogy that emerges most strongly at the end of this study. Contrary to my expectations\(^4\), Australian specific risks were not especially prominent in educators’ minds, and this finding alone was extremely insightful in facilitating my deeper engagement with wider sociocultural influences. The process of engaging in research at the intersection of childhood, ECEC, play, nature and risk, highlighted many sociocultural tensions.

In exploring Beck's notion of the ‘risk society,’ the resultant anxiety and the focus on creating one’s own biography really resonated for me. Through engaging with notions of immersion and flow, I came to consider how much of childhood (and arguably adulthood, too) can be spent planning or waiting for a time in the future, standing on the sidelines and not being fully immersed in an experience. Therefore, for me, the concept of ‘being’ became about facilitating children's immersion in their social world and the local environment. At times, the very concept of ECEC centres may serve to limit this immersion by cocooning children from the outside community and reinforcing an adult-child hierarchy. For instance, by safeguarding children from risk and ‘protecting’ their childhoods we may be simultaneously diminishing opportunities to expand their skills, shielding them from active participation and preventing immersion in the messy reality of life.

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\(^4\) As an international student I had expected that these risks may be more prominent in educators’ minds.
This tension prompted me to reflect upon something Siraj-Blatchford noted in relation to conceptualising progression (2009). She responded to educators’ concerns about balancing the “immediate ‘rights’ of a child to ‘childhood’ or focusing their attention on their perceived future ‘needs,’” by suggesting, “It is simply a natural transition. There is really no contradiction between these two, young children realise this themselves very quickly” (Siraj-Blatchford, 2009, p. 86). I was initially wary of this interpretation, as I felt that it could be used to justify a dominant focus on cognitive outcomes. However, through reflecting upon the development of collaborative social skills or risk literacy evident in this study, I have realised Siraj-Blatchford’s viewpoint is very salient. Through over-protecting children or conceptualising them as incompetent, it seems well-meaning adults can disrupt this natural process, and simultaneously violate children’s ‘immediate rights to childhood’ as well as the development of their skills. For example, through being overly protected from risk, children may be hampered from experiencing the exhilarating sensation of risky play, whilst simultaneously learning to manage risk.

Nevertheless, finding this balance between being and becoming within ECEC contexts can be difficult. There is on-going tension between the binaries of protection and agency, play and learning, or imagination and cognition, and I felt myself resisting and accommodating these binaries, sometimes simultaneously, as my thinking and understanding developed throughout the research process. I found the concept of flow particularly helpful in this regard. With the dual potential to facilitate a subjective sense of satisfaction and offer personal growth, the flow state seems to offer the ‘optimal’ balance of being and becoming. The EYLF advocates for educators to act with intention, therefore perhaps focusing upon helping to facilitate children to achieve and maintain a state of flow may offer a way of working that moves from a dualistic approach.

I do think that conceptualising flow as an optimum balance of play and learning resonates strongly with Bruce’s notion of free-flow play. In fact, I found myself regularly questioning whether my emerging ideas in the context of flow theory
were really any different to the existing discourse on free-flow play. However, I think it was helpful to specifically identify flow as an underlying theoretical interest, as it prompted me to critically engage with my data, with the nuances of the educators’ pedagogy and with the many other binaries in ECEC, beyond just play and learning. Indeed, whilst it may not be Bruce's intention, free-flow play does retain connotations of romantic childhood play and may inadvertently reinforce a supervisory rather than collaborative approach towards nature-based play. Similarly, I think it could have served to reinforce certain binaries for me, rather than challenging me to think in less oppositional terms. Therefore, putting the discourse on free-flow play aside, I have found it interesting to ponder what ECEC might look like if supporting the children to achieve flow was a key intentional teaching aim.

Through my engagement with the literature on computer gameplay I have come to appreciate that it is critical that such flow derives from an intrinsically motivated and conscious direction of attention. Computer games very effectively mimic flow but, akin to the acknowledgement of computer gameplay researchers, I believe computer gameplay experiences differ from Csikszentmihalyi’s conceptualisation of flow. Like many aspects of the modern world they grab attention, and then scaffold and support continued attention via coaxing. Therefore, computer games essentially provide entertainment for the mind, rather than the expansion of the consciousness. In comparison to computer games, nature is a very different stimulator for flow. It doesn’t arrest attention in the same way, and it doesn’t provide a clear path to flow. Nature requires the affordances to be considered by the individual, it offers multisensory stimulation but rarely are these initially arresting, and there are myriad directions to take play and seek flow.

