Children's experiences of animals in school to support wellbeing:

An exploration through relational ecology

Monica May Wilson

Declaration

This thesis is being submitted for the award of Doctorate in Applied Educational Psychology. I declare that it is my own work and does not include material that is the work of others without acknowledgement, that I have consulted all materials cited, and I have not submitted this assignment for any other academic award.

Overarching Abstract

This thesis explores children and young people's (CYP's) experiences of animals in school. It encompasses three chapters: a systematic literature review, a bridging document, and an empirical research project.

The systematic literature review explores CYP's and their supporting adults' views of human-animal interactions (HAIs) in relation to wellbeing, across a variety of settings. Meta-ethnography, an interpretive qualitative synthesis approach, is employed to analyse six papers. Findings yield fourteen themes suggesting animals can offer a unique contribution to supporting CYP's wellbeing, providing relational opportunities, acting as agents of change, providing physical, emotional, and psychological support, and supporting CYP to develop knowledge and skills in preparation for adulthood.

The bridging document describes how the findings from the meta-ethnography link with, and inform, the empirical research project. The rationale for the thesis is presented alongside underpinning philosophical assumptions. Key ethical and welfare considerations are explored, including wider implications of the human-animal relationship.

The empirical report explores primary school-aged children's experiences of animals in school as part of wellbeing support. A qualitative approach is adopted. Thirteen individual semi-structured interviews are transcribed and analysed using Thematic Analysis, adopting a hybrid approach to explore both inductive and deductive themes. A relational ecology lens is employed as an organisational framework, yielding ten themes under three overarching theories: deep ecology, developmental theory, and object relations theory and the holding environment. It is concluded that children perceive animals in school to be a helpful form of support for wellbeing. However, individual differences are acknowledged, and further research recommended. EPs are argued to be well placed to support schools to critically consider the incorporation of animals, and incorporate explorations of human-animal relationships as part of holistic assessments.

Acknowledgements

I would like to express my sincere thanks to all those who participated in my research, from the children and young people who willingly volunteered, and openly shared their experiences and stories, to the supporting adults that made it all possible. Thank you to the schools who took part, who despite all the pandemic-related challenges, continued to support the research and took all the necessary measures to ensure interviews could still go ahead. Without your commitment to the research and willingness to go the extra mile, this would not have been possible.

To my supervisor, Billy Peters, who supported me far longer than was ever expected. Thank you for showing interest and curiosity in my research, for your continued commitment, extreme patience, and concise constructive feedback that always helped me to keep taking the next step. There have been many challenges, but your consistent support, fine balance between pushing and just waiting, and solution-focused approaches, have been second to none! Thank you for believing in me.

To my practice supervisor, Sarah Tighe, who supported me throughout all of the ups and downs, tirelessly kept motivating, guiding, and focusing me, and ultimately, also spent a lot of time waiting. Thank you for your patience, support, challenge, and belief in me.

I would also like to thank my family and friends for their support, encouragement, and sacrifices made throughout the last four years. In particularly my parents, Robin Wilson and Karen Stephenson, my stepfather, Paul Stephenson, and grandmother, Kathleen Fryer. Without you all I could not have accomplished what I have.

Thanks to my partner, Christopher Hunt, who couldn't have met me at a more challenging time, but who has supported me, reminded me to take breaks, scientifically critiqued, and celebrated each next step. Also, to my colleague and friend, Rachel Sawyer, who endured hours of zoom calls and peer supervision. Your motivating quotes inspired me and will stay with me throughout my career.

Finally, to Lottie, my springer spaniel, who is yet to experience a life without thesis writing, for her utmost loyalty, patience, and companionship. She has never left my side.

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'What are children, young people (CYP) and their supporting adults' experiences of human-animal interactions in relation to CYP's wellbeing?'

Abstract

Aims: This systematic literature review explores CYP's and their supporting adults' views of human-animal interactions (HAIs) in relation to wellbeing, across a variety of settings.

Rationale: Rapidly increasing interest and development in HAI research, a national drive to improve and support CYP's mental health and wellbeing, increases in prevalence of animals in schools, and a lack of clear guidance, policies, and legislation, indicates this to be an important area of research.

Method: Meta-ethnography, an interpretive qualitative synthesis approach, is employed to analyse six papers. Noblit and Hare's seven stages of meta-ethnography is utilised as an organisational framework for the synthesis.

Findings: Findings yield fourteen themes organised under four overarching interpretations, suggesting animals can offer a unique contribution to supporting CYP's wellbeing; providing relational opportunities, acting as agents of change, providing physical, emotional, and psychological support, and supporting CYP to develop knowledge and skills in preparation for adulthood.

Limitations: This meta-ethnography is conducted on a small scale, by a sole researcher. It is recognised that my own personal values, prior knowledge, assumptions, and experiences, will have influenced the synthesis and the overarching interpretations achieved.

Conclusions: The four interpretations link with the 'Five ways to wellbeing' model, suggesting that HAIs might reflect preventative, proactive approaches to supporting and promoting CYP's wellbeing.

'An animal relationship serves as a catalyst towards an awakening sense of self' (Emmens, 2007, p. 64), and has 'vast potential for bridging our connections to others as well as to deeper and transcending parts of ourselves' (Emmens, 2007, p. 65).

1.1 Introduction

This Systematic Literature Review (SLR) utilises meta-ethnography to explore and synthesise current literature on human-animal interactions (HAIs), in relation to children and young people's (CYP's) wellbeing, to develop an interpretation based on CYP's and their supporting adults' lived experiences. Scoping searches were first conducted to establish the breadth of the human-animal research field and identify key terminology. This introduction clarifies the terminology used throughout and provides a brief explanation of the human-animal bond. Existing literature is explored, highlighting potential underlying mechanisms, and informing the rationale for the overarching research question.

1.1.1 Terminology

In this review, the terms 'animal', 'companion animal', 'pet' and 'non-human other' are used interchangeably, reflecting terms used within existing literature. 'Supporting adults' are defined as adults familiar to, and directly supporting CYP, such as family, teachers, or therapists. A lack of universally agreed terminology in the HAI field is evident (Bayne, 2002; Davis & Balfour, 1992; LaJoie, 2004) and existing literature indicates the term 'wellbeing' is difficult to define and measure (McNaught, 2011; Pollard & Lee, 2003; Thomas, 2009).

1.1.1.1 Wellbeing

Dodge et al. (2012) suggest wellbeing is often described, as opposed to defined. For example, Marks and Shah (2004) describe wellbeing as 'more than just happiness. As well as feeling satisfied and happy, wellbeing means developing as a person, being fulfilled, and making a contribution to the community' (p. 2). Wellbeing can be understood as an overarching concept used to describe quality of life (Rees et al., 2010; Statham & Chase, 2010). 'Quality of life' is often used interchangeably with 'wellbeing' (Morrow & Mayall, 2009). According to the Oxford English Dictionary, the definition of wellbeing, is 'the state of being comfortable, healthy, or

happy'. Conceptualisations of wellbeing have developed, in line with attempts to 'de-medicalise' (Statham & Chase, 2010, p. 5) the concept and recognise a broader range of contributing factors. Statham and Chase (2010) define wellbeing as 'a dynamic state that is enhanced when people can fulfil their personal and social goals and achieve a sense of purpose in society. Rather than being static, wellbeing emerges from how people interact with the world around them at different points in their lives.' (p. 2).

The World Health Organisation (2012, p. 9) states 'wellbeing exists in two dimensions; subjective and objective. It comprises of an individual's experience of their life, and comparisons of life circumstances with social norms and values. Subjective wellbeing consults people directly about how they think and feel about their wellbeing and includes life satisfaction (evaluation), positive affect (hedonic), and judgements on how meaningful life is (eudemonic) (Wismar et al., 2013). Objective measures, don't take into account human perception (Tinkler & Hicks, 2011), which Layard (2005) argued as fundamental to understanding wellbeing.

This review is primarily concerned with subjective wellbeing as it focuses on CYP's and supporting adult's experiences. However, the broader term 'wellbeing' is utilised throughout for brevity. Wellbeing in this review, can initially be understood to 'centre on a state of equilibrium or balance point between an individual's resource pool and the challenges faced' (Dodge et al., 2012, p. 230). This definition acknowledges that wellbeing can fluctuate in accordance with individual's life experiences and support available. It is hoped that findings from this review will further shape the definition.

1.1.1.2 Human Animal Interactions (HAIs)

HAIs can be conceptualised as a broad, overarching term used to describe dynamic, mutual exchanges between animals and humans, and the psychophysiological impact on humans (Griffin et al., 2011; McCardle, McCune, Griffin, & Maholmes, 2011). Encompassed within HAIs are Animal-Assisted Interventions (AAIs) which represent a variety of therapeutic approaches utilised across settings. Further terms exist under AAIs describing specific activities. Fine and Mackintosh (2015) developed a spectrum (Figure 1, below) that classifies common terms into the three main categories.

Spectrum of Animal-Assisted Interventions (AAIs) (Fine, 2019)
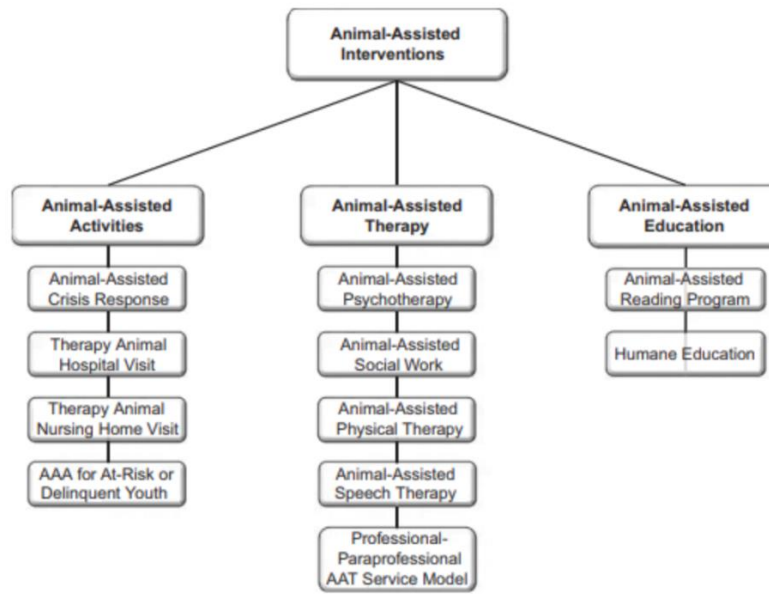
Figure 1: Spectrum of animal assisted interventions

Despite clarification attempts, inconsistencies remain across existing literature, with a vast range of terms describing the same activities or categories. Of particular note, was the use of the term 'therapy' which raises various contentions. Beck and Katcher (1984) concluded that 'a clear distinction should be made between emotional response to animals, that is, their recreational use, and therapy. It should not be concluded that any event that is enjoyed by the patients is a kind of therapy' (p. 419). Despite this, the term 'therapy' continues to be referred to in programs and literature, that would not ordinarily be medically or scientifically categorised as therapy (Kruger & Serpell, 2010). The lack of clarity and inconsistencies generates potential misunderstandings both within, and outside the field (Fine, 2019). The International Association of Human-Animal Interaction Organisations (IAHAIO) published a white paper in 2018 titled 'The IAHAIO Definitions for Animal-Assisted Activity and Guidelines for Wellness of Animals Involved' (Jegatheesan et al., 2018), that clarifies and recommends definitions for use across disciplines (Table 1, below).

Table of the IAHAIO Definitions for Animal-Assisted Activity

Term	Definition
Animal Assisted Intervention (AAI)	An Animal Assisted Intervention (AAI) is a goal oriented and structured intervention that intentionally includes or incorporates animals in health, education and human services (e.g., social work) for the purpose of therapeutic gains in humans. It involves people with knowledge of the animals and people involved.
Animal Assisted Therapy (AAT)	Animal Assisted Therapy (AAT) is a goal oriented, planned and structured therapeutic intervention directed and/or delivered by health, education, and human service professionals. Intervention progress is measured and included in professional documentation. AAT is delivered and/or directed by a formally trained (with active licensure, degree or equivalent) professional with expertise within the scope of the professionals' practice. AAT focuses on enhancing physical, cognitive, behavioural and/or socio-emotional functioning of the particular human recipient.
Animal Assisted Education (AAE)	Animal Assisted Education (AAE) is a goal oriented, planned and structured intervention directed and/or delivered by educational and related service professionals. AAE is conducted by qualified (with degree) general and special education teachers. AAE, when done by special (remedial) education teachers is also considered therapeutic and a goal-oriented intervention. The focus of the activities is on academic goals, pro-social skills and cognitive functioning. The student's progress is measured and documented. An example of AAE delivered by a special education teacher is a dog-assisted reading program.
Animal Assisted Activity (AAA)	Animal Assisted Activity (AAA) is a planned and goal oriented informal interaction and visitation conducted by the human-animal team for motivational, educational and recreational purposes. Human-animal teams must have received at least introductory training, preparation and assessment to participate in informal visitations. Human-animal teams who provide AAA may also work formally and directly with a healthcare, educator and/or human service provider on specific documentable goals.

Table 1: Table of the IAHAIO Definitions for Animal-Assisted Activity

This review utilises the term HAIs, as it is the broader interactional elements that this research is concerned with, as opposed to individual activities. It is hoped that this broader term will encompass all associated narrower terms.

1.1.2 Human-Animal Bond (HAB)

At the heart of HAIs is the concept of the Human-Animal Bond (HAB), 'a mutually beneficial and dynamic relationship between people and animals that is influenced by behaviours considered essential to the health and well-being of both' (American Veterinary Medical Association (AVMA), 2021, para. 1). The HAB developed thousands of years ago, when animals became domesticated. The bond reflects the social, symbiotic relationship between animals and humans (Odendaal, 2000). Beck (1999) suggested that one reciprocal benefit of the bond is increasing wellbeing for both parties. Fine (2019) argues that it is easier for humans to bond with animals than with other humans because animals are indifferent to status, social skills, material possessions, and wellbeing. AAIs draw upon relational aspect of the HAB, with animals perceived to enhance therapeutic outcomes (Fine & Beck, 2015).

1.1.3 Theoretical Underpinnings

Insights into how CYP interact with animals began with the work of child psychologist Boris Levinson. Levinson (1997) proposed that his dog, Jingles, acted as a 'social lubricant' when incorporated into therapy, helping create a more relaxed environment and increased dialogue. Since then, various research has explored HAIs in homes (Triebenbacher, 1998), therapeutic settings (Levinson, 1971), classrooms and hospitals (Jalongo, 2005; Jalongo et al., 2004), and in special needs environments (Anderson & Olson, 2006). Beetz (2017) highlights multiple effects of HAIs, including, physiological, social, emotional, and academic benefits, proposing several processes or psychological theories at work. For example, physiologically, a dogs presence can significantly lower distress, and reduce blood pressure and heart rate in CYP participating in a mildly stressful activity e.g. visiting the doctors. Fine and Mackintosh (2016) and Fine and Weaver (2018) proposed three main accepted theories that explain the HAB: theories of attachment, social support and the biophilia hypothesis.

1.1.3.1 Attachment

Attachment theory, developed by Bowlby (1969), illuminates the human need to protect and be protected (Sable, 1995). Barba (1995) suggests that human-animal relationships often reflect human-human relationships, especially the child-parent. Domesticated animals depend on humans for continual care and protection from danger, just as CYP depend on parents. Further, many people play with their pets and talk to them in motherese, as parents do with children

(Beck & Katcher, 1983). Many perceive animals to be significant members of their family, acting as outlets for support and affection, confidants or close friends (Fine, 2014). Animals can also help people feel safer and bring greater constancy into everyday life (Beck & Katcher, 2003). Walsh (2009) suggests animals provide reliable and consistent bonds that satisfy relational needs and provide support during transitional or disruptive life events.

1.1.3.2 Social Support

Bryant (2008) suggests that in times of difficulty, humans often seek social support, key to health and wellbeing, and that animals can be helpful sources for securing it. McNicholas and Collis (2000) highlight how people perceive pets to always be there for them, reflecting a strong sense of reliability. Further, the comfort and positive social outlet that animals can provide, reflects some human-human relations. Fawcett and Gullone (2001) and Wood et al. (2005) suggested animals can act as 'social lubricants' by facilitating and enhancing social interactions between people. The mere presence of a dog can help facilitate human interactions (McNicholas & Collis, 2000; Wells, 2009). Animals can also have an effect on stress, such as buffering CYP from parental conflict at home (Strand, 2004).

1.1.3.3 Biophilia

CYP are naturally and instantly drawn to animals through a process known as biophilia (Kellert & Wilson, 1993). The biophilia hypothesis suggests there is a beneficial, emotional relationship between humans and nature, with an 'innate tendency to focus on life and lifelike processes' (Wilson, 1984, p. 1). Wilson proposed that all CYP are intrinsically and innately motivated to interact with animals suggesting an inherent need to connect with and understand nature.

1.1.4 Rationale for Literature Review

There has been an unprecedented interest and development in HAI research (McCune et al., 2014), highlighting the benefits, proposed underlying mechanisms, and challenges of HAIs. One such area has been the impact of HAIs on human wellbeing. With a national drive to improve and support CYP's mental health and wellbeing, it is an increasingly important area of research. HAIs have been found to provide support during significant events such as the global pandemic (Ratschen et al., 2020; Shoesmith et al., 2021), and there has been increasing media attention

regarding animals incorporated into educational settings to support CYP's wellbeing. However, lack of clear guidance, policies, and legislation in the UK suggests further research is required. As HAIs are primarily something experienced subjectively, this review focuses on a qualitative exploration. Scoping searches highlighted a lack of qualitative studies specific to CYP's experiences in educational settings, so review parameters were widened to include a variety of contexts.

1.2 Method

This review utilises meta-ethnography; an interpretive method of qualitative evidence synthesis that 'compares and analyses texts, creating new interpretations in the process' (Noblit & Hare, 1988, p. 9). Meta-ethnography seeks 'an explanation for social or cultural events based upon the perspectives and experiences of the people being studied', obtaining 'understanding from multiple cases, accounts, narratives or studies' (Noblit & Hare, 1988, p. 12). This review explores CYP's and supporting adults' experiences of HAIs, in relation to wellbeing.

Noblit and Hare (1988) describe meta-ethnography as 'a rigorous procedure for deriving substantive interpretations' (p. 9). Such syntheses can be helpful for developing a theory about how a policy, service, or strategy works, and how people experience them (France, Cunningham, et al., 2019). France et al. (2015) maintained that rigorous synthesis of qualitative papers can 'increase their importance and relevance in the evidence base' (p. 2). Thus, in order to implement a rigorous synthesis, Noblit and Hare's (1988) seven stages of meta-ethnography, and subheadings from Atkins et al. (2008), are utilised as an organisational framework for the synthesis.

1.2.1 Phase 1: Getting started

Noblit and Hare (1988) describe this initial stage as 'identifying an intellectual interest that qualitative research might inform' (p. 26) with 'intellectual interest being immediately tempered and given form by reading interpretive accounts' (p. 27).