It is easy, if young children are conceptualised as having a short attention span and as being restless, to focus on entertainment. This can be particularly evident at ECEC centres, at the end of a long day, when children are ‘waiting’ to go home. However, entertainment is the opposite to immersion and flow and it reinforces the children’s reliance on educators. Reflecting upon this, I too largely worked on
the premise of grabbing attention in creating Wattle-Pottle, as I specifically wanted to provide a 'hook' to engage the children in the research. Whilst Wattle-Pottle did seem to be successful, I think Wattle-Pottle is emblematic of my own assumptions about the extent to which young children would be able to participate in the research.

I feel that these assumptions about pre-school children somewhat curtailed the children at Setting B. They regularly suggested where they wanted to take the process next – “We should make a picture for Wattle-Pottle!” – and took ownership of the activities. For instance, one group at Setting B decided that they wanted to create a collage with natural materials, and so they organised themselves to each collect the different materials and found the tools – scissors, buckets, tape etc. - to allow them to do so. Their appropriation of collaborative skills was far beyond what I had expected and, despite my flexibility, what I was probably able to accommodate within my carefully planned methods.

Yet for the children at Setting A, the level of collaboration I offered them was novel and exciting, and they seemed to relish the freedom and acknowledgement, but relied upon my structure. For instance, they regularly argued about turn taking in conversation. They seemed to expect me to facilitate this and to make sure that everyone waited their turn, and they tried to prolong their turn for as long as possible. When I considered this in relation to immersion and flow, it seemed that the children at Setting A, were waiting to experience the immersion and flow that can occur in conversation, debate and joint-meaning making – immersion in the social world. And the waiting process was frustrating. By contrast, the children at Setting B had the opportunity to appropriate more social tools to allow them to make their own flow in their play and conversations. In this way, they seemed to me to be more immersed in life, something that seemed to empower them.

This substantial focus on the 'social' in a study about nature again highlights the need to think in less oppositional terms about apparent binaries and dualisms. Whilst pre-school children’s immersion in nature-based play within the grounds
of their ECEC setting almost certainly does rely upon a naturalised environment, it equally requires consideration of children’s participation in inter-generational relationships. This study, and my concurrent learning journey, was fraught with binary tensions and, therefore, perhaps the most significant outcome for me is the need to move away from polarised notions about children and their learning, and instead to consider more nuanced ways to encompass or bridge the tensions inherent in nature-based play at ECEC.

7.3 Recommendations

These personal reflections, and the earlier identification of the importance of professional development, lead to four recommendations from this research. It might seem overly ambitious to propose recommendations from such a small study. However, the comparisons that can be made from the ostensible polarity between the two centres in this study highlight the impact of pedagogy upon children’s experiences in a clear and explicit way. This might be helpful to educators who, like me, have felt somewhat caught in the binary between play and learning outdoors.

**Recommendation 1:** That, in addition to physically naturalising pre-school grounds, educators also take time to collegially explore and discuss their beliefs and assumptions about children and childhood.

**Recommendation 2:** That the modelling of collaborative skills be more explicitly recognised as a key way by which a collaborative pedagogy is realised.

**Recommendation 3:** That facilitating children’s intrinsically motivated flow be considered an intentional teaching aim outdoors.

**Recommendation 4:** That risk literacy is considered a specific learning intention for collaborative interactions with children outdoors.

7.4 Limitations
Clearly, these recommendations are tempered by the understanding that this was a small-scale study. Additionally, as mentioned earlier, it transpired that the centres in this study were significantly contrasting. Had this study involved more centres it is likely that a continuum of beliefs, values and experiences would have been identified, providing a range of perspectives in between those of the two centres in this study. An expanded study may also have shed greater light on the influence of individual children’s agency, or elucidated greater nuance in the educators’ pedagogy. Nevertheless, although size is a limitation, the generated data still offers a useful contribution to knowledge.

A more substantial limitation surrounds the length of time spent at each of the centres. Given the ethnographic approach, a longer time at each site may have revealed more nuanced (and hence less polarised) experiences of the local ECEC cultures. It would also have been interesting to expand this study to include the children’s families and gather their views of the children’s nature-based play experiences and their risk perceptions. This would have offered useful triangulation of the data, particularly in relation to reciprocal trust.

The final limitation surrounds the children’s participation. As described above, my customisation of the Mosaic approach was influenced by my perceptions of the capabilities of pre-school children. Although I tried to offer as much flexibility as possible, at times I felt that the participation of children at Setting B in particular was being curtailed by my lack of experience in collaboration and/or my own agenda for the research. I think I could have more fully co-researched with these children, or worked with them creatively to establish a form of pre-school children’s advisory group for the project.