1.2.1.1 Defining the specific scope of the search

Scoping searches were conducted to establish the breadth of existing literature, inform the rationale, and establish inclusion or exclusion criteria. Toye et al. (2014) highlighted how 'strategies for identifying qualitative search can be unwieldy' (p. 5) thus the aim was to obtain 'a balance between a broad scope review, and a focus that would yield a manageable number of studies' (Atkins et al., 2008, p. 3).

1.2.2 Phase 2: Deciding what is relevant to initial interest

1.2.2.1 Defining the focus of the synthesis

Qualitative studies that described CYP's experiences of HAIs in relation to wellbeing, across a variety of settings, were chosen. Due to a lack of relevant studies, the search parameters were widened to include supporting adults' experiences. From this, the following research question was developed: 'What are CYP and their supporting adults' experiences of human-animal interactions in relation to CYP's wellbeing?'

1.2.2.2 Locating relevant studies

A SLR was undertaken to ensure that all possible studies were included. The search took place between February and May 2020 using databases: Eric, Psych Info, Scopus, Social Sciences, Web of Science, and The Human Animal Bond Research Institute (HABRI).

1.2.2.3 Literature search strategy

Campbell et al. (2011) suggest that multiple search strategies should be employed across a variety of databases. In light of the complex and varied terminology, a search string was developed through repeated trial and error to ensure a broad enough search of relevant papers. This resulted in complex final search strings, tailored to each database. Four overarching concepts were utilised: CYP, wellbeing, animals, and experiences. An example search string for ERIC EBSCO is presented in Table 2, below.

Table of Concepts and Associated Terms

No.	Concept	Type of term	Terms
1	CYP	Subject headings (DE)	"children" or "adolescents" or "early adolescents" or "primary education" or "secondary education" or "youth"
		Key words	"service user" or "young person" or "young people" or "kids"
2	Wellbeing	Subject headings (DE)	"Mental Health" or "Well Being" or "Wellness" or "Psychological Needs" or "Psychological Patterns" or "Mental health Programs" or "Adjustment (to environment)" or "Coping" or "Emotional Disturbances" or "Mental Disorders".
		Key words	anxi* or emotion* or SEMH
3	Animals	Subject headings (DE)	"Animals"
		Key words	"canine assisted" or "animal support" or canistherapy or pet N3 (therapy or psychotherapy) or animal W3 (therapy or psychotherapy) or "four footed" W3 (therapy or psychotherapy) or "human animal" W3 (therapy or bond or relation* or interaction or intervention or activity or education or learning or companion*)
4	Experiences	Subject headings (DE)	"Experience" or "Early Experience" or "Educational Experience" or "Emotional Experience" or "Group Experience" or "Intellectual Experience" or "Learning Experience" or "Sensory Experience" or "Social Experience" or "Student Experience" or "Teaching Experience" or "Sharing Behaviour" or "Helping Relationship" or "interpersonal Relationship"
		Key words	Relation* or perspective or perception or opinion or experience or attitude or view or thought or feeling or belief or reflect*

Table 2: Table of concepts and associated terms

1.2.2.4 Inclusion decisions

The initial search resulted in over 1,700 papers, once duplicates were removed. This was significantly reduced based on titles not concerned with experiences. Further refinements were

made using a process called 'berry picking' (Bates, 1989), described as being 'much closer to the real behaviour of information searches than the traditional model of information retrieval is, and, consequently, will guide our thinking better in the design of effective interfaces' (Bates, 1989, p. 407). The following inclusion and exclusion criteria were incorporated to guide the 'berry picking' process (Table 3):

Table of Inclusion and Exclusion Criteria

Inclusion	Exclusion
General criteria	
Papers available in English	Papers not available in English
Published after, and including 2009	Published pre- 2009
Qualitative studies (or qualitative element e.g., mixed methods)	Quantitative studies
Peer reviewed Published papers	Papers not peer reviewed Grey literature
CYP	
CYP aged 5-18 or the adults directly supporting them e.g., parents, teachers and other professionals	Pre-school children (aged under 5 years old)
	Post-18, higher education, or a focus on adults and elderly populations
n/a	Focus on specific groups of individuals such as: prisoners / youth justice / victims of sexual abuse / individual in rehab / military etc.
Wellbeing	
Wellbeing, mental health, anxiety, emotions, SEMH, subjective wellbeing etc.	Focus on physical or physiological health, quantitative measurements of wellbeing e.g. wellbeing scales, heart rate etc. or other contributing factors that impact on wellbeing e.g. pain management / cancer / loss / grief / loneliness / palliative care / brain injury / rehabilitation / addictions etc.
Papers noted focus on reading / literacy	Focus on reading or literacy, programmes or interventions or achievement/attainment
Experiences	
Qualitatively reported / including experiences, perceptions, views, opinions, perspectives, reflections, beliefs etc.	Quantitative papers or measures reported
Animals	

Animal-assisted: therapy / activities / interactions / relations / relationships / connections / bonds / interventions / education Human-animal: bond / interaction / connection / interaction etc. Animal support	Equine: therapy / psychotherapy / counselling etc., Dolphin: therapy / psychotherapy
Papers not focusing on 'pet ownership'	Papers concerned with 'pet ownership'
Service animals - emotional support dogs	Papers specific to service animals e.g. dogs / horses for the visually impaired or hearing impaired.

Table 3: Table of Inclusion and Exclusion Criteria

CYP under five years old were excluded, to enable a focus on school-aged CYP. Terms associated with wellbeing were kept broad to encompass a range of conceptualisations. Most of the literature regarding HAIs refers to dogs and small animals. Whilst farm animals, reptiles, horses, and dolphins were prevalent, they were excluded to maintain some commonalities across settings. With inclusion and exclusion criteria applied, 32 papers remained. These were read in full and further refined to six key papers selected for the synthesis. The refinement drew upon Light (1980) who referred to key judgement calls or decision points.

1.2.2.5 Quality assessment of included studies

Various quality appraisal tools or checklists exist for synthesising qualitative research (CASP UK, 2020; Gough, 2007; Walsh & Downe, 2006). However, Walsh and Downe (2006) highlight 'a tension exists regarding the extent to which a researcher should search out and establish the state of knowledge about the topic being explored before undertaking the primary data collection analysis' (p. 116). Sandelowski and Barroso (2003) highlight how conceptualisations of 'good quality' differ extensively, and Toye et al. (2013) argue that it is extremely difficult to distinguish between a 'key' and a 'satisfactory' paper. Toye et al. (2014) suggest that appraisal tools and quality criteria focus heavily on methodological strengths, as opposed to conceptual strengths, which can lead to the exclusion of potentially insightful studies (Campbell et al., 2011).

Thus, the Critical Appraisal Skills Programme (CASP UK, 2020) qualitative studies checklist was utilised as a guide for exploring the studies 'carefully and systematically' (Campbell et al., 2011, p. 44), to highlight important contextual information, potential influences on findings, and implications for the synthesis, with particular attention given to reflexive accounts, as opposed to informing any exclusions. Figure 2, below, presents a visual representation of the SLR process.

Flow chart representing the systematic literature search strategy

Eric EBSCo 39 papers	
Psych Info 230 papers	
Scopus 1,288 papers	Total of 1,959 papers 1,734 after duplicates removed
Social Sciences 40 papers	
Web of Science 349 papers	
HABRI 13 papers	

Papers excluded by title = 274 papers remaining

Inclusion and exclusion criteria applied

32 papers read in full

Further 26 papers excluded based on criteria = 6 papers remaining

Weight of evidence applied; 6 papers remained.

6 Papers included in Meta-ethnography

Figure 2: Flow chart representing the systematic literature review strategy

1.2.3 Phase 3 and Phase 4: Reading the studies and determining how they are related

The final six papers were revisited and repeatedly re-read in order to become acquainted with each paper. Attention was paid to the details of the accounts and key concepts, or ideas, noted. In reference to Britten et al. (2002), contextual information for each study was recorded (see Table 4, below) to provide context to interpretations made.

Table of contextual information of the studies included in the meta-ethnography

Study	Sample	Setting	Method
Nilsson, Funkquist, Edner & Engvall (2019)	Inpatient CYP aged 3-18 (n=50)	Sweden (Tertiary Hospital – inpatient paediatric ward)	Questionnaires (pre and post AAT)
Smith & Dale (2016)	School teachers (n=73)	Australia (Online)	Online survey
Mudaly, Graham & Lewis (2014)	Homeless CYP aged 7-15 (n=11)	Australia (Animal Shelter)	Interviews (semi-structured?)
Daly & Suggs (2010)	Elementary school staff (teachers, learning support, librarians etc) (n=75)	Canada (Online)	Online survey
Carlyle (2019)	A class group of Year 6 CYP and their teacher (n=30 CYP & 1 Teacher)	England, UK (North East Primary School)	Video, observations, workshops, photographs, sketches
Solomon (2010)	CYP aged 4 – 14 with a diagnosis of Autism (n=2)	United States (At the children's own home)	Video recordings of interactions and Interviews with parents

Table 4: Table of contextual information of the studies included in the meta-ethnography

Ascertaining how studies are related involves creating 'a list of key metaphors, phrases, ideas and/or concepts' (Noblit & Hare, 1988, p. 28). Seale (1999) argued a key aim of construct development is to help us to understand others' experiences, as opposed to just describing them. The constructs developed during this phase, reflect the first stage of the data analysis.

1.3 Findings

1.3.1 Phase 5: Translating the studies into one another

Phase 5 involves translating constructs into themes. The papers were examined to consider how they related by comparing and grouping common and recurring concepts, to create overarching themes. It was decided that similar constructs needed to appear in two or more of the studies to construct a theme. The studies' context provides important insights into the meaning of the constructs developed and should be considered throughout the translation process (Britten et al., 2002).

Campbell et al. (2011) utilised an 'index' paper as a way of 'orienting the synthesis' (Pope et al., 2007, p. 43). This involves taking concepts derived from the initial index paper, as a starting point for the translation, and comparing them with concepts from the other studies. In this review, Carlyle (2019) was selected as an index paper for two reasons; firstly, because the paper was considered conceptually rich, and secondly because it was one of the most recent papers. Fourteen overarching themes were constructed from the translation process (Appendix A, p. 109), presented in Table 5 below.

Table of themes informing the synthesis

Themes
'Unique contribution' of interspecies interactions
Autonomy
Connections
Attunement
Animals as catalysts
Transformational
Motivational
Ecosystemic benefits

Caregiving role
Skill development and preparation for adult life
Support mechanisms
Regulation
Happiness
Safe space

Table 5: Table of themes informing the synthesis

1.3.2 Phase 6: Synthesising Translations

Phase 6 involved synthesising the studies through the examination of constructs within each theme, deciding if they were similar in meaning. This informed the type of synthesis that took place. If concepts appeared similar in meaning, a reciprocal synthesis took place, whilst if concepts contrasted one another, a refutational synthesis took place (Noblit & Hare, 1988). To structure the synthesis, a large table was created, to demonstrate commonalities in constructs across papers, for each theme. The table draws upon Schutz's (1962) notion of first-order and second-order constructs, as indicated below in Table 6. It was decided that this review would incorporate first-order constructs, as second-order constructs were relatively thin in two of the papers (Mudaly, 2014; Smith & Dale, 2016). However, few first-order constructs were found in Mudaly (2014), thus, the full report was obtained and worked from thereafter. Reference to first-order constructs enabled further commonalities to be highlighted across studies, through the identification of constructs relevant to broader themes. These were not initially evident when consulting the author's second-order constructs alone. France et al. (2015) describe how a meta-ethnography seeks to achieve new interpretations through the expression of at least three levels of interpretations, as indicated in Table 6 below. Thus, third-order constructs, or overall syntheses, are created and presented in Table 8 (p. 39).

Table of Schutz's first-, second-, and third-order constructs

Type of construct	Description
First-order interpretation	Constructs that reflect direct quotes from the participants, about their understanding, as reported in the studies included

Second-order interpretation	The authors' interpretations of the participants' understandings, made by the authors of the included studies
Third-order interpretation	The synthesis of both first- and second-order constructs into a new model or theory about a phenomenon

Table 6: Schutz's first-, second-, and third-order constructs

Twelve of fourteen themes resulted in reciprocal translations; two resulted in refutational translations. A summary of key outcomes from the reciprocal and refutational translation of themes is represented in Table 7 below. A table of the full translations is presented in Appendix A, (p.109), with rows representing each individual theme and columns representing individual papers. First-order constructs are presented in italics and quotations to distinguish them from second-order constructs.

Summary Table of Reciprocal and Refutational Translations

Type of translation	Themes	Summary of translation
Reciprocal Translations	• Animals as catalysts • Motivational • Transformational • Ecosystemic benefits • Support mechanisms • Safe space • Happiness • Interspecies interaction	Reciprocal translations took place for twelve of the fourteen themes. Support for each theme needed to be evident within at least two of the papers and could be within first- and/or second-order constructs. Constructs conceptualised as 'in support' of a theme included positive references by CYP and/or supporting adults' with regards to observations, perceptions, or experiences of HAIs in relation to that theme. For example, for the 'transformational' theme, supporting extracts included: 'show a focus shift after the interaction with a therapy dog to mainly positive nature'

	• Connection to animals • Attunement • Connections to others • Autonomy • Skill development	'there had been a dramatic improvement in many areas of their lives' *"I used to be like more of a shyer person, type thing. And when I started going there, started talking to everyone and … probably gave me more confidence about myself".* For the 'happiness' theme, extracts indicated HAIs generally helped CYP to feel happy, although sadness was also reported in relation to the ending of interactions and relationships. This was not conceptualised as a refutation due to support for 'happiness' during HAIs, being evident across papers. However, conflicting feelings, such as sadness, were acknowledged, within the context of 'endings', and implications are later considered in terms of preparing and supporting CYP with these experiences of loss.
Refutational Translations	• Regulation • Caregiving role	Refutational translations occurred when conflicting evidence was found within and/or across papers. Such contradictions, highlight nuance and tensions in the literature. For example, for the 'regulation' theme, some of the papers highlighted how HAIs supported CYP to regulate, helping them to feel calm and comforting them when upset. The physical and sensorial nature of HAIs also provided opportunities for regulation. However, Smith and Dale (2016) highlight individual differences, suggesting that HAIs may not always support CYP to regulate. Examples of refutational extracts for this theme include:

		'Teachers felt that not all students would react well to having an animal in the classroom'.

"Dog was overwhelmed by students who had not yet been able to have their own needs met and therefore were unresponsive to the animals' needs"

"And also when we're holding the animals, makes you feel more calmer and stuff"

'the warmth, softness and sensation of weight and pressure from one another's body is calming and emotionally regulating'.

For the 'caregiving' theme – some papers highlighted how HAI provided opportunities for CYP to care for and nurture others, take responsibility and give to others. However, Smith and Dale (2016) highlight how not all experiences are positive as the overall caregiving responsibility lies with supporting adults, and could be viewed as additional burden, in light of their ever increasing workload. Further, they highlight potential difficulties relating to illness and retirement of animals, which are not alluded to within other papers. Examples of refutational extracts for this theme include:

'cause additional work beyond the classroom… outside of school hours' |

		"Issues arose when the dog was sick and required careful management and support for students and staff and when therapy dog had to be retired" 'Many participants demonstrated a growth in empathy. Several described the warm feelings they experienced in nurturing, comforting and caring for these vulnerable animals' 'the children developing a eudaimonic sense of well-being through the care-giving behaviours that Dave activates in them'. Overall, the refutational translations highlight tensions exist within the literature, suggesting that not all experiences are positive. They draw attention to important considerations that should be made in relation to HAIs particularly in relation to individual differences and the longer term care and responsibility for animals involved in such interactions.

Table 7: Summary Table of Reciprocal and Refutational Translations

1.3.2.3 Table of Syntheses

Themes	Interpretation	Construction
Animals as 'catalysts' *(reciprocal)*	The animals in HAIs are referred to as a 'catalyst', 'interaction engine' or a 'convertor'. All these terms suggest they play a key role in helping to promote and facilitate opportunities for change. The animals adopt a mediating role in social interactions, helping individuals communicate and connect to one another emotionally. Specific reference was made to dogs and their ability to alter power dynamics within the classroom setting, promote group cohesion and increased connections.	**Animals as 'agents' of change** Animals can act as 'agents of change,' facilitating opportunities for transformational change. HAIs can help transform environments, individuals, their experiences and associated narratives. They highlight and strengthen alternative stories, provide hope, and light the path to possible futures. The affects are often multidimensional and ecosystemic, impacting on individuals, their families, class groups and wider society. HAIs can transform power dynamics and promote co-agency. HAIs can provide avenues of opportunity that enable active participation and promote inclusion both within the family and classroom environment. Animals are key motivators to CYP's engagement and can act as social mediators or interaction agents, supporting individuals to engage in social interactions, communicating and connecting with others.
Motivational *(reciprocal)*	Animals spark interest and act as a key driver or motivating factor, acting as an incentive for participation and engagement in activities. This was particularly noticeable in children with additional needs such as ASD or those experiencing adversity. HAIs were described as providing 'something to live for'; helping CYP to find a purpose, feel included and explore future possibilities.	
Transformational *(reciprocal)*	Animals facilitate a shift in an individual's focus, often changing their physical or emotional presentation. They transform the environment by 'restructuring and reconfiguring the constraints and expectations of social interactions' and altering perceived power dynamics by challenging and transforming authoritarian power. HAIs help create and strengthen alternative narratives about CYP and their families by challenging perceived limitations and giving way to hope and future possibilities. The animals helped promote 'inclusion' across contexts, with children being more actively involved, participating, and engaging in family or group activities. The bi-directional nature of the transformation suggests that both the child and the animal transform one another.	
Ecosystemic benefits	HAIs bring transformational benefits for the individual, family, class group and wider society with a range of benefits across different contexts. This	

(reciprocal)	emphasises the suitability and potential benefits of HAIs for a wide audience including boys and girls of different ages and with differing needs. HAIs "could benefit anyone", not just those experiencing difficulties, although it is recognised that it "may be effective for some, but not all", as would be expected when considering any type of intervention or activity. Animals can contribute to a 'restructuring of the child's interactional ecology' enabling greater communication and participation in group contexts.	
Regulation *(refutational)*	HAIs can help create a calm, predictable and repeatable environment. Their presence can provide a physical grounding and connectedness, having a positive impact on both the body and mind. Animals can also provide a source of amusement and become a helpful distraction at times of difficulty or when emotions may be heightened. Interactions are 'fundamentally sensorial in nature', supporting emotional regulation and providing physical comfort. The dog also supports and empowers teachers, affording them permission to use physical touch to help the CYP regulate. However, some adults voiced their apprehension regarding HAIs as they felt that not all CYP would react well to the animals in their environment. There were concerns regarding the unpredictability of CYPs responses and the potential to further unsettle, as opposed to help regulate, CYP. This highlighted how the benefits were likely context dependent: "It depends on the student and their situation but if they like animals, it might be a different perspective to helping them".	**Support** HAIs can provide social, emotional and physical support for CYP. They also assist supporting adults to comfort and care for CYP across settings. They instil feelings of happiness and have positive effects on both the body and mind. Animals help create a calm, predictable and repeatable environment that offers a safe space for learning, exploration and interaction with others. Their physical presence is viewed as an important part of the environment often facilitating connections to others and supporting group cohesion. Interactions are 'fundamentally sensorial in nature' which aids emotional regulation and provides comfort. Further, dogs can empower supporting adults to provide, often controversial, physical comfort and touch, to CYP in the classroom setting. HAIs can provide light relief in the form of amusement and distraction as well as a sense of physical grounding and safety. However, benefits are likely context dependent, and there needs to be careful
Support mechanisms *(reciprocal)*	Animals provided two key elements of support. Firstly, for CYP directly, and secondly through supporting key adults. When CYP are in a heightened state, their ability to process verbal information is compromised. Thus, the non-linguistical, but highly social nature of the HAIs provides an accessible form of support for CYP. The 'intimate dialogue' between CYP and animals, can be seen as 'a means of coping with typical pressures in childhood that can be alleviated by feeling heard, understood and not judged', adopting a preventative approach to	

	maintaining positive wellbeing. Both CYP and the animals are part of a bi-directional process of 'becoming and being well together', with the dog acting as 'a champion of wellbeing'. Animals also offered a sense of security. The dog was viewed as an integral part of the classroom support system; providing additional support for the teacher in light of their "keen senses and naturally helpful attitudes" and supporting teachers to recognise individual CYP's strengths and creating a caring culture and conducive learning environment. Further suggestions are made for HAIs to be utilised as a form of specific, targeted support e.g., to address and encourage healthy living by acting as a motivator for exercise.	consideration regarding the suitability of environments, the individuals involved in the interactions and associated ethical implications to safeguard welfare, wellbeing and safety.
Safe space *(reciprocal)*	The CYP and animals 'share common worlds' both physically and metaphysically. In the home and classroom environment, the animals are quite literally 'on the same level' operating within shared physical spaces. This provides opportunities for 'coming together', where new, deterritorialised spaces are created. The animals help create a neutral ground for new social interactions and relationship building. The dog helped CYP's learning environments to 'feel like home'. The shared spaces facilitate co-agency, promote autonomy and give way to increased confidence, competence and self-esteem. They help create a dynamic environment with a sense liminality and opportunity for alternative possibilities.	
Happiness *(reciprocal)*	Happiness could be both seen and emotionally felt in the moment. It is created from simply the dogs presence, through to moments of joint attention and playful activities. There is a clear sense of well-being. The happiness created is something extending beyond just biophilia, it's a bi-directional, 'reciprocal encounter' experienced by both CYP and the dog. The sheer scale and breadth of the happiness experienced is likely unmeasurable. The dogs acts as a 'catalyst' or 'interaction agent' providing positive opportunities for fun and engagement across a variety of contexts.	