### 7.5 Future Directions

This study has identified the need for further research in three key areas. Firstly, further investigation into ECEC educators’ beliefs about childhood is needed, especially during this time of paradigmatic transition and given trends towards
increasing naturalisation of ECEC playgrounds and increased emphasis on risky play. Secondly, this study has identified flow as a useful way to bridge the binary between play and learning, it would be interesting to explore more thoroughly how educators might utilise the potential of flow in practice. Finally, the results of this research point strongly towards the need for further investigation into the nuances and links between risk education, risk literacy, competence and fear.

7.6 Concluding Statement

In bringing this thesis to a close, I conclude by reiterating the importance of pedagogy to children’s experiences of nature-based play and, moreover, to their experience of pre-school, whether in relation to enjoyment of their outdoor play or feelings of fear towards natural risks. Consequently, I wish to re-emphasise the importance of ensuring any changes to the physical ECEC playground are accompanied by professional development that challenges educators’ underlying assumptions about childhood and the kind of pedagogical approaches that best afford children the opportunity for active participation and flow in their play and learning.


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Sumsion, J., & Wong, S. (2011). Interrogating 'belonging' in 'Belonging, being and
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Appendices

Appendix A: Invitation to Pre-schools

18th February 2013

Dear <Director>,

Invitation to participate in Early Childhood research

I would like to invite your pre-school to participate in the pilot for my research project exploring play and nature at Australian pre-schools. This project would involve the participation of six pre-school children (aged 4-5 years) and two members of staff, working within the outdoor play area of your centre.

There is no obligation to participate in this research, although should you wish to do so, your participation would be very much appreciated.

An information sheet with further details about the project has been enclosed to help you make a decision. Should you have any queries about the project or what is involved, please do get in touch with me. Alternatively, you can contact Prof. Anne Graham, Director of the Centre for Children and Young People at Southern Cross University on the telephone number listed above.

Please indicate on the enclosed reply slip whether you would like to participate or not and return via e-mail or post by 28th February. I would be grateful if you could reply even if you do not wish to take part, so that the opportunity can be offered to another pre-school.

Many thanks in advance.

Yours sincerely,

Julia Truscott
M.Ed. Research Student
**Research Information Sheet**

<table>
<thead>
<tr>
<th><strong>Title of Research</strong></th>
<th>Exploring nature-based play at Australian pre-schools</th>
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| **Researchers**       | Julia Truscott is a trained Forest School Leader and was involved in developing nature kindergarten programmes with pre-schools in the UK. She has been awarded an International Endeavour Award Scholarship from the Australian Government to undertake this research, which is part of a Masters of Education (by thesis) degree at Southern Cross University.  
This research is supervised by Professor Anne Graham, Director of the Centre for Children and Young People at Southern Cross University. It is co-supervised by Associate Professor Amy Cutter-Mackenzie, Director of Research for the School of Education at Southern Cross University. |
| **Dates of the Study** | This research is scheduled to take place between February and June. However, the dates and times would be arranged to be mutually convenient. |
| **Participation Details** | This study seeks to explore the benefits, risks and current status of nature-based play in Australian pre-schools. The aim is to gather the opinions and experiences of staff and children in community and private settings, including those that are more nature-based and those that have less contact with nature within their grounds.  
**For staff**  
For educators, the study will provide the opportunity to reflect on the concepts of nature, play and risk. Two members of staff within the pre-school room are invited to participate individually in a conversation with the researcher (ideally one member of staff to be a degree or diploma qualified in early childhood.) There are no right or wrong answers, as the study seeks only to gather the experiences and personal reflections of the staff. Interviews will take between 30 and 60 minutes and can be arranged at a convenient time within or out-with work commitments.  
**For children**  
In line with the UN Convention of the Rights of the Child, the participation of children “in matters that affect them” is highly valued. As such, six children are invited to share their experiences. It is hoped that the staff will identify six children who may be willing to participate. Ideally two groups of three children who regularly play together. Children of all abilities, gender, culture and ethnicity are invited to take part. A separate letter will then be provided to seek consent from their parents/guardians. |
1. Firstly, the researcher will observe the children (up to 2 hours) during outdoor play time to see whether and how they engage with natural features in the outdoor area during their usual pre-school play and learning activities. This will take place on two days about one week apart. During this time the researcher will explain to the children that she is not there in a teaching capacity or to play, she is only watching.

2. This will be followed by a visit from the researcher and accompanying soft toy, Wattle-Pottle. During this session (about 30 mins) the children will be invited to help Wattle-Pottle to locate natural spaces within the pre-school. This will act as an avenue to help them to share their point of view about their play in those natural spaces. The children and the researcher will take photos of the natural spaces that are important to the children (it is not necessary for the children to be in the photos, they could include only the natural feature).

3. On the final visit, the children will be invited to help the researcher to create a map of their playground for Wattle-Pottle using the photos. This activity will be used to stimulate discussions with the children about playing in nature and their thoughts and feelings about Australia's natural risks.

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<th>Risks / Benefits to Participants</th>
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<tr>
<td>All data gathered will be de-identified to protect the identity of the centre, staff and children in any published results of this study. Staff, and the parents of children, will have the opportunity to review a draft of the results to ensure they are happy that they are suitably de-identified. This will also allow staff to confirm that the researcher has recorded their thoughts accurately.</td>
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The researcher has undergone a full police check in the UK, which shows no criminal convictions. She has also completed the NSW working with children declaration and can provide a copy of both to your centre. This research will not offer any advantage or disadvantage to the children who do or do not participate. However, it is envisaged that the children may enjoy talking about their play and being a part of the project. Should any child not wish to participate on a given day, wish to stop participation during an activity or re-start their participation again later then this will be honoured.

This research project has been approved by the SCU Human Research Ethics Committee (Approval Number: ECN-12-274).

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<tr>
<th>Contact Details</th>
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<tr>
<td>If you would like to ask any questions about this research then please get in touch. E-mail: <a href="mailto:Julia.truscott@scu.edu.au">Julia.truscott@scu.edu.au</a>  or Tel: (02) 6620 3613</td>
</tr>
</tbody>
</table>
Julia Truscott  
Centre for Children & Young People  
Southern Cross University  
PO Box 157  
Lismore, NSW 2480  
Julia.truscott@scu.edu.au 
CCYP Tel: (02) 6620 3613

(Please return this to the researcher).

Dear Julia,

<Pre-school>

I acknowledge your invitation to take part in the early childhood research pilot project entitled: Exploring nature-based play at Australian pre-schools.

☐ I am willing for my pre-school to take part. Please get in touch with me to make further arrangements.

Preferred contact details (phone or e-mail):

Most convenient time to call:

☐ I am not willing for my pre-school to take part.

Yours sincerely,

(Director)
Appendix B: Information and consent form for parents

29th April 2013

Dear Parent/Guardian,

**Parental/Guardian consent to participate in Early Childhood research**

The pre-school class is participating in a research project with Southern Cross University this term. The project explores nature and play at Australian pre-school settings. The research will involve the participation of 6 pre-school children from the centre and 2 members of staff and will take place in the outdoor play area of the centre.

Your child is invited to take part in the study. Please rest assured that it is entirely your choice, there is no obligation for your child to participate in this research. However, should you be willing for your child to take part, their participation would be very much appreciated.

Please complete the reply slip and return to the pre-school office. Even if you don’t want your child to take part please take the time to return the reply slip, so that another child can be given the opportunity.

An information sheet with further details about the project has been enclosed to help you decide whether you would like your child to take part or not. Should you have any queries about the project please discuss these with <the director>, or get in touch with me at the address below or via Julia.truscott@scu.edu.au.

Many thanks in advance.
Yours sincerely,

Julia Truscott
M.Ed. Research Student
**Research Information Sheet for Parents**

<table>
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<th><strong>Title of Research</strong></th>
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<td><strong>Researchers</strong></td>
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</tr>
<tr>
<td><strong>Dates of the Study</strong></td>
<td>This research is scheduled to take place in May and June. It is likely to take place once per week over four weeks, lasting between 30mins to 1 hour per visit. The exact dates and times will be agreed with the pre-school Director.</td>
</tr>
<tr>
<td><strong>Participation Details</strong></td>
<td>This study seeks to explore the benefits, risks and current status of nature-based play in Australian pre-schools. The aim is to gather the opinions and experiences of staff and children in community and private settings. What will my child be doing? In line with the UN Convention of the Rights of the Child, the participation of children “in matters that affect them” is highly valued. As such, six children from the centre are invited to share their experiences about play and nature at pre-school. This will involve two groups of three children who regularly play together. Children of all abilities, gender, culture and ethnicity are invited to take part. The activities are designed to complement the children’s usual pre-school learning. 1. Firstly, the researcher will observe the children during outdoor play time to see whether and how they engage with natural features in the outdoor area during their usual pre-school play and learning activities. This will also allow the children to become familiar with the researcher. This will take place on once a week for two weeks. During this time the researcher will explain to the children that she is not there as a teacher or to play, she is only watching. 2. This will be followed by a visit from the researcher and accompanying</td>
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puppet, Wattle-Pottle. During this session (about 30 mins) the children will be invited to show Wattle-Pottle the natural play spaces within the pre-school and to share their point of view about them. The children and the researcher will take photos of the natural spaces that are important to the children (it is not necessary for the children to be in the photos, they could include only the natural feature).