Interspecies interaction *(reciprocal)*	A key component of HAIs is 'animals' unique contribution'. That is, that animals have something 'special' to contribute within interspecies interactions. This can be conceptualised as providing a combination of factors including attunement, intimacy, companionship, non-verbal communication, regulative support through sequential predictability, and a sense of co-agency. The dog provides CYP with a different kind of relationship, acting as both a playmate and friend. The relationship and interactions are dynamic, with CYP and animals 'flourish together in difference'. Interspecies interactions are bi-directional and can be mutually beneficial through a process of 'becoming and being well together'. Interestingly, some of the most transformational moments happen in 'seemingly ordinary moments' and thus are often difficult to capture, measure and evidence. This highlights the importance of hearing individuals' experiences and conducting qualitative research. The impact of HAIs may have wider ecological implications in terms of supporting individuals to appreciate, connect with, protect and conserve the environments we live in and those we share it with.	**Relational opportunities** A key component of HAIs is 'animals' unique contribution'. That is, they are able to offer something different or additional to human-human interactions. The interspecies relationship affords different qualities, with animals often adopting the role of a non-judgemental playmate or friend. Their uniqueness is displayed through a combination of interactional factors including attunement, intimacy, companionship, non-verbal communication, regulative support, and co-agency with CYP. There is a strong, bidirectional, relational element to the interactions that is mutually beneficial, reflecting a relational ecology. This appears beyond the realms of biophilia, offering a deeper level of purposeful connection. HAIs can afford both CYP and animals autonomy, such that they are freely able to approach and interact with one another. HAIs also support CYP to connect to others (humans) through their ability to support social interactions and positively affect group cohesion. HAIs can be both formal, such as set interventions, or informal, more opportunistic and dynamic, which in turn promotes increased agency and independence. Animals are highly regarded and valued by CYP. CYP often make significant
Connections *(reciprocal)*	*Connections to animals* Many CYP became personally connected and invested in the animals they interacted with. The animals afforded them a different kind of relationship that enabled them to be open and expressive. There was mutual affection and the development of strong bonds. CYP perceived animals to be non-judgemental, sentient beings, who 'loved anybody'. Of particular note was the feedback or recipiency the animals gave CYP during interactions such as when they approached and orienting to the children, sought attention or physical contact and expressed contentment and satisfaction. The animals provided a listening ear and CYP felt heard. The interactions often occurred in an 'entirely embodied way' with non-verbal communication often prevailing through mutual gaze and the sharing of joint attention; there was a mutual sense of connectedness. This was particularly evident for CYP with ASD who appeared to be drawn to a 'communicative partner whose social dispositions match his or her own'.	

	Connections to others (humans) HAIs provide CYP with a form of social support and mediation, where there are opportunities for social and emotional interactions and connections with others, with both peer and supporting adults. They strengthen bonding processes which in turn promotes group cohesion and can help to reconnect individuals with peers and wider society. HAIs transformed CYP's experiences of social interactions, particularly for CYP with social communication difficulties where HAIs acted as a catalyst to social interactions with peers that had never been seen before. Thus, what appeared to be quite ordinary moments, were in fact hugely 'monumental' and transformational for many individual CYP and their families.	personal investments in them over the course of their relationship.
Autonomy *(reciprocal)*	Both animals and CYP demonstrate their autonomy and agency throughout HAIs. Interactions are generally not forced, with animals and CYP freely able to approach and interact with one another. This element of freedom sits within an ethics of care framework. The spaces shared are 'deterritorialised', neutralising any power dynamics and creating as sense of co-agency. The HAIs allow for the acknowledge that both CYP and animals have a voice that needs to be heard, but that may only be visible to those who are attuned and grounded 'in that moment'. Suggestions are made that both CYP and animals need to become 'more visible' in the spaces they occupy, to protect and preserve their autonomy and relatedness. The element of autonomy highlighted, suggests that there is importance to be credited to the informal nature of HAIs and further still, that formalisation of these interactions such as through set interventions, could potentially restrict some of the perceived benefits and transformational properties of the experience. CYP described HAIs as fun and providing opportunities for them to be themselves, perhaps linked to the perceived, non-judgemental character of animals. Coupled with this, the freedom and choices afforded, positively affects CYP's motivation, engagement and participation.	

Caregiving role *(refutational)*	A key element of the HAIs was the role of caregiving. Many CYP showed increased empathy and experienced 'a eudemonic sense of well-being' in response to care giving behaviours. The caregiving is reciprocal, facilitating a 'mutual flourishing, being and becoming well together' and a sense of 'collective nurturing'. The children learnt how to attune to the animal's needs, care for them and ensure they felt safe. They described how it felt to take on this role. Teaching empathy provided important lessons for life, promoting respect, moral awareness, compassion, responsibility, humane treatment of both human and non-human animals, care and love. Care giving activities and empathy exchange, provided opportunities for CYP to open up and talk about their thoughts and feelings that were otherwise often hidden. Whilst acknowledging that children played a role in the caregiving behaviour, some teachers framed the caregiving role as a burden, as additional work and responsibility for already overworked and overstretched adults. Some expressed concern for the wellbeing of the animals when interacting with the children, raising ethical considerations and potential implication of the animals being in such environments. Additional issues were raised regarding if the animal were to be sick, retire or die and the impact this would have on the CYP and the environment.	**Developing life skills and preparing for adulthood** A common component of HAIs is 'caregiving'. CYP engage in animal caregiving activities, but also feel that animals cared for them through displays of affection such as when they approached to greet them. There is a sense of 'collective nurturing' and 'mutual flourishing' through empathy exchange and attunement. CYP develop their ability to attune to others needs through animal caregiving activities, perhaps also helping them to develop their ability to perspective take. Animals are considered 'unique and important sources for extended learning'; helping CYP build knowledge and skills that supports their development. This includes academic benefits such as enhanced affective learning skills, recognition of their own personal strengths, and improved confidence, self-esteem and independence, which CYP felt helped prepare them for adulthood and potential challenges they might face. Animals were perceived to be sensitive to the emotions, needs and behaviours of CYP, which in turn informed their responses to CYP, providing feedback
Attunement *(reciprocal)*	There is a sense of bi-directional attunement during HAIs. CYP recognised and responded to aspects of animal's behaviour. They were able to identify how their own feelings and emotions could transfer to animals such as when they are scared. They became skilled at detecting what certain aspects of animal's behaviours indicated such as the dog wagging its tail when happy and the small animals not eating when scared. CYP were able to describe how to respond to animals behaviours, how to help them, make them feel safe and look after them. They were able to reflect on how their actions were received by the animals. The dog in the classroom was described as 'getting inside your boots' suggesting he was able to observe the CYP's perspectives and attune to how they were feeling and demonstrating empathy. Suggestions	

	are made that the attunement experienced extends beyond personal gratification, giving way to bi-directional benefits.	through displays of affection and attention seeking behaviours. However, not all reports of caregiving were positive. Some supporting adults highlight how the overarching caregiving responsibility lies with them, which, when coupled with increasing pressures, demands and expectations, across settings, could sometimes be viewed as a burden. Others felt that there were potential animal welfare concerns and further ethical considerations to be made in relation to the appropriateness of some interactional environments.
Skill development and preparation for adult life *(reciprocal)*	HAIs can support the development of CYP's skills. They can offer 'unique and important sources for extended learning'. For many children the HAI provided dramatic changes in many areas of their lives. Wellbeing increased significantly following HAIs and CYP experienced increased confidence and self-esteem. Improvements in their social competence, turn taking skills and language development were also observed. HAIs enhanced both CYP's self-perception and others' perception of them; they were better able to recognise their own individual strengths and qualities. SEMH benefits were also acknowledged, with animal-directed empathy later observed to transfer to other social contexts, thus developing their ability to function in the wider society. CYP also developed their social and independence skills which helped them to feel better prepared for adulthood. HAIs positively impacted on CYP's academic development by providing opportunities for extended learning, encouraging discussions and providing CYP with a greater knowledge on animals. This is turn, led to CYP to be more caring, competent and respectful around animals. This could have important future implications for the protection and conservation of animals and abolishment of cruelty.	

Table 8: Table of Syntheses

1.3.3 Phase 7: Expressing the Synthesis

Noblit and Hare (1988) suggest syntheses are often 'bias toward the written word' (p. 29) and 'the worth of any synthesis is in its comprehensibility to some audience' (p. 82). Thus, alternative ways of expressing the synthesis, such as visual representations, may help to reach wider audiences through increased accessibility.

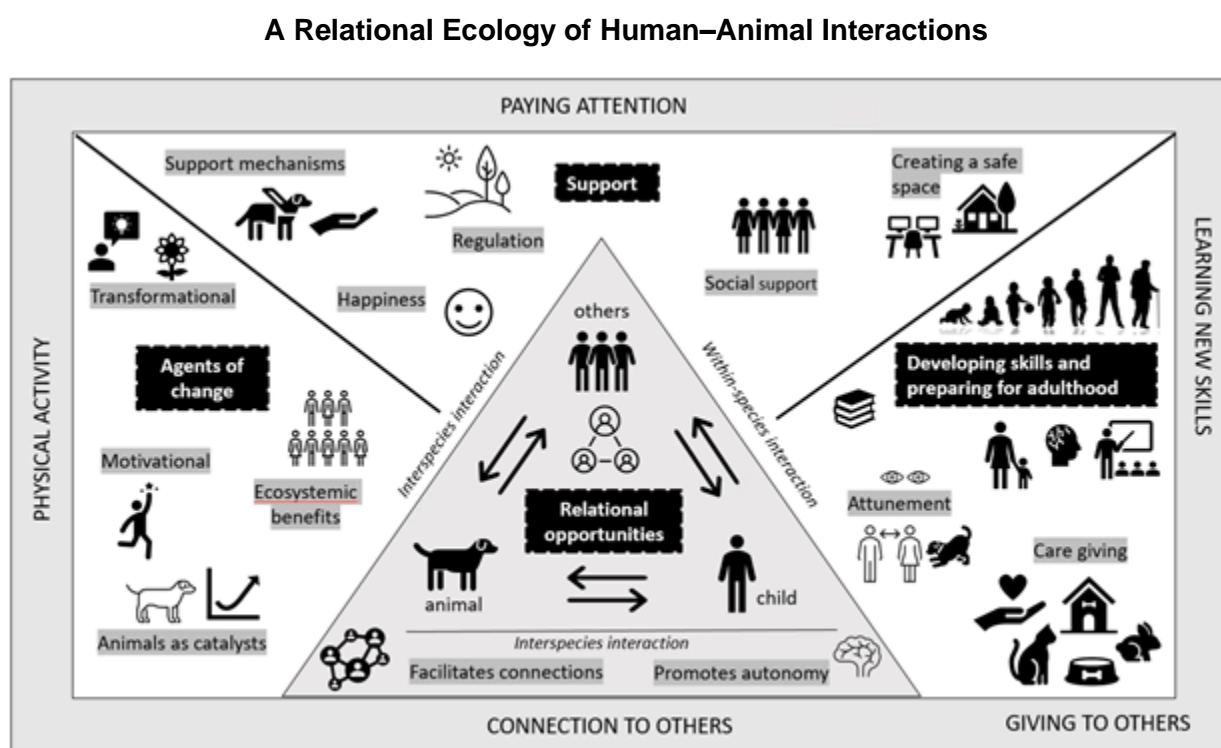Figure 3, below, presents a visual model of this synthesis.

A Relational Ecology of Human–Animal Interactions

Figure 3: A relational ecology of human-animal interactions

Figure 3 represents one interpretation of a line of argument synthesis (France, Uny, et al., 2019; Noblit, 2016; Noblit & Hare, 1988). This synthesis found CYP's and supporting adults' experiences indicated HAIs provided CYP with relational opportunities and various means of support. The visual presents a central interactional triad between a child, animal and other people, representing the third-order interpretation, 'relational opportunities'. The other three interpretations, 'agents of change', 'support' and 'developing skills and preparing for adulthood', are presented in black text boxes in surrounding sections. The fourteen underlying themes are situated in associated sections, highlighted grey. The grey box surrounding the perimeter of the

visual represents the 'Five ways to wellbeing' mapping on to the four overarching interpretations.

1.4 Discussion

The final synthesis comprised of a combination of reciprocal and refutational themes, developed from six studies set across a range of contexts. The syntheses are complex and multi-faceted, explored individually below. The four overarching interpretations, encompassing the fourteen themes, were found to link with the 'Five ways to wellbeing' model, also explored.

1.4.1 Agents of Change

All six papers suggest animals often act as catalysts, enhancing CYP's participation in the world, mediating social interactions, and giving way to transformational change. McNicholas and Collis (2000) propose dogs act as catalysts to human-human interactions, with 'casual exchanges' (p. 69) often developing into more substantial relationships. Mudaly (2014) and Carlyle (2019) suggest transformations are bi-directional; both the child and animal transform one another. Emmens (2007) states 'an animal relationship serves as a catalyst towards an awakening sense of self' (p. 64), offering 'vast potential for bridging our connections to others as well as to deeper and transcending parts of ourselves' (p. 65).

One interpretation of this catalyst effect is that animals have agency and can be powerful agents of change through relational interactions with humans. Animal agency has gained increased recognition in the literature. Irvine (2004) defines agency as 'the capacity for self-willed action' (p. 128) and Thomas (2016) described animals as 'acting, intentional agents' (p. 35), who have their own minds, beliefs and intentions, and who can exercise reasoned, free choices.

The papers highlight how HAIs often instigate a shift in CYP's focus. Four papers refer to HAIs as motivational in terms of CYP's increased engagement in academic tasks, participation in activities, and incentives for positive behaviour. Notably, in Mudaly (2014), one child refers to HAIs as 'something that I should live for' (p. 28), highlighting the value placed on interactions and the support provided.

HAIs were also found to be helpful for highlighting and strengthening alternative stories (White, 1988). In Nilsson (2020), CYP reconstructed their hospital stay more positively following HAIs. In Mudaly (2014), CYP recognised changes in themselves and spoke about increased confidence, independence, and sociability, whilst Smith and Dale (2016) highlight changes in adult narratives following HAIs, highlighting CYP's strengths, and challenging previously perceived limitations. So HAIs could support self-reflection, and help develop a greater holistic understanding of individual CYP, supporting explorations of hopeful futures and possibilities (Pearpoint et al., 1993).

Mueller et al. (2019) proposed 'exploring relationships involving companion animals within the family can be a lens for understanding the functioning of a family as a whole' (p. 351) and when adopting a systems perspective, animals are highlighted as an integral part of CYP's family context. All papers in this synthesis indicate positive effects on CYP's wider ecosystems.

1.4.2 Relational Encounters

Evident across all papers, is a strong bidirectional, relational element to HAIs, with mutual benefits perceived for both CYP and animals. Carlyle (2019) and Solomon (2010) demonstrate high levels of freedom and choice, finding positive effects on CYP's motivation, engagement, and participation. However, Gorman (2019) and Yerbury and Lukey (2021) argue perspectives and wellbeing of animals need to be better considered and incorporated.

Three of the papers are concerned solely with dogs (Carlyle, 2019; Nilsson, 2020; Solomon, 2010), the other half, incorporate a variety of small animals, reptiles, or horses (Daly & Suggs, 2010; Mudaly, 2014; Smith & Dale, 2016). The latter found the variety was positively received, with CYP preferencing different animals. Mueller (2014) argues that the type of animal involved has implications for the type of relationship developed. Beck and Madresh (2008) suggest interactions with dogs appear to produce the greatest reciprocity, perhaps due to the extent of their domestication. Dogs are often bred to reflect traits and behaviours that appeal to humans, thus have evolved as more friendly, adaptable, attentive and responsive beings (Horowitz, 2010).

However, Smith and Dale (2016) suggest some environments or situations may not be conducive for HAIs, with one participant describing the "dog was overwhelmed by students who

had not yet been able to have their own needs met and therefore were unresponsive to the animal's needs" (p. 19), thus raising important ethical considerations. Conversely, Mudaly (2014) highlights how CYP appeared well attuned to the needs of the animals, learning about their needs and behaviours. Noddings (2003) proposed that educational settings should be cultivating positive relationships between CYP and nature, to contribute to happiness and fulfilment of basic needs.

All papers refer to aspects of interspecies interactions that highlight the unique contribution of animals. That is, that they provide something different or additional to human-human interactions. Animals have a way of reaching CYP who may not always respond well to peers or supporting adults, suggesting they support CYP with a variety of needs. Animals' uniqueness was displayed through a combination of interacting factors including companionship, non-verbal communication, physical, psychological, and emotional support, attunement, intimacy, and a sense of co-agency with CYP.

1.4.3 Support

All papers indicated that HAIs provided CYP with some form of support, including emotional, physical, social and psychological. Carlyle (2019) referred to HAIs as 'fundamentally sensorial in nature' (p. 206), suggesting animals could comfort and support regulation through physical contact, such as rhythmical stroking. Harlow's 'contact comfort' theory (1958), implies that tactile comfort is important for attachment development, suggesting infants seek emotional comfort through biological innate needs to touch or cling to something. Levinson and Mallon (1997, p. xii) stated 'contact with the inanimate and particularly the animate world via the pets is most important to a wholesome emotional development'. Irvine (2004) highlights that HAIs provide 'the basis for a model of the self that does not depend on spoken language' (p. 3). Solomon (2010) supports this, finding that HAIs provided CYP with autism, opportunities 'to practice non-linguistic but highly social actions and to coordinate these actions with others, human and canine' (p. 156). The synthesis highlighted that HAIs could help create a calm, predictable, and repeatable environment, and offer a safe space for learning, exploration and interaction with others.

With the exception of Nilsson (2020), all of the papers refer to HAIs having a positive impact on CYP's social interactions, facilitating connections to others and supporting group cohesion.

However, Nilsson's study took place within a hospital, which likely reduced opportunities for human-human social interactions. For some CYP, HAIs were the start of the development of more meaningful friendships. Messent (1983) suggested that animals can act as 'social lubricants' (p. 37), whilst McNicholas and Collis (2000) refer to a 'social catalysis effect' (p. 61), highlighting the potential impact on individual's health and wellbeing. Putnam (2000) argued social bonds to be one of the most powerful predictors of life satisfaction.

Four of the papers highlight how HAIs instil feelings of happiness in CYP; having positive effects on body and mind. Noddings (2003) argued that happiness requires human flourishing, which is connected to wellbeing. However, whilst not conceptualised as a refutational interpretation, the 'happiness' theme was met with reports of sadness in Mudaly (2014), when HAIs ended. This suggests a need for careful consideration regarding the ending of HAIs and relationships, as for some CYP, 'endings' may instil similar feelings and experiences to other forms of loss.

1.4.4 Developing Life Skills and Preparing for Adulthood

Animal caregiving activities supported CYP to develop their ability to perspective take and attune to others needs. Animals were perceived to be sensitive to CYP's emotions, needs, and behaviours, responding with displays of affection and attention seeking. Born (2018) referred to 'animal as peer' (p. 49) reflecting CYP's awareness of the animals' ability to understand, communicate, and in some cases, respond to their social advances, suggesting an affinity, or attunement, exists (Myers, 2007). Purewal et al. (2017) suggest the 'reciprocal affectionate and non-judgemental relationship' (p. 17) that CYP share with animals, has obvious benefits for their development. Myers (2007) found that CYP often talk to animals, highlighting their desire to communicate with them.

Melson (2003) argues that animal caregiving activities support the development of nurturing behaviours and skills. Daly and Suggs (2010), Solomon (2010), and Mudaly (2014) support this. However, Smith and Dale (2016) highlighted how not all caregiving experiences were positive, with some adults sharing that caregiving responsibilities brought increased pressures, demands, and expectations, sometimes perceived as an additional burden. Others highlighted potential animal welfare concerns and ethical considerations, particularly regarding the appropriateness of environments.

Together, the papers suggest that HAIs can support the development of CYP's affective learning skills, support the recognition of individual strengths, and improve confidence, self-esteem, and independence, helping preparation for adulthood. One participant in Daly and Suggs (2010) argued animals were 'unique and important sources for extended learning' (p. 107). Sobel (1993) suggested physical connections with non-human others can be powerful motivators for learning and invoke a sense of wonder; instigating curiosity and inquisitiveness (Sobel, 2016). Melson (2003) argued similarly, explaining that CYP often make emotional investments in animals, and that optimal learning occurs within meaningful relationships. Animals have been found to have positive effects on the development of CYP's language (Poresky, 1996), literacy and reading ability (Le Roux et al., 2014), and reading accuracy and comprehension (Hall et al., 2016).

1.4.5 Wellbeing

Statham and Chase (2010) highlight variations in how CYP and adults define and prioritise different aspects of wellbeing. In this review, the conceptualisation of wellbeing was kept broad, and although focusing on subjective wellbeing, it was hoped that the findings might further shape the conceptualisation.

The findings yielded fourteen themes that suggested that CYP's and supporting adults' experiences of HAIs occurred mainly in support of, or to maintain positive wellbeing in CYP, or as an early, lower-level intervention, as opposed to being used as a specific intervention in response to CYP experiencing significant difficulties e.g., at times of severe dysregulation. Thus, the conceptualisation of wellbeing was further shaped and added to by considering the preventative and supportive aspect of HAIs in relation to CYP's wellbeing. This led to the exploration of the 'Five ways to wellbeing' an evidence-based model designed to improve the mental health and wellbeing of the whole population. The model was utilised to further highlight the fluid and developmental nature of wellbeing. Table 9, below, highlights how the model links to the four overarching interpretations and the three key underpinning psychological theories: biophilia, social support and attachment.

Table of The Five Ways to Wellbeing

Way to wellbeing	Links to the overarching interpretations and underpinning theories
1. **Connection to others**	This is reflected in the 'relational encounters' interpretation. CYP experienced connections to both animals and other humans during HAIs, with animals supporting and facilitating connections and social interactions. This links to all three underpinning theories; biophilia, attachment, and animals as a form of social support.
2. **Paying attention**	The 'relational encounters' interpretation suggests that CYP pay attention to the world around them, and that they have a biological instinct to connect with nature, as described in the underpinning theory biophilia. CYP became increasingly attuned to the needs and desires of the animals as they adopted caregiving roles. CYP and supporting adults noticed transformational changes stemming from what often appear to be quite ordinary moments.
3. **Physical activity**	Many CYP made reference to the physical nature of HAIs. The 'Support' interpretation represents how animals provided comfort and supported CYP to regulate through opportunities for physical contact. CYP valued opportunities for touch, with the physical stroking of animals being seen as important. Further, some CYP referred to HAIs as providing opportunities for play and being outside, whilst others referred to activities such as dog walking. Play and physical activities with animals often incorporated a social element, involving other CYP, thus linking with the underpinning theory social support.
4. **Giving to others**	This is reflected in the 'Developing life skills and preparing for adulthood' interpretation, through animal caregiving opportunities. CYP learnt how to care and provide for others, e.g. animals, develop their knowledge and skills, and experience an increased sense of responsibility. This could be perceived to link with the underpinning theory attachment, as the role of caregiving is a vital component and CYP need to develop their caregiving skills and empathy in order to develop, facilitate, and receive healthy attachments with others.

5. **Learning new skills**	This is reflected within the 'Developing life skills and preparing for adulthood' interpretation. HAI were perceived to support the development of CYP's knowledge and skills. There was a sense that the CYP felt proud, and were able to recognise their progress and achievements made.

Table 9: The Five Ways to Wellbeing

1.5 Conclusion and Implications

1.5.1 Conclusion

Four overarching interpretations emerged as a means of understanding CYP's and supporting adults' experiences of HAIs in relation to CYP's wellbeing: relational opportunities, animals as agents of change, support, and developing skills and preparing for adulthood. HAIs provided relational opportunities for CYP to connect with both animals and other people. The findings suggest animals can act as agents of change, offering a unique contribution to supporting CYP's wellbeing, particularly in light of their catalytic effects on CYP's social interactions. HAIs are utilised and valued across different contexts and deemed beneficial for the wellbeing of a variety of CYP with differing needs. Ecosystemic benefits are noted, in terms of the impact on the CYP's family and wider community networks. The findings suggest that HAIs provide emotional, physical, social, and psychological support, reflecting psychological underpinnings proposed in existing research, including biophilia, attachment theory, and social support. HAIs were perceived to support CYP's learning and development, help increase confidence and self-esteem, and facilitate caregiving opportunities, supporting the development of life skills. Findings indicate that CYP's and supporting adults' experiences of HAIs were beneficial for CYP's wellbeing. The four interpretations link with the 'Five ways to wellbeing' model, suggesting that HAIs might reflect preventative, proactive approaches to supporting and promoting CYP's wellbeing.

1.5.2 Limitations

Whilst existing literature highlights advantages of HAIs for supporting children's wellbeing, findings remain varied, and limitations of existing literature and research should be

acknowledged. McCardle, McCune, Griffin, Esposito, et al. (2011) caution that those involved in research on HAIs, who likely already have a keen interest in the field, may have a personal bias towards striving for positive outcomes which can impact on data analysis and interpretation, as researchers might specifically search for the findings they hope to achieve. Further, it appears that some studies, whose findings do not offer support for existing literature, are often perceived to be less valuable, and therefore not published. Many existing studies are not peer reviewed, and raise questions surrounding scientific objectivity and rigour, due to lack of scrutiny. Barker et al. (2000) argue potential biases exist if, for example, research is limited to classrooms with the most enthusiastic and willing teachers, as is often the case with opportunity samples. Thus, consideration of context within the papers included was important.

This meta-ethnography is conducted on a small scale, by a sole researcher. This has implications for the data selected for extraction being limited to the interpretations and biases of one researcher. Noblit and Hare (1988) make reference to researchers engaging in discussions with the original authors from the papers synthesised, and Britten et al. (2002) highlight how such consultations can help 'test the validity of the third-order interpretations' (p. 215). Time and resource constraints made this impossible; thus, opportunities for further constructive dialogue were restricted. Finally, it is recognised that my own personal values, prior knowledge, assumptions, and experiences will have influenced this synthesis and the overarching interpretations achieved.

1.5.3 Implications for Educational Psychologist's Practice

EPs are strong advocates of holistic assessments, acknowledging and valuing CYP's whole ecosystems and the interactions that occur within them. EPs may wish to further develop their understanding on HAIs and the potential impact on CYP's wellbeing, raising the profile of HAIs in their work by considering how CYP's interactions with animals could be explored as part of information gathering and holistic assessments. Such information could reveal important insights into the lives of CYP and help provide and strengthen alternative narratives about their strengths, skills, motives, desires, and future possibilities. Given the value placed on animals within these interactions, EPs need to be mindful of, and highlight to supporting adults, the implications and potential impact of any loss on CYP (Crawford et al., 2020).

EPs working within a traded model of service delivery (Lee & Woods, 2017), are well placed to

support schools to critically explore the costs and benefits of incorporating animals, as well as highlight any animal welfare concerns and ethical implications. EPs can signpost schools to evidence-based research, policies, and guidance, as well as other services, organizations or charities who provide tailored training and education. Safeguarding CYP is an important aspect of the EP role, and I would argue that this should also extend to considering the welfare of animals in school.

Finally, current literature and the findings from this meta-ethnography have highlighted that whilst research in the field is prevalent across many disciplines, EPs have made little contribution to the field. Thus, there is a distinct lack of research from an EP perspective, on the contribution of HAIs to CYP's wellbeing. This is surprising considering the increasing prevalence of animals in schools and increased media attention promoting potential benefits. I would argue that EPs are well placed, and skilled in using a variety of tools and approaches to explore and obtain CYP's views, which they could utilise to consider CYP's experiences of animals in school from a psychological perspective.

Chapter 2: Bridging Document

2.1 Introduction

This chapter provides a context for this research, linking the Systematic Literature Review (SLR), presented in Chapter 1, with the empirical research, in Chapter 3. An overview of my personal and practice-based experiences is presented and fed into the rationale for the thesis. An exploration of my philosophical positioning follows, including how this informed the way the research was conducted, and the positioning of children and young people (CYP) and animals. Ethical and welfare considerations are made.

2.1.1 Background Context to Research

2.1.1.1 Personal History and Motivations

From a young age, I have always been drawn to animals and opportunities to interact with them, having a range of pets and spending much of my childhood engaging in activities involving animals. Human-animal relationships afforded me something that no human relationship can offer. Fine (2019) proposed there is something extraordinary about human-animal relationships, which are quite different to conventional human relationships.

I believe that animals in my life supported me to flourish, succeed, and overcome difficulties. They taught me about empathy and responsibility, and provided a sense of love, laughter, friendship, loyalty, and acceptance. Animals are non-judgemental and often viewed as key members of one's family (Fine, 2014). My relationships with animals were of equal, if not more, importance to me than many of my human relationships. Further, my experiences of HAIs often took place outside, which contributed to my wellbeing, enabling me to recognise, appreciate, and connect with nature.

2.1.1.2 Practice-Based Experiences

Throughout my career I have developed increasing interest in HAIs, particularly in relation to wellbeing. I incorporated animal caregiving activities when working with CYP with additional needs, witnessing first-hand the positive benefits to their development, confidence, social skills,

and wellbeing, and visited alternative provisions incorporating animals within their curriculum.

This research was conducted as part of my doctoral training, whilst I was on placement within a Local Authority (LA) as a Trainee Educational Psychologist (TEP). Throughout my placement, I came across educational settings that incorporated animals with a broad variation in approaches adopted. Nonetheless, a distinct lack of formal guidance and legislation was evident. Many settings appeared unclear of the research evidence underpinning interventions employed. Despite this, the practice-based experiences, and anecdotal reports that I experienced, were largely positive, including some indications that animals were having a positive impact on CYP's wellbeing in school.

Reflection on both my personal and practice-based experiences led me to consider how these types of interactions could potentially become more widely available and open to others. Not every child has access to, or opportunities for HAIs. I considered whether such opportunities could, and should, be more widely incorporated into educational settings to complement CYP's learning and support their health and wellbeing. This is where my initial interest in the research began.

2.1.1.3 Timing and Context

Schools have been described as playing a central role in supporting the mental health and wellbeing of CYP (Department for Education (DfE), 2018). The green paper: Transforming Children and Young People's Mental Health Provision (Department of Health & Department for Education, 2017), describes a mental health strategy that led to various initiations such as assigning area mental health leads and upskilling staff in schools to facilitate low-level interventions and support. Schools are increasingly trying to adopt innovative, cost-effective approaches to support the social, emotional, and mental health needs of CYP.

To add to these challenges, on 20th March 2020, all schools across England closed in response to a national pandemic; covid-19. This abrupt, unplanned ending left many CYP feeling unsettled and uncertain about their futures. Consequently, the global pandemic resulted in additional pressures on services such as the Child and Adolescent Mental Health Service (CAMHS), the wider National Health Service (NHS), charities, helplines, youth workers and school staff. Further, upon return, some CYP, supporting adults, and families, had experienced

loss, anxiety, and prolonged uncertainty, thus further adding to the challenges.

Many schools within my LA placement, took the pandemic and associated lockdown periods as an opportunity to re-evaluate school wellbeing support systems. Some considered HAIs as a potential valuable 'tool' that could be incorporated into their settings as part of wellbeing support systems or to complement recovery curriculums. This led me to consider whether the incorporation of animals in schools could potentially, in the longer term, assist schools as part of an overall preventative approach to promote and support positive mental health and wellbeing.

To explore the field of HAIs further, I carried out scoping searches and attended the annual Society for Companion Animal Studies (SCAS) conferences which led me to discover that research in this area was a rapidly accelerating field. There was a distinct increase in the number of studies carried out over the last five years, as well as increased prevalence of the incorporation of Animal-Assisted Interventions (AAIs) or therapies in health settings, workplaces, and educational settings. Whilst the potential benefits of HAIs have long been alluded to, it is only more recently that these benefits have been increasingly recognised, explored, and utilised. Considering the current educational climate, now more than ever, educational settings are seeking more innovative ways to support CYP's mental health and wellbeing.

Whilst acknowledging that HAIs are likely not for everyone, I remained hopeful that there was potential for them to be incorporated more widely as one of several approaches adopted as part of an overarching wellbeing support system e.g., alongside other opportunities such as engaging in art, music, or mindfulness, to promote positive mental health and wellbeing in schools.

2.1.2 Key Underpinnings

2.1.2.1 Philosophical Assumptions

It is acknowledged that a researcher's ontological and epistemological stance impact on the way in which they approach, plan, conduct, analyse, interpret and evaluate research (Creswell & Poth, 2018). My ontological perspective rejects the notion of objective realities and reflects an approach often referred to as relativist. I adopt a relational ontology that perceives humans to be

relational beings who jointly create meaning through dialogue (Gergen, 1999). My epistemological viewpoint sits within the social constructionist paradigm, that suggests knowledge and meaning are jointly created through social and cultural activity. Thus, reality itself is subjective. Individuals construct their own realities through interpretation of their own experiences and develop shared meanings through dialogue with others.

Reflective of my philosophical viewpoints, it is acknowledged that individuals have many different experiences of HAIs. Some may experience interactions as deeply meaningful, whilst others may show little interest, or perceive no benefits. Thus, this research adopts a qualitative methodology as it hopes to illuminate and obtain rich descriptions of individual's experiences.

2.1.2.2 Personal Values

Core values that particularly resonate with me, and influence both my personal life and professional practice, include the importance of children's views and participation, and ethical considerations. These values influence the approaches and methods adopted in this research, and are further explored below.

2.2 Systematic Literature Review and Empirical Research

2.2.1 Systematic Literature Review

Meta-ethnography was the chosen method for synthesising the studies in the SLR. It uses a distinctive translation synthesis method that transcends the findings from each study to create higher order themes (Noblit & Hare, 1988). It provides a more detailed description of methods and higher order interpretations in comparison to other narrative literature review approaches (Atkins et al., 2008). Further, such syntheses can enable the development of new conceptual understandings and/or frameworks which can help to shed light on any protentional gaps in existing literature.

The meta-ethnography was the first formal step in the exploration of CYP's experiences of HAIs, with a focus on wellbeing. The literature review highlighted that few studies had been conducted on CYP's lived experiences of HAIs, to such an extent that the participant group had to be

extended to include supporting adults' experiences of child-animal interactions. Further, few studies had been conducted within educational settings, so the environment or context in which the interactions took place was kept broad. Existing research encompassed a range of disciplines, although, at the time of my systematic searches, no empirical studies appeared to be conducted by an Educational Psychologist (EP). The studies included a variety of interactions ranging from formal, goal-directed interventions to more informal, animal-assisted activities. From the perspective of CYP and supporting adults, findings highlighted four constructs that provided a starting point for the exploration of CYP's experiences of animals in school, with a focus on CYP's wellbeing.

2.2.1.1 Informing the Empirical Research

CYP's and supporting adults' experiences of HAIs constructed through the meta-ethnography reflected some of my personal and practice-based experiences, as well as anecdotal reports shared with me on placement. This, coupled with my growing interest in the field, and acknowledgement of an increase of animals in schools within the LA, led me to consider how my empirical research might better support educational settings to critically consider the incorporation of animals in schools, with a specific focus on their incorporation as part of wellbeing support. As an applied psychologist, I considered how my empirical research could build upon findings from existing literature by utilising a lens of psychological theory to inform the exploration.