3. On the final visit, the children will be invited to help the researcher to create a play picture of their playground for Wattle-Pottle using the photos. This activity will be used to stimulate discussions with the children about playing in nature and their thoughts and ideas about health and safety.

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<th>Risks / Benefits to Participants</th>
<th>There is no cost to participate in this research.</th>
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<tr>
<td></td>
<td>All data gathered will be de-identified to protect the identity of the centre, staff and children in any published results of this study. Your child will be invited by the researcher to make up a name such as Spiderman or Fairy and their comments will be acknowledged by this name. You will be provided with a draft of the results so that you can review your child’s contribution.</td>
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<td></td>
<td>The children’s comments may be recorded on an MP3 player to aid the researcher’s memory. These files will be destroyed once the information has been transcribed. The photos taken do not need to include children, however the children may like to be photographed in their play space. On the consent form please indicate whether you consent for your child to be photographed or not. The photographs will be used with the children for the last activity and will not be included in any publications. They will be destroyed once the research process is complete.</td>
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<td></td>
<td>This research will not offer any advantage or disadvantage to the children who do or do not participate. However, it is envisaged that children may enjoy talking about their play and being a part of the project. Should any child not wish to participate on a given day, wish to stop participation during an activity or re-start their participation again later then this will be honoured.</td>
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<td></td>
<td>This research has been approved by the Southern Cross University Human Research Ethics Committee (Approval Number: ECN-12-274)</td>
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<tr>
<td></td>
<td>Complaints about the ethical conduct of this research should be addressed in writing to the following: Ethics Complaint Officer, HREC, Southern Cross University, PO Box 157, Lismore, NSW, 2480 Email: <a href="mailto:ethics.lismore@scu.edu.au">ethics.lismore@scu.edu.au</a> All complaints are investigated fully in accordance with Australia’s National Statement on Ethical Conduct in Human Research. Any complaint you make will be treated in confidence and you will be informed of the outcome.</td>
</tr>
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| Contact Details | If you would like to ask any questions about this research then please get in touch. E-mail: Julia.truscott@scu.edu.au or Tel: 6620 3613 |
Please complete and return to the pre-school director by 13th May 2013.

I give consent for my child, .........................................................., to take part in the nature play project with Southern Cross University. I understand that my child’s comments may be recorded for the purposes of the study. I acknowledge that the researcher will be taking photographs, which will be used in a discussion with my child and his / her friends about play and nature.

☐ I give permission for my child to appear in these photos if he/she wishes.
☐ I do not give permission for my child to appear in the photos.

Signed................................................................. Date.................................

Print Name.................................................................

Please complete and return to the pre-school director as soon as possible so that another child can be given the opportunity.

I do not give consent for my child, .........................................................., to take part in the nature play project with Southern Cross University.

Signed................................................................. Date.................................

Print Name.................................................................

Please note: Other children from the centre may be taking part in this project. However, please rest assured that any comments your child makes will not be recorded and no photographs of your child will be taken for the purposes of this study.
Appendix C: Invite to staff to participate

18th April 2013
Dear <Pre-School Staff>,

**Invitation to participate in Early Childhood research**

Your pre-school is participating in a research project exploring nature and play at Australian pre-school settings. The research will involve the participation of 6 pre-school children from the centre and 2 members of staff.

As such, I am looking for two members of staff who would be willing to take part. Your participation would involve a conversation with the researcher surrounding the topics nature, play and risk. Please rest assured that there are no right or wrong answers, as the study seeks only to gather your experiences and personal reflections. You are the expert of your own experiences. Interviews will take between 30 and 60 minutes and can be arranged at a convenient time within or out-with work commitments.

There is no obligation to participate in this research, although should you wish to do so, your participation would be very much appreciated. It may offer you some time to reflect on nature, play and risk and will also give you the opportunity to contribute to early childhood research.

All data gathered will be de-identified to protect your identity in any published results of this study. You will have the opportunity to review a draft of the results to ensure that this is satisfactory and also to confirm that the researcher has recorded your thoughts accurately.

An information sheet with further details about the project has been enclosed to help you decide whether to take part. Should you have any queries about the project please discuss with <your director> or get in touch with me at the above address.

**If you are willing to take part, please let <your director> know.**

Many thanks in advance.

Yours sincerely,

Julia Truscott
M.Ed. Research Student
# Research Information Sheet

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2. This will be followed by a visit from the researcher and accompanying soft toy, Wattle-Pottle. During this session (about 30 mins) the children will be invited to help Wattle-Pottle locate natural spaces within the pre-school. This will act as an avenue to help them to share their point of view about their play in those natural spaces. The children and the researcher will take photos of the natural spaces that are important to the children (it is not necessary for the children to be in the photos, they could include only the natural feature).

3. On the final visit, the children will be invited to help the researcher to create a map of their playground for Wattle-Pottle using the photos. This activity will be used to stimulate discussions with the children about playing in nature and their thoughts and feelings about Australia’s natural risks.

### Risks / Benefits to Participants

All data gathered will be de-identified to protect the identity of the centre, staff and children in any published results of this study. Staff, and the parents of children, will have the opportunity to review a draft of the results to ensure they are happy that they are suitably de-identified. This will also allow staff to confirm that the researcher has recorded their thoughts accurately.

The researcher has undergone a full police check in the UK, which shows no criminal convictions. She has also completed the NSW working with children declaration and can provide a copy of both to your centre. This research will not offer any advantage or disadvantage to the children who do or do not participate. However, it is envisaged that the children may enjoy talking about their play and being a part of the project. Should any child not wish to participate on a given day, wish to stop participation during an activity or re-start their participation again later then this will be honoured.

This research project has been approved by the SCU Human Research Ethics Committee (Approval Number: ECN-12-274).

### Contact Details

If you would like to ask any questions about this research then please get in touch. E-mail: Julia.truscott@scu.edu.au or Tel: (02) 6620 3613
Appendix D: Mosaic approach with children

Visit 1 & 2 (Observation)

Visit 3 (Nature):

...Thank you for playing with me and for letting me watch you play over the last two weeks. But I need to share a secret with you...I think you would be a lot better at being play researchers than me, you know a lot more about play than me because you do a lot more playing than me. Do you think you could help by answering some questions about your play?

...I've brought along someone very special who would like to meet you. This is Wattle-Pottle. Wattle-Pottles are very unusual animals with a furry body of all different colours and a long scaly tail all down their back. Have you ever seen a Wattle-Pottle before?

... Wattle-Pottle has a worry. Over Wattle-Pottle's long life, Wattle-Pottle has noticed that not so many children play out in nature anymore. Oh, when Wattle-Pottle says nature, what do you think he means? I'm not quite sure? What do you think? ...OK so Wattle-Pottle is a bit concerned that he doesn't see so many children playing out in nature anymore.

Do you feel like you get to play in nature here at pre-school? ...Do you think maybe we could show Wattle-Pottle some of the places where you can play in nature here? Where are your favourite places to play? (Use these questions as prompts if required to help the children as they take Wattle-Pottle and the researcher on a tour of the natural spaces in the playground)

(At the natural spaces) What do you usually play here? What do you like about playing here? Can you show me how you play here? Can I take a picture to help Wattle-Pottle and I to remember? (Repeat at the different natural spaces they suggest).

(Regroup together) How do you feel about playing in all these natural places at pre-school? Do you get to play in nature when you're not at pre-school? Where do you play? Do you think it is important for children like you to get to play in nature? Why is it important to you?

Thank you for helping Wattle-Pottle and I to learn about play and nature at your pre-school. When I come back next time I'll print off the photos we've taken so that we can all look at them. Maybe we can make something with the photos to help Wattle-Pottle remember about play here. <collect in researcher name badges and remember to bring them next time>

Visit 4 (Risk):

(We can use the photos and short transcribed sound bites of the children's comments to make a map, collage or similar.)
Wattle-Pottle wanted to come back to see you again because we had such a great time on our last visit. But because we were having so much fun Wattle-Pottle got muddled up with all the different places we visited last time. I’ve brought the photos along that we took last time and I wrote down some of things that you said about your play. Maybe we could make a map or a picture together to help Wattle-Pottle remember all about play here?

(As we create the map / picture) Sometimes on a map we put signs that warn people about any dangers or anything they need to be careful of. Is there anything that Wattle-Pottle needs to be careful of here, or here? How will Wattle-Pottle remember to be careful?

If you are / were playing without an adult, which things would you be most careful of? How would you be careful of them? Do you think that adults know that you remember to be careful of these things?