One of the four overarching constructs that emerged from the SLR was 'relational opportunities'. This particularly resonated with me as it reflected aspects of my own personal values and relational approaches that underpin my practice. I considered psychological theory specific to this area and selected relational ecology (Putney, 2013) as a theoretical lens for this exploration. Relational ecology draws upon psychodynamically informed theory, and ecological systems theory, to explain how human identity and wellbeing can be shaped and influenced by relationships humans have with their environment, and other living beings. Within the theory, Putney integrates the growth task model of human development, deep ecology, object relations theory, and liminality, as proposed underlying mechanisms that explain aspects of HAIs. This research utilises relational ecology and the underpinning theories, as a framework for the empirical exploration. It was hoped that a relational focus would help illuminate any bidirectionality of interspecies interactions, and any associated ethical and welfare

considerations. In addition, it was hoped that adopting a theoretical lens, would also help to increase the rigour of the research.

2.2.2 Empirical Research

The relational ecology perspective was adopted to inform the data collection and analysis, as opposed to conducting 'theory testing'. It was hoped that the theoretical lens would support the development of an alternative perspective (Marková, 2007). Reflective of the philosophical assumptions underpinning this research, I utilised a qualitative, interpretive method, inductive analysis, to explore the rich accounts shared by children in response to open ended questions during semi-structured interviews. It is acknowledged that the analytical accounts obtained during the data collection process produced research data reflective of a co-construction of the children's accounts and my own interpretations (Edwards et al., 2002). It is recognised that 'the findings of qualitative research will inevitably be only one possible interpretation of data' (Toye et al., 2014, p. 11).

2.2.2.1 Researcher Reflexivity

Toye et al. (2014) propose that researcher bias is an internal part of the data interpretation and highlights how the 'interpretative nature of qualitative research challenges the prevailing scientific research culture which aims to reduce, or even remove, the effect of researcher bias' (p. 11). Thus, it was important to adopt a position of reflexivity throughout the data collection process. I recognise that my own personal and practice-based values, and experiences, have informed and shaped this research (Burr, 2003) and influenced my interpretations of children's reported experiences (Clarke & Braun, 2013). Noblit and Hare (1988, p. 35) highlight how 'the person conducting the synthesis is intimately involved in the synthesis that results', and as such, 'in qualitative research, the issues of judgements and biases is accepted and included in the accounts created.' Noblit (2016) highlights how positionality, 'the perspectives being brought to the work' (p. 13) impact on the kinds of interpretations individuals make.

2.3 Ethical Considerations

Whilst this research obtained full ethical approval from the university and BPS ethical guidelines (British Psychological Society (BPS), 2009; Oates et al., 2021) were adhered to throughout, it was felt that further ethical considerations, beyond standard procedures and requirements, were required.

2.3.1 Positioning of Children

A researcher's conceptualisation of childhood can inform their decisions on chosen methods, analysis, ethical practice, and data interpretation (Mayall, 2000; O'Kane, 2008; Punch, 2002). This research aimed to hear and explore children's lived experiences of animals in school. Thus, it is necessary to consider how my research positioned children. Research indicates children to be experts on their own lives, and that adults can't fully understand children's perceptions of the world (Dockett & Perry, 2011; Farrell & Danby, 2015; Fattore et al., 2012). This research perceives children to be competent social actors (Gallacher & Gallagher, 2008), who, as participants, should be consulted, informed, involved and heard (Christensen & Prout, 2002). Children have a right to be involved in topics that affect them, as well as a right to not be (Brady, 2017). Article 12 of the United Nations Convention on the Rights of the Child (UNCRC) (UNICEF UK, 1989) states, a child has 'the right to express those views freely in all matters affecting the child (p. 5).

Moore et al. (2008) highlight the importance of recognising potential power imbalances in research, particularly when working with vulnerable groups such as children. The research process can exacerbate such imbalances, as the researcher is often considered the expert (Thomas & O'Kane, 1998). Noble-Carr (2006) caution if power differentials are not addressed, children may answer in accordance with what they believe researchers want to hear, especially during one-to-one interviews (Morrow & Richards, 1996). Throughout the development of my methodology, epistemological and ethical considerations were made to address and reduce potential power imbalances.

Ratification of the UNCRC (UNICEF UK, 1989), the children's rights movement, policymakers, and service providers, have increasingly addressed the meaningful involvement of children in discussions and decision-making, and considered how to do so in more credible and ethical

ways (Moore et al., 2008). Key to these developments are researchers' commitments to reflexive practice (Crabtree, 2019) and critical thinking regarding methodologies chosen and limitations experienced.

2.3.1.1 Informed Consent

Consent for children is explored across a range of literature (Dockett & Perry, 2011; Moore et al., 2017; Parsons et al., 2016). This research considers how children, not just their parents, could be meaningfully consulted and empowered in relation to informed consent. Moore et al. (2008) found children considered it important for adults to explain why questions would be asked, and how their responses would be used. This research developed a child friendly process, assigning time for each child to talk through the project and ask questions of the researcher. Discussions were supported by child-friendly forms and visuals considering children's range of reading abilities (see Appendix C, p. 144).

Outcomes of this process led one child to share that their parents had wanted them to take part, but they didn't wish to. Another child indicated that they wished to take part, but not be audio-recorded, despite their parents consenting. On both accounts children's wishes were acknowledged and respected. This suggested, that when appropriately informed, and provided with the right tools, children were able to make their own informed choices, even if these conflicted with opinions of adults they knew and trusted. To ensure children felt able to change their mind at any point throughout the research, their visual consent forms, highlighting their right to do so, were kept visible throughout the interviews. Regular check ins were made alongside consideration of non-verbal cues, in an attempt to identify signs that children otherwise may have found difficult to verbalise (Parsons et al., 2016).

2.3.1.2 Confidentiality and Transparency

Children take matters of confidentiality very seriously (Moore et al., 2008). Prior to participation in this research, they asked questions about who would listen to the audio recording, where it would be stored, and when it would be deleted. Some even asked who could access the computer where the recording would be stored, and whether the computer was encrypted. This highlighted both the importance of confidentiality and transparency for children, but also that their knowledge, understanding, and interest about matters affecting them, often exceeds what

might be expected. To increase transparency throughout the interviews, and aid children's conceptualisation of what was included as data, children were given the choice to take ownership of controlling the audio recorder, kept within view throughout.

2.3.1.3 Building Rapport and Relationships

Researchers need to reflect on their verbal and nonverbal communication to ensure children feel heard, accepted, and understood (Moore et al., 2008). This research first piloted the research questions with a child, to check that the language used could be understood, and to seek suggestions for increased accessibility. Language was amended accordingly following feedback. Moore et al. (2008) highlighted how children considered it important for adults to introduce themselves, including sharing something about themselves, such as what they enjoyed doing. Engaging in something fun was also considered helpful. It was hoped that the incorporation of creative methods during the interviews would support this and help make the interviews more ethical (Mumford et al., 2010). Further, allowing children to take charge of the audio recorder can help the researcher to establish rapport and reduce power imbalances (Mahon et al., 1996).

2.3.2 Positioning of Animals

The positioning of animals is another key aspect of the research. It is a topic of increasing and contentious debate, particularly in relation to HAIs. It raises important ethical considerations regarding the incorporation of animals into educational settings, particularly where the primary focus is often for human benefit. Terminology within existing literature often positions animals as inferior. For example, referring to the 'use' of animals in schools can unhelpfully contribute to animals' objectification. 'Animals are not static 'treatment' modalities or interventions, they are individual, dynamic organisms that are part of their own contextual systems' (Mueller, 2014, p. 8). Walsh (2009) argued the term 'companion' instead of 'pet' across literature could indicate predisposing biases in researchers' beliefs, such as assumptions of mutual relationships and the existence of psychological bonds. It is important to consider the 'mutually influential nature of human-animal relationships' (Mueller, 2014, p. 8) and how such relationship affect animals. Serpell (2003) asks one to consider the extent of the costs animals experience when participating in human-animal relationships, arguing there to be 'ethical limits beyond which we should not go' (p. 449). For example, Katz (2004) critiques pet owners for sometimes using

dogs to fulfil emotional gaps within their own lives. Where possible, this research, utilises alternative framing, such as the 'incorporation of animals' to recognise and appreciate animals' equal place and value within the wider ecosystem, and the agency they should be afforded within inter-species relationships.

2.3.3 Relational Ethics

One key interpretation from the SLR was relational opportunities, pertaining to interspecies interactions and relationships. Taylor and Giugni (2012) propose a 'common worlds' framework that acknowledges children's relationships with others, including non-human others, within their worlds, highlighting ethical and political challenges. Haraway (2008) refers to this multifaceted concept as learning 'how to flourish together in difference without the telos of a final peace' (p. 301). This included how to invite and include non-human others into our common worlds, how to be responsible, how to apply constructive criticism regarding our relationships with others, and how to adopt a relational ethics.

2.3.4 Health and Welfare

'One Health' is a concept used to describe a collaboration across disciplines to promote and protect public health (Jegatheesan et al., 2018). Health is defined by the World Health Organization (WHO) as 'a state of complete physical, mental and emotional wellbeing and not merely the absence of disease or infirmity' (World Health Organisation (WHO), 2001, p. 1). 'One Health', recently re-termed 'One Welfare', highlights the interconnectedness of human well-being, animal welfare, and the environment and aims to achieve optimal health outcomes for all (Centers for Disease Control and Prevention (CDC), 2021; Pinillos et al., 2016).

Chapter 3: An exploration of children's experiences of animals in school in relation to wellbeing, through the lens of relational ecology

What are children's experiences of animals in school as part of wellbeing support?

Abstract

Aims: This empirical report explores children's experiences of animals in school as part of wellbeing support, in two primary schools, one mainstream and one special, in an English Local Authority (LA).

Rationale: Limited research exists pertaining to the exploration of children's experiences of animals in school, in relation to wellbeing, particularly studies adopting a psychological theoretical stance. It is hoped that by adopting a relational ecology lens, alternative understandings can be developed about children's experiences.

Method: A qualitative approach is adopted. Thirteen individual semi-structured interviews are transcribed and analysed using Thematic Analysis, adopting a hybrid approach to explore inductive and deductive themes.

Findings: A relational ecology lens, employed as an organisational framework, yields ten themes under three overarching psychological theories: deep ecology, developmental theory, and object relations theory and the holding environment.

Limitations: Findings are not considered generalisable to the wider population but hope to highlight key areas for consideration and further exploration.

Conclusions: It is concluded that children perceive animals in school to be a helpful form of support for wellbeing. However, individual differences are acknowledged, and further research suggested. EPs may find the relational ecology framework helpful for supporting schools to critically consider the incorporation of animals to support children's wellbeing, and to include explorations of human-animal relationships as part of their holistic assessments.

3.1 Introduction

The aim of this empirical report is to explore children's experiences of animals in school as part of wellbeing support, in two primary schools, one mainstream and one special, in an English Local Authority (LA). This introduction comprises of a brief exploration of the terminology, background literature, and theory, which together inform the rationale for this research.

3.1.1 Terminology

For the purpose of this research, all participants are referred to as 'children', both for brevity and due to the narrower age range of participants, as opposed to 'children and young people' (CYP), as referred to in the Systematic Literature Review (SLR). The abbreviation 'HAIs' continues to be used to represent the overarching term human-animal interactions.

3.1.2 Background

3.1.2.1 Child Voice

Encouraging and involving children in decisions that affect them is increasingly reflected in legislation and policies across the UK (Children Act, 2004; Department for Education and Skills (DfES), 2003). Richards et al. (2015) argue that the involvement of children in research raises the profile of child voice and helps inform and develop policies, legislation, and services, and illuminates individual differences, strengths, and areas for development. Treseder (1997) refers to participation as a process that enables children to influence decisions and affect change for themselves, peers, and wider communities. Children's involvement 'should lead to policies and services that better reflect children's and young people's priorities and concerns' (Brady & Graham, 2019, p.18). It is hoped that involvement of children in this research will help keep it grounded in children's lived experiences. Putney (2013) claimed that 'lived experiences are more complicated than any single theory or conceptual framework can adequately capture' (p. 67).

3.1.2.2 Animals and Children

Animals in the lives of children are a rapidly increasing area of research, stemming back to the work of Freud, who proposed that animals and children share a natural kinship (Freud, 1965).

Animals play a significant role in children's lives from early years right through to adulthood, from real-life physical interactions to symbolic representations, such as in stories. Companion animals, or pets, are often found to receive the same emotional, financial, and timely investments as children. Children might also experience HAIs in educational contexts such as visiting farms, zoos, or aquariums, or by experiencing more spontaneous interactions by simply exploring their natural environment. The biophilia hypothesis (Wilson, 1984) suggests that children are instinctively drawn to, and inquisitive about animals.

3.1.2.3 Animals in Educational Settings

Animals are increasingly incorporated into educational settings, often introduced as part of a specific learning experience, or linked to curriculum objectives. Some settings incorporate wider humane education curriculums, where children learn how to care for and protect animals. In others, animals are permanent residents and referred to as the school pet. A variety of animals are incorporated, including small animals, aquatics, reptiles, and farm animals. Some schools, referred to as 'farm schools', house animals and offer alternative provision, curriculums, or learning experiences tailored for children with additional needs.

There has been increased media coverage on the benefits of animals in schools, including Sir Anthony Seldon, Vice-Chancellor of the University of Buckinghamshire, proposing that 'every school should have a dog or another pet to reduce stress in the classroom' (Coughlan, 2019, para. 1). Whilst existing research alludes to potential benefits, there is a lack of consistent evidence. As such, the incorporation of animals in schools remains a controversial topic and one that requires further exploration, research, and consideration. There are contentious animal welfare and ethical considerations to explore, including the suitability of such environments for animals, and the potential impact on their overall quality of life. Haggerty and Mueller (2017) highlight a lack of knowledge concerning requirements and standards, that would increase the safety and effectiveness of HAIs.

3.1.2.4 Children's Wellbeing

Wellbeing is a broad term, with no universally agreed definition, influenced by a variety of environmental factors and individual experiences, over the course of one's life. It can be understood both in terms of objective measures, relating to traditional policy areas of economy,

health, and education, and subjective measures, that recognise aspects of individuals' lives that are self-determined. This might include how we feel about ourselves, our sense of purpose, discovering our capabilities, and the quality of our relationships with others. The SLR, in Chapter 1, explored the concept of wellbeing in greater detail, conceptualising it as a 'dynamic state', which alters in accordance with how people interact with the world (Statham & Chase, 2010, p. 2). Dodge et al. (2012) suggest that wellbeing is centred 'on a state of equilibrium or balance point between an individual's resource pool and the challenges faced' (p. 230).

The findings of the SLR were found to reflect the 'Five Ways to Wellbeing' (Aked et al., 2008), a model helpful for exploring and considering factors impacting on and supporting children's wellbeing. It highlighted the multi-dimensional, changeable nature of wellbeing. This research is open to further developing the conceptualisation of wellbeing through the exploration of children's experiences of HAIs in school. Thus, it is hoped that the 'Five ways to wellbeing' model will provide a helpful framework for the exploration, without limiting the potential for further developments or new understandings.

3.1.3 Animals Supporting Children's Wellbeing

HAIs can have positive effects on children's social, emotional, physical, and psychological development. The findings from the SLR suggest that animals can support children's wellbeing through relational encounters, acting as agents of change, providing physical, social, emotional and psychological support, and by helping children to develop their knowledge and skills, supporting preparation for adulthood. Melson (2003) suggests animals can support children through reassurance, intimate dialogues, and a calming presence. McCardle, McCune, Griffin and Maholmes (2011) highlight how children from different cultures and backgrounds, will have a range of differing encounters, experiences and perspectives on animals, including social norms, in relation to the value of animals within their society (Chandler & Otting, 2018). This suggests that individual differences also likely impact on children's experiences of HAIs.

Russow (2002) proposed that the Human Animal Bond (HAB), a mutually beneficial relationship, promotes wellbeing for both parties, characterised by affection and affiliation, and built upon mutual trust. Fine (2019) highlighted how children often seek reassurance and emotional support from pets during times of stress. Research during the global pandemic highlighted how many people turned to their pets as avenues of support (Ratschen et al., 2020; Shoesmith et al.,

2021). Strand (2004) argued pets were important sources of nurture and acceptance, helping support the development of children's coping skills, with animals acting as an outlet to support emotional regulation, in response to environmental stressors.

Whilst research pertaining to animal ownership indicates benefits for humans, Wohlfarth et al. (2013) highlight differences in relationships between children and animals in the home, and those in therapeutic or educational settings e.g. Animal Assisted Interventions (AAIs). Differences include the amount of time spent interacting, focuses or goals, needs, and roles. They caution that findings from studies concerning animal ownership, may not be transferable to AAIs. It is hoped that this research will add to current understandings in the field, by qualitatively exploring children's experiences of animals in school, as part of wellbeing support. In order to focus and inform the exploration, this research will utilise a relational ecology psychological lens, as relational opportunities were identified as a key interpretation developed in the SLR.

3.1.4 Ecology

Ecology is a broad concept concerned with the study of interactions of living organisms with each other, and their environments. Ecologists highlight how human activity can have a significant impact on the health of ecosystems across the world.

3.1.5 Relational Ecology

Deville and Spielewoy (2019, New spaces of connection section, para. 6) refer to relational ecology as 'focusing on the relationships that interconnect us', reintroducing 'physical and nonphysical spaces of understanding and sharing between humans and non-humans'. Putney (2013) refers to relational ecology as a way of conceptualising the human-animal bond to better understand 'the inter-dependence of humans and their companion animals, as they exist in the context of an individual's many relationships' (p. 68). Putney describes relational ecology as bridging several psychological theories, including deep ecology, object relations theory, the holding environment, developmental theory, and liminality. Putney draws upon Bronfenbrenner's (1979) Ecology of Human Development, a model proposing dependency between humans and the environment, characterised by dynamic and reciprocal relationships. This empirical study utilises Putney's (2013) relational ecology conceptualisation to create a lens tailored to the exploration of children's experiences of animals in school. The underpinning theories are

presented below.

3.1.5.1 Deep Ecology

Deep ecology is the exploration of dynamic relationships between different species, and their environments. It concerns 'symbiosis, the interdependency between all aspects of an ecosystem, and the intrinsic value of all parts of an ecosystem', whereby individuals are 'intertwined within multiple contexts' (Putney, 2013, p. 74). This reflects Bronfenbrenner's (1979) ecological model, that suggests:

> *"The ecology of human development involves the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are imbedded"* *(p. 21).*

Oliver (2009) highlights how ecological perspectives 'force us to re-think notions of humanity, animality, pedagogy, and kinship in ways that will have significant consequences for reconceiving our relationships to the earth, the environment, animals, and ourselves' (p. 22). Unpicking similarities and differences between humans and animals illuminates how animals are of no less value, making us reconsider our positionings in the world, and our relationships with animals, in ways that might be unsettling (Putney, 2013).