**Evaluation**

I’m going to visit a different pre-school to ask the children there about nature and play. Do you think they will like Wattle-Pottle? Did you find it helpful to talk with Wattle-Pottle about your play rather than just me? Why do you think you found it helpful?
# Appendix E: Semi-structured interview question matrix for staff

## Interview Question Matrix for Educators

<table>
<thead>
<tr>
<th>Topic</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Thank you so much for agreeing to take part. I’ve prepared some questions, but just remember that there are no right or wrong answers, I just would like to hear about your experiences and any difficulties or not that you find in your daily work. So, just before we start would it be ok if I record our conversation so that I can transcribe it for my research later?</td>
</tr>
<tr>
<td>Meeting each other</td>
<td>OK, also just to remind you, in any reports I write up, I won’t say your name or the name of the centre, I’ll just say something like “a diploma qualified educator with 10 years experience felt...” So can you clarify what qualification you have? How long have you been working in early childhood? How long have you been working at this centre? Can you tell me a little bit about why you got involved in early childhood education and care?</td>
</tr>
<tr>
<td>Defining Play</td>
<td>The main focus of this study is on nature-based play, but play can mean so many different things, so it would be useful to know what you mean when you say play, or how you use play in your work here at the centre?</td>
</tr>
<tr>
<td>Research Q1. How do children experience nature-based play at pre-school?</td>
<td>How would you describe the opportunities offered to children at this centre to engage with nature? And how about to play in nature, if this differ? How do you feel about the opportunities that your centre provides?</td>
</tr>
<tr>
<td>Change</td>
<td>Have there been any changes in your or your centre’s approach towards nature recently? If so, what do you feel has influenced these changes? There seems to have been an increase in interest in nature kindergartens in Australia over the past couple of years, have you felt this? And what do you feel may be influencing the interest? Do you see any connection between this and the EYLF?</td>
</tr>
<tr>
<td>Childhood</td>
<td>Do you think the children get opportunities to engage with or play in nature outside of their ECE provision? Why / why not? How important do you feel it is to provide these opportunities to children as part of ECE provision?</td>
</tr>
<tr>
<td><strong>Research Q2. How do educators and children perceive the risks in Australia's unique natural environment in the pre-school play context?</strong></td>
<td></td>
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<td>---</td>
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<tr>
<td><strong>Personal concerns</strong> Do you have any concerns about working with children in nature here? [Find out specifically about Australia’s unique environmental risks eg. Snakes and spiders, additional questions may be required to find out whether these are of high concern or if slips and falls rate higher for educators]. Do you worry about these same risks yourself when you are say gardening at home or camping? How do you deal with this tension in your professional role?</td>
<td></td>
</tr>
<tr>
<td><strong>Risk &amp; Childhood</strong> Did you encounter these risks yourself as a child? Was your play constrained by these risks, or by your parents’ concern for these risks? Do you feel there is more anxiety surrounding these risks nowadays, and if so why do you think that is the case?</td>
<td></td>
</tr>
</tbody>
</table>
| **Concerns of others** How do you deal with parental anxiety surrounding these risks? How much awareness do the children have of the risks / dangers in nature?  
Overall, how do you feel about the balance between the risks and the benefits of playing and learning in nature for children? Are there any other questions that you were expecting, or that you think I should ask other teachers? Is there anything else you would like to add about risk, nature or play? |
Appendix F: Findings summary for educators and parents

Nature-based play research project: Findings summary for Parents & Staff

This project explored 2 main research questions:
1) How do children experience nature-based play at pre-school?
2) How do children and educators perceive the risks of nature-based play at Australian pre-schools?

These questions were explored at centres with similarly naturalised playgrounds; playgrounds with mature trees, small bushes and other vegetation, and live grass rather than artificial soft-fall underfoot. There were landscaping features involving slope, rocks and bridges, as well as cubby houses, large sandpits and playground climbing equipment surrounded by bark. The centres had also recently added vegetable beds.

What did we find out?
1) Nature-based play
We found that some children had the opportunity to experience immersion in nature-based play whilst some pre-dominantly experienced nature as a backdrop to their play. Of course, different children had different experiences on different days, but we found that 4 factors seemed to have an influence on whether the children had the opportunity to become immersed in nature-based play if they wished.

The four factors were:
Educator conceptualisations of childhood: When children were viewed predominantly as capable they seemed to be given more opportunities to demonstrate and practice responsibility and were allowed more access to ‘riskier’ materials for nature-based play such as sticks and stones.

Teaching Practice: When educators used sustained-shared thinking with children outdoors, as well as

What is immersion in nature-based play?
Immersion suggests the idea of a full sensory experience, a deep and purposeful engagement and the opportunity to get muddy from head to toe.
indoors, the children seemed to engage more deeply, socially and purposively in nature-based play.

The importance of nature-based play: When educators viewed the outdoor area as a place mainly for children to let off steam, it seemed to be used less as a site for sustained-shared thinking or nature-based play.

Belonging: When educators and families had close relationships, trust could develop. This had two parts. A) When staff could trust parents to react consistently to minor childhood accidents they felt less anxious, and they felt less need to curtail children in their nature-based play. B) When educators felt trusted as experts by parents, the centre could position itself as a site, within the landscape of modern childhood, where children could experience nature-based play.

"Maybe...they can’t do it at home but it’s good if they do it here."
"...with playing outside, and in the dirt and stuff like the mud pit, sometimes these children go home in quite a state! Anyhow, parents are like, "Oh well, that’s what they’re here for."

Children thought nature-based play was fun and fascinating, and it was also a social experience. They enjoyed finding and picking up natural creatures, which they shared with their friends. They also liked the opportunities for social imaginative games that nature-based play offered.

When children were not given responsibility, were curtailed, and were not extended in their play outdoors they could feel bored:

Girl: Um, I just don’t play much here...I don’t play very much when I’m here...I’m getting a bit bored. ... I’m getting kind of bored at playing outside.
Researcher: Oh ok, you prefer to play inside?
Girl: Hmm, no. I’ve been here [at this centre] for a very long time now. I’ve been here for quite a while.

2) Risk
We found that educators didn’t appear to worry unduly about the risks unique to Australia such as snakes and spiders. Also, educators didn’t think that the broader risks of nature-based play were any greater than other aspects of the children’s play. However, when the children appeared to be trusted with more responsibility in nature-based play, the educators seemed to have less need to intervene with safety concerns. This appeared to create a more relaxed atmosphere.
All children had the opportunity to learn *about* risk at their preschool. However, by being immersed in nature-based play they also learned *through* experience with small risks.

All of the children had knowledge about general outdoor risks, developed largely through experience:

"Like tripping over stuff! ...Because you have to be careful to watch where you’re going…”
"Like things that come off sticks...you can get splinters and you have to take them out…”
"You can’t run on the mud, because it will be slippery.”

However, when the children learnt about risks they might not have experienced before, such as encountering a snake, different perceptions emerged. When children were given responsibility, experienced nature-based play, and then learnt about natural risks they tended to frame them as something ‘to be careful of’ and seemed to be empowered in their capability to do so. When children largely experienced nature as a backdrop to their play and then learnt about natural risks they framed them as something scary:

"It’s every spider. Every spider....If you ever see one...we have to run away!”

Reflective questions for centres wishing to offer greater immersion in nature-based play:

- Why is the centre making physical changes to the grounds? Are these physical changes being accompanied by mindset changes to allow children the opportunity to become immersed in nature-based play if they wish?
- What sorts of restrictions does your centre have about playing with things such as sticks? Do these restrictions frame the children as capable and trustworthy, or not?
- Consider the responsibilities offered to children to demonstrate their capability – can these be increased indoors and out? What sort of collaboration and education is needed to allow this?
- What changes might need to be made in the message to families regarding nature-based play? What tensions and problems are likely? How will these be dealt with if the centre is to be positioned as an ‘accepted’ place where the children can experience immersion in nature-based play?
Appendix G: Findings summary for children

Nature-based Play Research Project: Findings summary for children

Do you remember when Wattle-Pottle and I visited your pre-school? We also visited other children too. All of you helped us to learn more about children’s play in nature. This is what we found out:

Some children

- cooked with mud, leaves, grass and bark
- played make-believe games with friends in nature
- collected ripe fruit from the garden by their self
- found interesting lizards, bugs and frogs
- were allowed to get muddy or sandy if they wanted to
- were in charge of their play

Wattle-Pottle and I decided to call this playing ‘really deeply with nature.’

The things children liked about playing ‘really deeply with nature’ were

- making up games with friends - you can pretend a tree is a rocket one day and the big bad wolf’s house the next day
- finding little creatures because they are really interesting and it is fun to show them to your friends

Some children worried about getting muddy though, especially if they had nice clothes on.

When children weren’t allowed to play ‘really deeply with nature’ – so maybe if they weren’t allowed to play with natural things like sticks, stones or mud, or if their teachers didn’t help them to be in charge of their own play - then some children said they got bored of playing outside at pre-school.

At places where children felt bored, some children thought nature was scary. But, when children were allowed to play ‘really deeply with nature’ they understood that you need to be careful of things like snakes and spiders, and they didn’t feel too scared of them.

Thank you for helping us – let’s hope it helps more children to be allowed to play ‘really deeply with nature.’ Thank you from, Julia & Wattle-Pottle 😊