3.1.5.2 Development

Bronfenbrenner (1944) describes the relationship between animals and humans as a 'developing organic unit' (p. 75), highlighting the reciprocal and changing nature. Putney (2013) adopts a relational development systems approach, the growth-task model, as a tool to explore the dynamic nature of the human-animal relationship. The model suggests relationships vary depending on the stage of human development, and proposes humans continually strive towards growth, and experience constant change. Weick (1983) emphasises the non-linear nature of developmental tasks, proposing more cyclical themes that reflect 'the capacity for intimacy, the capacity to nurture, engagement in productive activity, establishment of balance between dependence and independence, and the capacity to transcend personal concerns' (p.

134). All through life, the challenges we experience require us to engage in a process of self-reflection and 'exploration of self in relation to others' (Weick, 1983, p. 136).

3.1.5.3 Object Relations Theory

Attachment theory is another key underpinning psychological theory for HAIs. Putney (2013) cautions the theory could instil elements of inflexibility and cause overly prescriptive judgements about healthy and unhealthy attachments. Object relations theory, originating from attachment theory, proposes that humans develop internal representations of external people and the interactions with them, referred to as 'objects'. Internal representations, or objects, contribute to an individual's psychological development, and help inform their understanding of self, others, and relationships between the two. 'What is 'outside' often gets 'inside' and shapes the way a person grows, thinks, and feels' (Berzoff et al., 2011, p. 122). Key to this conceptualisation is the idea that animals can function as objects, becoming internally represented, impacting on an individual's conceptualisation of self and other, helping illuminate and nurture one's sense of self, and instilling a sense of safety and stability. The SLR findings highlight animals' non-judgmental presence, which could be internalised in ways that positively affects an individual's sense of self, including self-awareness, confidence, self-acceptance, and experiences of identity and community transformations (Putney, 2013).

The use of the term 'object' for animals can be problematic due to its potential to objectify and devalue animals. The term is referred to throughout this research with caution and doesn't intend to promote objectification, but rather align with terminology used across the literature.

3.1.5.4 The Holding Environment

Also concerned with attachment theory, is Winnicott's (1953) 'holding environment', which represents the biopsychosocial context in which infants are nurtured by their caregivers, and reflects tranquil, therapeutic aspects of a joint, relational experience (Applegate, 1997). As with the ecological model, Winnicott (1953) argued the holding environment was not limited to the caregiver-child relationship. Putney (2013) found some individuals perceived animals to provide a holding environment which made up for those not available to them during childhood.

3.1.5.5 Liminality

The final component of the relational ecology lens is 'Liminality', a term derived from 'limen,' the Latin word for 'threshold' (McCoy, 2009). It is a concept used to reflect a gap, or transient, in-between space (Turner, 2008), when one may be in limbo or contemplation, including experiences of loss, or times of significant change. Being in liminality can feel anxiety-producing, psychologically troublesome, and transformative (Putney, 2013), with individuals likely experiencing a state of disorganisation, disruption, and living loss (Kelly, 2008). Putney found animals helped humans to cope with liminal situations by providing elements of consistency through their presence, with interactions reflecting a borderland space, where different species meet and affect change within one another. The value placed on animals during liminal experiences suggests they can support individuals to cope during difficult times.

3.1.6 Rationale

There is limited research pertaining to the exploration of children's experiences of animals in school, particularly studies adopting a psychological theoretical stance, such as relational ecology. Relational ecology is a framework of increasing relevance and importance given the severity of concern surrounding children's mental health and wellbeing, their interconnections with the natural world, and wider global issues such as the climate crisis. It is hoped that by adopting a relational ecology lens, alternative understandings can be developed about children's experiences of HAIs within schools, in relation to wellbeing.

Exploration of HAIs are arguably crucial and timely for Educational Psychologists (EPs), particularly given animals in school appear to be on the increase, especially in relation to supporting children's wellbeing. EPs are likely to come across animals in schools in which they work. Thus, the research question to be explored was: 'What are children's experiences of animals in school as part of wellbeing support?'

3.2 Method

This research obtained full ethical approval from the university and BPS ethical guidelines (British Psychological Society (BPS), 2009) were adhered to throughout.

3.2.1 The Local Context

Some educational settings within the LA where the research took place already had animals incorporated. Actual numbers cannot be reported as there is currently no requirement to declare, record, or monitor animals in settings. The type of animal varied from small animals to dogs, and some farm animals.

3.2.2 Sampling

The research project was promoted at LA Special Educational Needs Coordinator (SENCo) network meetings and emails were sent to all primary headteachers and SENCos, providing an overview of the project and eligibility criteria. Schools who expressed initial interest were sent further details regarding participants, time, and commitment requirements. Those who confirmed participation were provided with information sheets and consent forms to share with parents (Appendix B, p. 141). Parents returned consents if they were happy for their child to take part. Children were recruited through opportunity sampling, followed by stratified and random sampling. The recruitment process is illustrated below in Figure 4.
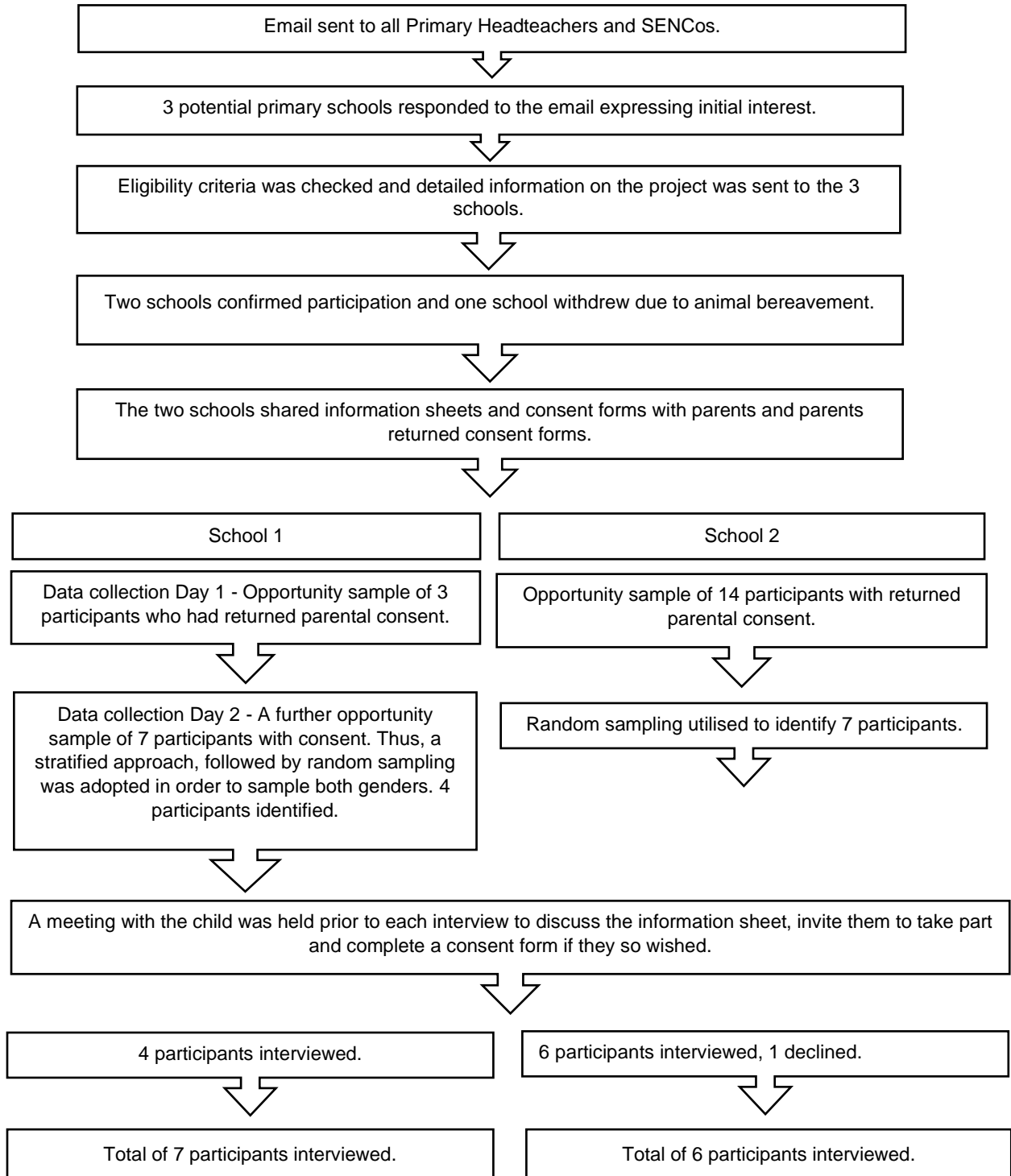
Flowchart of Participant Recruitment Process

Email sent to all Primary Headteachers and SENCos.

↓

3 potential primary schools responded to the email expressing initial interest.

↓

Eligibility criteria was checked and detailed information on the project was sent to the 3 schools.

↓

Two schools confirmed participation and one school withdrew due to animal bereavement.

↓

The two schools shared information sheets and consent forms with parents and parents returned consent forms.

↓

School 1	School 2
Data collection Day 1 - Opportunity sample of 3 participants who had returned parental consent.	Opportunity sample of 14 participants with returned parental consent.
Data collection Day 2 - A further opportunity sample of 7 participants with consent. Thus, a stratified approach, followed by random sampling was adopted in order to sample both genders. 4 participants identified.	Random sampling utilised to identify 7 participants.

↓

A meeting with the child was held prior to each interview to discuss the information sheet, invite them to take part and complete a consent form if they so wished.

↓

4 participants interviewed.	6 participants interviewed, 1 declined.
Total of 7 participants interviewed.	Total of 6 participants interviewed.

Figure 4: Flowchart of participant recruitment process

3.2.3 Participants

Thirteen primary school-aged children ranging from Year 3 to Year 6, from one mainstream primary school, and one special primary school, participated in the research. Details of the participants are summarised in Table 10 below.

Table of Participants

School	Male participants	Female participants
Mainstream	3	4
Special	6	0

Table 10: Table of participants

3.2.4 Semi-Structured Interviews

A qualitative approach was adopted as this research explored the lived experiences of children. Semi-structured interviews were chosen as a framework for the exploration, whilst enabling children to discuss wider issues or ideas. The nature of semi-structured interviews allows the researcher to adapt interview questions, to some degree, in order to suit the needs of participants. This was helpful due to the age range and type of setting. The aim of the interview was for children to have an enjoyable, empowering experience, taking ownership over their responses, and feeling listened to. They should feel comfortable, and able, to decline answering any questions. It was hoped that this approach might generate rich accounts about individual views, which would enable children's experiences and perspectives to be heard (Willig, 2013).

The fourteen themes from the SLR were drawn upon to inform the development of interview questions (Appendix D, p. 147). The questions were piloted to identify and address any language that may need adapting. The semi-structured interviews were conducted individually, face-to-face, in the child's own school. They were approximately 20 minutes long and took place in a separate room within school, away from classrooms, to provide a safe, private, and comfortable space for children to talk about their experiences. Consent was obtained from parents and children for interviews to be audio-recorded. This enabled free-flowing conversation, the researcher to be fully present, actively listen, and reduced interruptions or distractions caused by note taking.

3.2.5 Creative Methods

Creative methods were used alongside the semi-structured interviews in an attempt to make them creative, fun, interactive, participatory, and help generate discussion. Such methods can support children to relax, enjoy the activity, and reduce any pressure or intensity. They can maximise engagement and interactivity and help free up thinking processes (Brady & Graham, 2019). To ensure inclusivity and accessibility, a choice of three activities were provided to cater for different ages, abilities, and interests. The researcher was actively involved in the activities alongside the children, which supported rapport building and helped children feel at ease. Creative methods can help lessen any 'them and us' perceptions (Brady & Graham, 2019), neutralising any perceived power imbalances. They were used as a parallel activity alongside the semi-structured interview, for children's benefit, and were not used as part of the data collection process. Thus, any outcomes, or end products, were not noted, and this was shared with children so they could freely engage in the actively. Children were able to choose which activity, and the researcher asked the interview questions whilst they engaged in it. The three activities available were drawing or painting, playing with Playmobil (see Figure 5 below), or modelling clay.

Figure 5: Example of Playmobil used as part of the creative methods

3.2.6 Process of Analysis

Thematic analysis was conducted using the principles from Braun and Clark's (2006) approach. Both inductive and deductive analysis were carried out using a hybrid process (Fereday & Muir-Cochrane, 2006) to incorporate and build upon theory-driven themes, whilst enabling any new

data-driven themes to be discovered. A relational ecology (Putney, 2013) lens was used as an overarching framework for the deductive analysis, incorporating theoretical underpinnings; deep ecology, developmental theory, object relations theory, the holding environment, and liminality. Inductive analysis was undertaken alongside, to provide opportunities for any new themes to be developed.

3.3 Findings

Using thematic analysis, key themes were identified and organised under a relational ecology framework encompassing three main elements: 'Deep Ecology', 'Development' and 'Object Relations and the Holding Environment'. No data extracts were found to support 'Liminality'; thus, it wasn't included beyond this point. The three elements are presented in Appendix E (p. 151), demonstrating the connections between data extracts, codes, sub-themes, and themes. A thematic map for each element is presented and discussed below, with example quotes, that whilst random, were selected to reflect and represent each theme. Additional themes are then summarised and presented in Appendix F (p. 173).

3.3.1 Thematic Map 1: Deep Ecology

Children's experiences of animals in school relating to deep ecology, generated three sub-themes, presented in Figure 6 below.
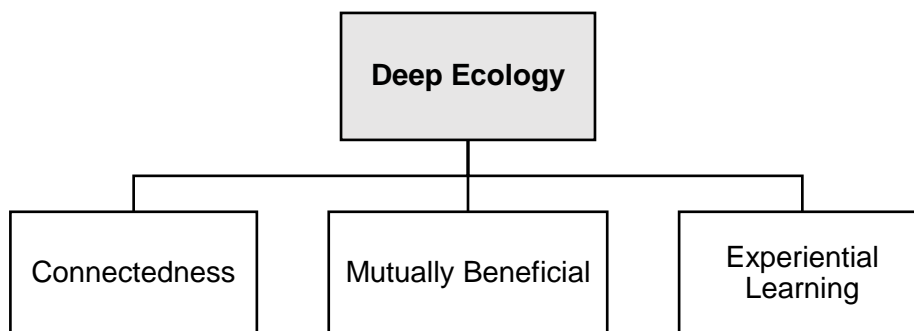

Figure 6: Thematic map of themes relating to Deep Ecology

3.3.1.1 Connectedness

The theme connectedness represents the connections children experienced with animals in school. Children's descriptions included excitement to see the animals (Box 1), greetings, communication with each other, animals' attractive characteristics, and the ways the animals responded to them (Box 2).

Box 1: Excitement

"Just really the, just really Max he's the only person who actually, who people get excited about!"

"Because when Lola comes in, after lunch, caus lunch is before the last two lessons we do, people get excited when they come in because Lola's there. [they] Get excited! Really excited."

Box 2: Dog's response or feedback to children

"you just tap your knee and she'll come to you and she'll drop it"

"If you go, if you go down like that he jumps and licks ya!"

One child explained how their school microsystem encompassed both humans and animals (Box 3) suggesting an awareness and appreciation of non-human others as an integral part of their school environment.

Box 3: The school microsystem

"Well, it's not just, it's not just humans in this school, there's more, well its actually, there's different people that aren't man or women, they're smaller than us, or, well mostly smaller than us"

3.3.1.2 Mutually Beneficial

Most children perceived animals in school to be mutually beneficial for both humans and animals involved. They described how children and supporting adults liked having animals in

school and they perceived the dog to enjoy being in school; often happy and excited to see them, portraying a strong sense of reciprocal happiness (Box 4).

Box 4: Happiness

"He runs around us, like he's really excited! [laughs] to see us!"

[I feel] "Really, really happy. And like, joyful!"

Many children laughed during the interview when recalling some of their experiences, with some directly referring to how interactions had evoked laughter, both individually and for the whole class group (Box 5).

Box 5: Laughter

"And she just makes you want to laugh"

"Well, he made, he made me, he made all of us laugh once caus he picked up, urr ****, one of *****'s socks caus he went around the edge of ******'s chair and down and he grabbed up a pink sock that was ********'s"

Whilst there was a general sense of happiness about having animals in school, one child highlighted how some children with phobias might feel scared (Box 6).

Box 6: Phobias

[they might feel] "Happy, but like scared." [CYP with phobias]

3.3.13 Experiential Learning

Some children described experiences that reflected opportunities for experiential learning. Experiential learning is characterised by 'learning through doing' and reflecting on what one has

done. Some children described their observations of the animals (Box 7), which enabled them to further develop knowledge about animals, their behaviours, and how to care for them. They described the dog's personality and key memorable moments of interactions they had. Some drew upon their knowledge and experiences of animals at home to help them make inferences within the school context (Box 8).

Box 7: Observation of animals

"She is either, um, sat down nicely, um, uh, not like barking or anything. Or she's either sat in her bed asleep or listening to us read."

Box 8: Applying knowledge

"Because I've had experience with a dog, caus my grannie, caus my grannies dog, she, she really knows, I , I, sometimes I spend time with her and I walk her sometimes and I know how to keep her safe."

Some children referred to the impact of animals on the wider environment, including wildlife (Box 9). One child explained how they helped wildlife through conservational action. This highlighted the child's sense of responsibility to care and look out for non-human others.

Box 9: Helping the environment

"I save quite a lot of animals, in like the world... if they are in trouble, I would save them because I like saving wildlife"

"I mean it's helping the environment. Because there's more animals around"

3.3.2 Thematic Map 2: Development

Children's experiences of animals in school relating to developmental theory yielded four themes presented in Figure 7 below.
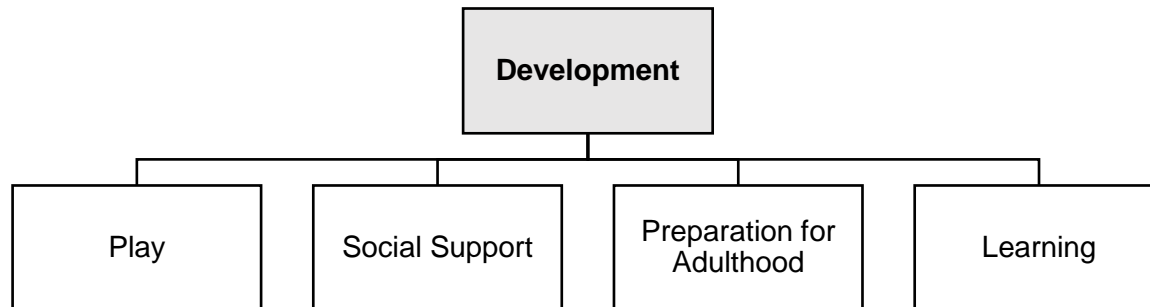

Figure 7: Thematic map of themes relating to Development

3.3.2.1 Play

Many children described opportunities for play (Box 10) with animals during interactions which were fun and created laughter. Play was often linked to children's most memorable moments with the animals. Most play involved some movement or exercise, and took place outside, providing further benefits for wellbeing.

Box 10: Play

"Well you can, you can, if, if you have the swing ball, he will normally just run around and get the ball… Yeah [laughs] it's attached to a string, so it's like a wild goose chase!"

"She goes outside sometimes we used to like throw the ball with her! At break time."

"When its break, she comes outside with us and like has a run around"

3.3.2.2 Social Support

Some children described their experiences of how animals had supported them, or others, to develop social skills such as turn taking, kindness, how to get along with one another and respecting individual differences (Box 11). Some spoke about their perceptions of others, self-perceptions, and how they felt HAIs in school were fair, because the dog visited different classes, and everyone had a turn.

Box 11: Dog as social mediator

"Well I think she's taught people to be nice and kind to people… even if you don't like that person, like I don't like this girl in my class…"

"She's definitely taught some, you know, like bad kids to start like sharing"

3.3.2.3 Preparation for Adulthood

The development of knowledge and skills can support children's preparation for adulthood. Some children referenced growing up, describing a sense of maturity that enabled them increased responsibilities with the animals (Box 12).

Box 12: Maturity and responsibility

"Um, um, since we are mature enough, we get to [hold the lead]"

"and I get to hold the lead and play fetch"

Box 13: Caregiving

"well I mean, he has toys, he has care, he is cared [for] by people in the school"

"Some children will go fetch her water"

Some explained about animal caregiving activities (Box 13), and special assigned jobs or roles, sometimes linked with school reward systems. Others made personal investments in the animals (Box 14).

Box 14: Investment

> *"Well, for instance, a kid in, called ***** in my class, ur, keeps bringing him stuff and he keeps, last time he brought a ball and Max almost absolutely wrecked it. He liked it so much! And this time he brought in a doggy treat"*
>
> *"me and ****** put our coats down [for the dog to lie on]"*
>
> *"I bought her, this Ariel and a rainbow thing"*

3.3.2.4 Learning

Children described their experiences of animals in relation to learning and indicated animals were generally perceived to have a positive effect. This included the dog helping create a conducive environment (Box 15), being involved in specific learning tasks such as literacy, and HAIs utilised as a reward or motivator.

Box 15: Learning environment

> *"I think it's because the class is quieter... Our class is really loud, but when the dog's there, everyone is a lot, really quiet."*

Some children reported that the dog gave children courage (Box 16) and some described things the dog had taught them.

"But then, Lola, Lola helps them. Like gives them more courage to do it."

The dog appeared to spark children's curiosity and help them to concentrate better on their work (Box 17), although some noted that it could also be a distraction (Box 18).

Box 17: Concentration

"And she makes people concentrate more and feel happier"

"And, people listen more when Lola is there."

Box 18: Distraction

"Ur, it helps people kinda like, sometimes it concentrates people, sometimes it can distract though."

Overall, children's experiences in relation to learning indicated that the dog supported the development of affective learning skills.

3.3.3 Thematic Map 3: Object Relations Theory and the Holding Environment

Children's experiences of animals in school relating to object relations theory and the holding environment yielded three themes presented in Figure 8 below.
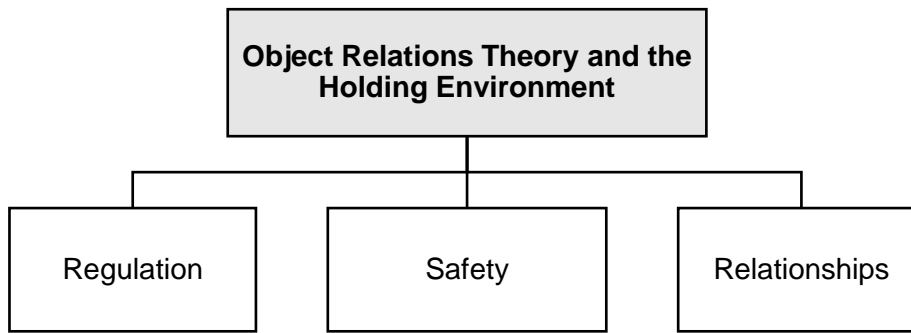
Figure 8: Thematic Map of themes relating to Object Relations and the Holding Environment

3.3.3.1 Regulation

Children described their experiences as relatively structured and predictable, with the dog visiting classes on set days, spending time with individual children and class groups. Some children referred to the dog's obedience, potentially further increasing a sense of predictability.

Many children perceived the dog provided comfort when children were upset or feeling sad, thus providing emotional support. They believed the dog could sense how they were feeling and helped make them feel better (Box 19). This suggests a sense of reciprocal attunement and emotional connection between children and animals.

Box 19: Comfort

"I think he helps people when they are sad. Like, if when they are sad, Max, he would come in and cheer them up. Sometimes."

"Well, what I think she does, to make people like ni, better, is that she goes to sit with them, if they get upset"

"I like how he comes and just like he wants to like give you a cuddle, like he comes to ya then jumps up at ya and puts ya paws like, there [points to shoulders]"

There was also a sense the dog helped children to regulate through physical and sensory support (Box 20), such as when they were able to stroke the dog.

Box 20: Physical and sensory support

"Um, he helps people if they are stressed… He goes over and lets him stroke her… Because the fur is soft, and it stops stress."

Other children spoke about reciprocal affection giving (Box 21), from the dog to the children, and vice versa. It seemed that affection giving helped increase feelings of belonging, with children looking forward to seeing the dog.

Box 21: Affection

"Because dogs are just most loveable, the most loveable pet I've ever met."

3.3.3.2 Safety

The theme safety represents both physical safety and psychological safety. Most children reported feeling safe around the animals in school. Children spoke about action they took to ensure the dog was safe, including rules and boundaries implemented by adults. Some children spoke about phobias, allergies, and feelings of uncertainty which impacted on feelings of safety (Box 22).

Box 22: Uncertainty

"I mean, he's not a dog that's, that I know that often, so I just feel like, will he do something to me?"

Some children described that whilst peers might have been scared, the dog, over time, supported them to overcome their fears or phobias, leading to overall positive experiences (Box 23).

> *"If people are scared, give them a bit more time with Lola so they can have more time. She has helped some people to feel okay about dogs, stopped their fear"*
>
> *"So, Max has helped him to overcome his fear of dogs"*

One child described how children might seek out animals if they didn't feel safe, suggesting the presence of animals could help children feel safe (Box 24). This is perhaps representative of the dog acting as a secure base, for children to return to.

Box 24: Safety

> *"I mean if people don't feel safe, they, could be with the animals in the school?"*

3.3.3.4 Relationships

Children described aspects of their experiences that reflected relationships. Some referred to animals as providing a form of companionship (Box 25).

Box 25: Companionship

> *"Well I'd say it's more, I'd, s, s, well I'd say if, well I'd say I somebody, I would say it's just company."*

Children perceived the dog was liked by everyone in school; children and adults. This highlighted commonalities, perhaps reflecting a sense of group cohesion and increased sense of community. However, one child explained not everyone liked the dog, highlighting individual differences and disparities (Box 26).

Box 26: Individual differences

> *"Well, like I said, some people don't like him, and some people love him or want to be him"*

Another child spoke about how they trusted the dog, viewing them as a non-judgmental being who couldn't hurt your feelings (Box 27).

Box 27: Trust

> *"You can trust them caus they can't, caus they can't say anything, so they can't say that you hate them so you know that you can, so then you, know what they don't think caus people, they can speak and they can hurt your feelings, but dogs, but animals, they can just hurt you, they can't hurt your feelings."*

Children spoke about the difficulties they experienced ending relationships with animals. They described feelings of sadness and missing the animals when they no longer saw them (Box 28).

Box 28: Ending relationships

> *"There used to be chickens. It's sad"*
>
> *"They just said they are feeling they kind of miss her because they really liked her."*
>
> *"They really miss her!"*

3.3.4 Additional Themes

Additional themes emerged during the data analysis, that whilst pertinent to children's experiences, did not directly link to the research question and therefore were not represented by a thematic map or further explored. Additional themes (Appendix F, p. 173) included: the impact of the pandemic, barriers to implementation, and advice for schools who might be thinking about incorporating animals.

3.4 Discussion

The research question to be addressed was: 'what are children's experiences of animals in school as part of wellbeing support?' The findings indicate ten themes organised under three underpinning psychological theories pertaining to the overarching relational ecology framework. Each are further explored below, drawing upon wider literature and considering links to the 'Five ways to wellbeing' (Aked et al., 2008) model.

3.4.1 Deep Ecology

Deep Ecology can be understood as an approach, or movement, necessitating radical change from a world valuing nature primarily for its usefulness to humans, to a more harmonious existence, between all. It is characterised by respect, compassion, and a deeper acknowledgement and understanding of the inherent value of nature (Devall & Sessions, 1985). Themes relating to this theory concerned children's experiences of a sense of connectedness to animals in school, the development of mutually beneficial inter-species relationships, and opportunities for experiential learning.

3.4.1.1 Connectedness

Children indicated they experienced meaningful connections with animals in school. Overall, opportunities to interact with animals were positively received, although, some children referred to phobias or allergies that impacted on their experiences. Children looked forward to HAIs,

describing how animals made them feel happy or joyful and created laughter. Laughter can have positive effects on wellbeing as it can help strengthen resilience (Cann & Collette, 2014), enhance optimism and self-efficacy (Crawford & Caltabiano, 2011), and reduce stress hormones, thus helping to elevate one's mood (Bennett & Lengacher, 2009). Falkenberg et al. (2011) found humour to be linked with improved coping strategies.

Children described an awareness of and appreciation for animals that appeared to contribute to feelings of happiness. This could be considered an example of 'taking notice', one of the 'Five ways to wellbeing'. One theory that explains this awareness and attraction to animals is the biophilia hypothesis, described as an 'innate tendency to focus on life and lifelike processes' (Wilson, 1984, p.1). Some children described animals' attractive characteristics, including references to animals as 'cute'. Lorenz (1943) theorised that this attractive appeal is due to animals having perceptual features similar to human infants e.g. large foreheads and big eyes. Sherman et al. (2009) found that perceived cuteness could enhance behavioural carefulness, such as caregiving for a young child, implying that an individual's sensitivity to 'cute features' (p. 282) might be an evolutionary adaptation that facilitates caregiving behaviours. Amiot et al. (2016) concurs, suggesting that care and empathy for animals is likely a selected trait, reflecting human caregiving of younger infants.

Children viewed animals as sentient beings, highly valued as part of their school microsystem. Bronfenbrenner's (1979) ecological model, suggests interactional elements of relationships operate within a wider 'dynamic system' and 'radiate outward from the most intimate – family – to neighbourhood, school, region and culture' (p. 250). Connection to others, in the 'Five ways to wellbeing' model, is more often linked to human-human relationships, but children's experiences of meaningful connections with animals suggests benefits might extend to connections with non-human others.

3.4.1.2 Mutually Beneficial

Children perceived animals in school to be mutually beneficial for themselves, and the animals. They perceived the animals as happy and enjoying being in school, which they identified through interpretations of their behaviour and presentation, known as anthropomorphising. Anthropomorphism is defined as 'the attribution of human characteristics, including the projection of subjective states and feelings, to non-human entities' (Morton et al., 1990, p. 13).

Serpell (2003) described how attribution of human social motivations to nonhumans, can act as a form of 'nonhuman social support' (p. 437). Morton et al. (1990) argue that anthropomorphising can result in 'uncritical thinking and invalid interpretations' (p. 13) which sometimes results in the personification of animals, as if they were actual humans. This can lead to misinterpretations of behaviour, and misunderstanding about needs and emotional states, raising important ethical considerations and welfare concerns.

One might argue that benefits of animals in schools are more heavily aligned with human needs, which challenges perceptions of mutually beneficially relationships. Further, measuring how beneficial relationships are to animals is problematic, given their limited ability to communicate with us, suggesting an element of interpretation will always be required. Morton et al. (1990) call for a critical anthropomorphism, that incorporates empathy, alongside objective knowledge of individual species, life history, physiology and behaviour.

Serpell (2003) emphasised that beliefs one holds about animals, such as that animals love or admire them, are key to determining how meaningful human-animal relationships are. Children's individual experiences and interpretations about animals in school should be recognised as potential protective factors that can positively impact on their wellbeing.

3.4.1.3 Experiential Learning

Children's experiences of animals in schools highlighted opportunities for learning. Their observations, experiences, and interpretations, impacted on the meaning that they assigned to interactions. Practical learning opportunities provide children with increased autonomy and ownership of learning, drawing upon their natural curiosity and interest. Kellert and Wilson (1993) suggest that children are primed to learn from their environment, as rich sources of information. Dewey (1997) argued that education should stem from a child's social environment and draw upon their individual lived experiences. Findings of this research highlighted children's direct experiences of animals, at home, in school, and during conservational activities. Thus, real-life, practical HAIs may provide crucial learning opportunities, helping develop knowledge and skills, and provide opportunities to practice skills across different contexts.

Experiential learning could be considered to link with the 'keep learning', 'be active' and 'giving' elements of the 'Five ways to being' model, encouraging and empowering children to develop

their own informed views, make decisions, and take responsible action. It helps them to develop knowledge, skills and criticality, that can support them to make positive future contributions such as effecting positive change for environmental issues, conservation, and promoting wellbeing more widely, across species. Noddings (2005) argues that the primary focus of education for many children has been lost due to a predominant focus on academic curriculums and testing. Roffey (2008) concurs, highlighting how more needs to be done to support the development of the whole child, such as through the incorporation of relational values. There are specific curriculums, such as humane education, tailored to address the development of values that encourage more attuned connections to nature and the wider environment. Humane education is a values-based approach encompassing topics such as social justice, environmental issues, citizenship, and animal welfare. Schools might consider how opportunities for HAIs, could be supported or complimented by humane education curriculums, which can help promote empathy, compassion, care, and responsibility towards animals (What is Humane Education, 2019).

3.4.2 Development

Exploring children's experiences of animals in school from a developmental perspective can be helpful due to the dynamic nature of HAIs and relationships. Key themes organised under this theory were play, social support, preparation for adulthood, and learning.

3.4.2.1 Play

Children's experiences of animals in school included opportunities for play, often outdoors. Play is an important part of children's development, supporting the development of skills, such as motor skills, and general competencies that help prepare them for adulthood (Elkonin, 2005). Through play, children learn how to interact and connect with others. Vygotsky (1967) emphasised the importance of play, particularly for learning. He proposed that through play and imagination, children were able to build upon their conceptual abilities and further develop their knowledge of the world. He also highlighted the importance of the environment children grow up in, suggesting that it had implications for how, and what, they think about. A report exploring children's views on their right to play (Burns & Irvine, n.d.) highlights the enjoyment children get from playing with pets.

Melson (2005) suggested that play with pets might reflect the type of play often observed within sibling relationships, reflecting a hierarchical structure whereby the child structures and directs the play with the animal. However, a lack of research exists regarding the nature and significance of children's play with animals. Play could be conceptualised to fall into the 'be active' element of the 'Five ways to wellbeing' model. Children in this study reported enjoying opportunities for physical games, running, taking the dog on walks, and playing fetch. Other animal caregiving activities were physically active. Existing literature focuses heavily on animal ownership, but indicates dogs to be associated with human health benefits, including regular physical activity (Christian et al., 2014; Shibata et al., 2012), and better weight control (Coleman et al., 2008). Conflicting research (Timperio et al., 2008; Westgarth et al., 2012) may be partly due to differing levels of interest and involvement children have.

3.4.2.2 Social Support

Animals can offer a direct source of social support (McConnell et al., 2011). Children spoke about self-perceptions and perceptions of others, reflecting on how an animal's presence, particularly the dog, had supported them to be kind to one another, learn to share and take turns, and respect each other's differences. Experiences indicated the dog to be impartial, often acting as a social mediator. Messent (1983) proposed the presence of a dog could serve as an icebreaker, offering a neutral and safe conversation starter. Dogs are deemed as very sociable animals (Hubrecht et al., 1995) and their presence can attract people, facilitating social interactions (Amiot & Bastian, 2015). Similar effects are observed with smaller animals. McNicholas and Collis (2000) argued that pets, particularly dogs, could act as 'social catalysts' (p. 61), promoting feelings of social integration. Melson (2005) argued children with companion animals often experience improved self-esteem, social participation, and empathy. However, research on personal networks can be limiting as questions are often framed on human social relationships, meaning human-animal relationships may get overlooked (Melson, 2005).

McNicholas and Collis (2000) suggested HAIs might facilitate the development of more meaningful social relationships, such as discovering other commonalities, aside from animal-related interests, which could act as a 'source of relationship-based social support' (p. 63). Animals can help individuals learn about causal effects of behaviour and appropriate social interactions (Nebbe, 1991). I would argue that animals may provide opportunities for children to reflect on social situations and consider others' perspectives and individual differences. Thus,

animals can provide social support, which in turn may enhance an individual's wellbeing through enhanced social and network opportunities. Social support is a key coping resource that can predict psychological wellbeing. It could be conceptualised to link with the 'connect', 'take notice' and 'keep learning' elements of the 'Five ways to wellbeing' model.

3.4.2.3 Preparation for Adulthood

Animal caregiving is gender neutral (Melson & Fogel, 1989). Both boys and girls volunteered to participate in this project. Ascione and Weber (1996) argue that animals in children's lives provide opportunities to practice nurturance and care. This may be particularly beneficial for boys, who may be less inclined to engage in other forms of nurturing activities, such as doll play. Animal caregiving appeared to increase children's sense of responsibility and enabled them to make a positive contribution. Animal caregiving enabled caregivers to experience a sense of meaningful responsibility (Putney, 2013), helping them feel skilled and capable, and 'attuned to something beyond themselves' (p. 65).

Mueller (2014) argued that for interactions to be meaningful and successful, humans must develop relationships with animals that require contributions beyond the self, e.g., taking responsibility for animals' wellbeing. Mueller proposed HAIs might support children to foster mutually beneficial relationships with their environment. Arbour et al. (2009) claimed if children are taught kindness towards animals, it will transfer to kindness towards other people. Endenburg and Baarda (1995) found children growing up with animals usually show higher levels of empathy, self-esteem, and responsibility, developing into more socially competent adults, than those who grow up without them. Although, Endenburg and van Lith (2011) highlight potential confounding variables, including the impact of the family and wider community environment.

3.4.2.3 Learning

Whilst opportunities for experiential learning were explored within deep ecology, this theme relates to learning more broadly. Children perceived animals in school supported learning, although some indicated they could cause distraction. Melson (2005) proposed animals play an important role in shaping children's view of the world, and Myers (1998) highlighted how children learn about their world through interactions, including with animals. Gee et al. (2007)

found the presence of a dog: increased children's performance in motor skills tasks; enabled children to better adhere to instructions (Gee, Crist, et al., 2010); meant children made fewer errors in object recognition tasks (Gee, Church, et al., 2010); and needed fewer prompts and instructions in memory tasks (Gee, Crist, et al., 2010). Kotrschal and Ortbauer (2003) found children paid greater attention to the teacher when there was a dog in the classroom and Meltzoff et al. (2009) found animals in the classroom kept children actively engaged with meaningful learning experiences.

Children in this research perceived animals in school to be motivational for learning, sometimes incorporated as a reward. Endenburg and van Lith (2011) argued animals can act as powerful motivators for learning, drawing upon Vygotsky's (1978) principles that children learn and remember more in the context of meaningful relationships, and when emotionally invested. Wohlfarth et al. (2013) proposed a motivational theory for HAIs drawing upon humans' 'implicit motives' (p. 2) and 'positive emotional-motivational states, such as curiosity, affection, or joy' (p. 2). They suggest that animals' body language interacts with, and triggers these states, such as a child experiencing an achievement motive when the dog listens to them read. Gee (2010) suggested incorporating animals into the classroom can enrich the curriculum, enabling opportunities for active participation and the development of meaningful connections with learning. Zilcha-Mano et al. (2012) found when a pet was either cognitively or physically present, owners experienced increased feelings of self-efficacy regarding attainment of personal goals, and higher aspirations.

Overall, children's experiences of animals in relation to learning could be conceptualised to link with all five elements of the 'Five ways to wellbeing' model. McCune et al. (2014) concluded that whilst animals may enhance learning by increasing children's attention, focus, or motivation, further research is required. Fine et al. (2019) caution whilst much research points to dogs in school as positive, concerns remain regarding animal welfare, ethics, and knowledge and experience, raising potential adverse implications for both animals and children involved.

3.4.3 Object Relations and the Holding Environment

3.4.3.1 Regulation

There were two key elements of children's experiences of animals in school reflecting regulation. Firstly, a direct impact through physical interactions and associated physiological effects. Many children referred to physical and sensory aspects of HAIs, i.e., stroking the dog. Children indicated the dog provided comfort and emotional support, helping them to feel better, particularly when sad or upset. Rost and Hartmann (1994) found children often sought out their pets when feeling sad. Physical proximity to a dog, particularly stroking a dog, can lower human anxiety levels (Kotrschal & Ortbauer, 2003). Sensory interaction between humans and dogs can reduce heart rate, blood pressure, noradrenaline, plasma levels of adrenaline, and cortisol (Beetz et al., 2012; Handlin et al., 2011; Odendaal & Meintjes, 2003). Animals have been found to have a buffering effect on stress (Allen et al., 2002; Strand, 2004). Kruger and Serpell (2010) concluded the presence of animals can produce calming effects. However, Wilson's (1991) findings that interacting with an animal was more stressful than reading quietly, should not be discounted, highlighting the importance of context, and a need for HAI research to compare with studies not incorporating animals, but with similar objectives, as they could be equally effective.

Secondly, an indirect impact on children's regulation through animals' effect on the school environment. Children described how HAIs in school were usually structured and predictable with set visit times. One child reported HAIs gave them something to look forward to, but some experienced disappointment when there were changes. Children described how their class was much quieter and more mindful when the dog visited. The dog's presence appeared to help create a calm, conducive working environment, with children reportedly being able to concentrate better and work with increased independence. The dog's presence may have impacted positively on children's behaviour within the classroom. Kruger and Serpell (2010) argued that even simply watching animals at peace, can decrease arousal and promote sustained attention and alertness, key principles for learning and growth.

3.4.3.2 Safety

Parish-Plass (2013) suggests that the HAB reflects the four criteria of an attachment bond; proximity seeking, secure base, safe haven, and separation distress (Ainsworth & Bowlby, 1991). Whilst humans usually adopt the caregiving role, attending to animals' needs, animals

might also act as attachment figures for their owners (Amiot et al., 2016; Zilcha-Mano et al., 2012). Melson (2005) suggests that animals can function as attachment 'objects' for children by providing a sense of security, reassurance, and calm, particularly for children experiencing transition or distress. Melson and Fine (2010) suggest that animals might sometimes act as a form of coping mechanism. Children viewed animals as non-judgmental being who could be trusted and couldn't hurt your feelings. Animals are unable to pass judgement, answer back, break confidence, or be influenced by what others say (Bonas et al., 2000) and children can talk with them without worrying about confidentiality or a need to meet any expectations (Melson, 2005). Bryant (1990) found most children referred to at least one animal, that they didn't own, as a special friend who they engaged in intimate talk with. Katcher and Beck (1986) found over 70% of children confided in a pet.

Linked to attachment theory, Winnicott (1953) refers to an emotional space between a child and mother. He referred to this as a holding environment, both physical and psychological. Putney (2013) refers to the holding environment as 'a robust metaphor for human-animal interaction' (p. 72). Children in this research perceived animals in school positively impacted on feelings of safety; physically and psychologically, although some reported fears, phobias, or allergies. Children highlighted how interactions supported children to overcome their fears over time. They sometimes sought out animals if they didn't feel safe. This could be interpreted as animals acting as a secure base, with children experiencing increased feelings of safety in their presence. Burrows et al. (2008) found dogs were perceived to enhance safety and helped increase children's freedom and independence. Beck and Katcher (2003) argued that a life shared with companion animals usually resulted in people feeling safer, and Brooks et al. (2013) suggested that pets provide consistently positive responses, security, reassurance, and comfort.

3.4.3.3 Relationships

Kohut (1971) proposed that children's sense of self, emotions, and thoughts, develop through relationships with others, which they referred to as 'objects'. Triebenbacher (1998) proposed that behaviours such as smiling toward, following, and touching, exhibited toward primary attachment figures, could also be displayed towards other attachment objects e.g., older siblings or grandparents. This might extend beyond the realms of human-human bonds, to include other species (Melson & Fine, 2010). The human-animal relationship is of a longstanding nature; the co-evolution of humans and dogs arose approximately 32,000 years ago (Wong, 2013). Fine

and Weaver (2018) suggest humans are motivated to form relationships with other animals to feel a closer kinship with nature. Fine et al. (2015) stated 'the formation of mutually beneficial relationships with the diversity of life on earth is one of the most important forms of protection, and balanced human-animal-environmental interactions are integral to human health' (p. 26). Levinson (1971) believed animals could fill gaps for children whose parents weren't able to meet their developmental needs. He stated, 'these children have experienced so much hurt at the hand of people in the environment, it is only after they have had a satisfactory relationship with an animal, that they can make a start at developing a human relationship' (p. 35). Children in this research, spoke about difficulties they experienced ending relationships with animals. Knight and Edwards (2008) found that for some, grieving for a pet is as painful as grieving for people.

Besthorn (2002) proposed we draw upon our 'ecological self-identity' (p. 53), to view humanity as 'part of a complex totality of interconnected relationships', where 'connections among both human and non-humans are the very essence of existence' (p. 61), as opposed to humans existing separately from the environment. One conceptual framework helpful for considering this is the 'common worlds' framework (Taylor & Giugni, 2012). It considers children's relations with their outside world, including non-human others, and explores collectively, wider inclusivity and belonging. It draws upon commonalities and opportunities to 'assemble or bring together' (Taylor & Giugni, 2012, p. 110). The framework provides 'an alternative way of thinking about the world we share and the kinds of relations that constitute our experience of it' (p. 111). Taylor and Giugni propose that a shift in thinking about exclusively human societies, to living in common worlds, can widen perceptions of social relationships, to include heterogenous relationships. Further, they refer to 'relationality', as opposed to relationships, conceptualising relations as 'generative encounters' (p. 112) with others. Haraway (2008) stated 'actual encounters are what make beings' (p. 67) and reiterated not all actors are human.

3.5 Conclusion and Implications

There is limited empirical literature considering children's experiences of animals in school as part of wellbeing support, from a psychological, theoretical perspective. This final section considers potential limitations of this research, summarises key findings, and presents implications for EPs' practice.

3.5.1 Limitations

There were constraints on this research that may have had implications for the findings. Firstly, this project only interviewed children who had engaged in HAIs in their current school setting. Perspectives of children who attended a school not incorporating animals, were not explored. Secondly, the project was limited to two schools within a Northeast LA. The findings are not considered generalisable to the wider population, but instead hope to highlight key areas for consideration regarding the incorporation of animals in school to support children's wellbeing. Whilst children were provided with opportunities to authentically share their perspectives, it is acknowledged that the semi-structured interview questions may have restricted and shaped the types of information children shared, compared to if unstructured interviews had been used. Finally, as the researcher, who was fully immersed in the project, it is acknowledged that my own biases will have informed the interpretations made.

3.5.2 Conclusion

Exploration of children's experiences of animals in school in relation to wellbeing, through the lens of relational ecology, yielded ten themes organised under three psychological theories. Overall, children perceived animals in school to be a helpful form of support for their wellbeing, although individual differences are acknowledged. Animals are an important and valued part of children's school microsystem. Children developed meaningful, often difficult to end relationships with animals, experiencing feelings of loss, similar to ending human relationships. Animals in school contributed to children's happiness and created commonalities within classes and the wider school community, supporting group cohesion and increasing feelings of belonging. Animals were perceived to comfort children and provide emotional regulation through physical and sensory experiences. They acted as non-judgemental friends and helped children to feel safe. HAIs helped children develop key skills pertinent to adulthood including increased responsibility through caregiving activities, social support, and the development of affective learning skills. More broadly, this research adds to a growing acknowledgment of the role of animals in schools, and considers how psychology might be applied beyond the human ingroup (Amiot & Bastian, 2015) to improve wellbeing for all. The subject of living together has never been so critical (Taylor and Giugni (2012).

3.5.3 Implications for Educational Psychologists

Rises in prevalence of animals in schools suggests EPs are increasingly likely to encounter animals in schools in which they work and will need to be aware of relevant research, associated costs, benefits, and current guidance and legislation. EPs are well placed to support schools to develop criticality surrounding the incorporation of animals, signpost them to further resources, and help them to make better informed decisions. This should include consideration of cultural implications, particularly regarding how the role of animals might be conceptualised differently across cultures (Gray & Young, 2011) and within each child's individual ecosystem, and the impact this might have on children's individual approaches to animals within school. EPs can also help schools to acknowledge children's potential experience of loss when HAIs and relationships end, such as at end of year transition points or following animal bereavement. Schools should think carefully about and plan for such endings, as would be expected when preparing children for other transition-related losses such as the ending of teacher-pupil relationships.

It is hoped that EPs might further develop their relational practice, approaches, and holistic assessments, to include greater exploration of children's relationships and interactions with non-human others. Such explorations of a child's ecosystem or family system can help gain an greater insight in their culture, including beliefs about and positioning of animals, as well as potentially highlighting other underlying difficulties or tensions that may exist, such as animal cruelty and family violence, which have been found to correlate (Jegatheesan et al., 2020). Such explorations could lead to potential disclosures or highlight safeguarding concerns that would not otherwise have been shared. Thus, exploration of HAIs, might act as a form of problem externalisation through animals and could be key in the 'recognition, prevention, and protection of animal and human victims trapped in family violence' (p. 1). The relational ecology framework could be a useful tool for such explorations.

Further, whilst HAIs appear widely applicable and gender neutral, it remains an area in distinct need of development, both in terms of research and legislation, and EPs have a crucial role to play in contributing to future research and informing strategic work within their LAs (Lee & Woods, 2017). Now more than ever, children need to learn to live alongside one another in such a way that enables them to protect and conserve the world, and all within it. EPs can work with schools to ensure ethical and welfare considerations are addressed and long-term plans

secured in relation to animal's care.

'In their intimacy with other species, in their ease at crossing species lines, lie the seeds of their future stewardship of the planet' Melson (2005, p. 199)

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Appendices

Appendix A: Table of Themes

Reciprocal Themes

	Nilsson, Funkquist, Edner & Engvall (2019)	Smith & Dale (2016)	Mudaly, Graham & Lewis (2014)	Daly & Suggs (2010)	Carlyle (2019)	Solomon (2010)
Animals as catalysts	The frequencies of the written responses from the children changed… showing that the children wanted to write about their experiences of the interaction with the therapy dog. p. 1055	facilitating student engagement by providing a means for the student to connect with the activity, teacher and peers p. 19 "Animals generally provide an avenue to encourage ASD children to actively participate in the world, rather than existing in retreat/ solitude" p. 17	their interactions with the animals as promoting many changes in them p. 28 Others talked about how the group facilitated their social development p. 37 Many developed friendships and some of them maintained these friendships. p. 37 For most of them, the group provided an opportunity to develop friendships and interact socially	students' daily observations contributed not only to an increase in their social skills.... p. 107 "I often talk a lot about animals that I have at home and show my students pictures of my cats and dog. This helps them to connect with me when telling them a story about one of my own animals." p. 106 "often make an appearance as a 'character in creative writing situations' and as such can be used as catalysts for writing projects." p. 107	Dave is affording a different kind of relationship with others in the classroom. It feels hugely monumental. p. 205 there are times we both inevitably return to being territorialised and it is this state of oscillation between the two, which opens up spaces of becoming other, breaking boundaries with the authoritarian, ruling, structured and organised environment p. 205	therapy dogs' mediating social engagement of children with autism in relationships, interactions, and activities illustrate how dogs support children's communication, their experience of emotional connection with others, and their participation in everyday life. p. 143 Twinone is imitating the way Childone strokes Crystal's back when she pets Lucky, p. 153

			with other participants. p. 43 "We helped out feeding the animals, talking about stuff that goes on in our lives" p. 33		he also becomes a 'converter' of the social assemblage when he comes together with the children. This 'converter' means he disrupts and transforms the classroom environment and atmosphere, becoming space-maker and disrupting operations of power. p. 205 "Because of Dave I have become a very popular teacher; I stroke and hug the children, just like I do with Dave." p. 202	Childone takes the dog's head between her hands and says, "Here, I am holding while my sister brushes." p. 154 At the park Childone initiated a demonstration for an unfamiliar girl on how to give the dog, Crystal a favourite command, "Speak." p. 154 Stephen Levinson's (2006) metaphor of a human "interaction engine" may be productively extended p. 156 it is the mothers who, out of love for their children, are inviting the "wolves" into the family to contribute their animal sensibility to the complicated activity of rearing a child with autism. p. 161

Motivational		"to enhance their participation and willingness to read" p. 18 'Was an incentive for students with behavioural concerns'. p. 18	"...and then in the group it was so good and then I just felt like, it was something that I should live for, like I could actually go and work with them" p. 28	animals appeared to be used to spark interest in animal research and for science projects in which, for example, their weight and growth patterns were logged. p. 105 "The students love to name the pets and write stories about them" p. 105		"Childone then offered, "Here, let me help," took the girl's hand.." p. 155 "Every afternoon, they head off on a 2.5 mile walk" p. 159
Transformational	show a focus shift after the interaction with a therapy dog to mainly positive nature regarding self-reported feeling of well-being and experiences of the hospital stay p. 1049 Children's well-being increases and they assess their hospital stay as better after animal-assisted therapy with a therapy dog than before. p. 1050 [physiological response] - pain decreased when	"The dog taught an autistic child to play fetch. The child previously didn't interact or play with people and was afraid of animals" p. 18	Prior to attending the group, many described themselves as angry, scared or quiet and shy. After the group, they talked about gaining confidence, becoming independent and more sociable. p. 08 Research participants also described how they had changed as a result of attending the group. p. 26 Anecdotal evidence had demonstrated that there had been a	aim of promoting moral awareness and fostering humane treatment of both human and non-human animals p. 109 they see a positive impact on their students and that they believe the benefits of pets in classroom settings outweigh any concerns about liability .p. 111	Through their interspecies relationship both child and dog transform one another and occupy a space of shared relations and multiple subjectivities. p. 199 These assemblages of well-being are ones in which affective sensitivities collide through relational dominions which are embodied and transforming. p. 202 Thus, the children state how Dave	As Twinone negotiates Childone's help with brushing Lucky, we can see how powerful and transformative the dogs' presence can be for these children's relationship p. 154 Childone's mother later observed that Childone had never initiated interactions with unfamiliar children on the playground or in any setting. Here, Childone confidently demonstrated her favorite ''speak'' command to a child she had never met p. 155

	they had the dog nearby since the dog made them think of something else. p. 1053 felt calmer and more tired after the interaction with the dog p. 1053 On the other hand, the well-being increased significantly after interaction with the therapy dog, indicating that the positive effect of the therapy was very good despite some possible influence on the assessments prior to the therapy. p. 1055 meeting with the dog made their memories of being in hospital more positive. p. 1053 the pain could be somewhat greater, after having been more active with the dog. p. 1053		dramatic improvement in many areas of their lives. p. 42 Many of them recognised that they had changed since attending the group. Many talked about gaining confidence, changing from being quiet and shy to being friendly and positive. Others described being angry initially and one child said 'it takes me a bit longer to get angry now' p. 42 For some of them, it helped them overcome feelings of isolation and aloneness. p. 43 "I used to be like more of a shyer person, type thing. And when I started going there, started talking to everyone and … probably gave me		makes the classroom 'feel like home' and how such material, multisensory memories, evoke and play a part in changing and transforming the atmosphere and structured, [transforming] authoritarian power of the classroom environment p. 205 Therein lies a transformative aspect where Dave is seen as not just 'cute' but providing a sense of 'hope' (see comic panel E in figure 6). Thus, the child–canine assemblage enables children to move from one state of being to another, for example, low to high, sad to happy (see comic panel B in figure 6). He is an assemblage converter, which changes	This restructuring and reconfiguration of the parameters of social interaction afford the child with autism an experience of social competence and the confidence to venture more fully into an improvised, fluid social engagement with other people. p. 158 Childtwo's stubborn willing the black and white dog into reality transformed what his family members believed about his limitations. Moreover, the story of a black and white dog quickly spread across the parent advocacy community as further evidence that children with autism have extraordinary abilities. p. 160

			more confidence about myself" p. 26 '…and then after the group I was more positive on life and everything' p. 27 "I think it's because of the group, because I learnt how to talk to everyone there and make friends. Yeah, and now I'm a person who will get in there." p. 29 "I didn't really like small animals but now I do" p. 32 " After that group I wanted to become a vet' p. 33		emotional states and emotional atmospheres p. 207 he produces movement (and non-human data) differently, altering our perspective of space and time. p. 208	The changes in this child's and this family's life, and their family narrative have been dramatic p. 160 Childtwo's mother reported that they went out more often as a family for dinner, to visit friends, to movies much more often than "before Simon," and they never left Childtwo home anymore. p. 160 we can glimpse from Childtwo's own story his understanding of how his life has changed. Childtwo's story has a new temporal horizon: "I like to Simon big," he writes. The dog had brought a possibility of not only a shared present but also of a shared future. p. 161 it is the mothers who counteract the view of autism

						as "a disorder of affect" (Silverman 2004) with a search for innovations that offer hope and alternative stories for their children's lives and possible futures. p. 161 Research... holds the potential to advance not only an understanding of autism but also a theory of sociality in psychological anthropology and the larger discipline
Ecosystemic benefits	Animal-assisted therapy using a therapy dog in paediatric hospital care is suitable complementary treatment from the children's perspective. p. 1050 the findings indicate that using a therapy dog as complementary treatment is suitable for both boys and girls of	reported a range of benefits at the individual student and classroom level p. 19 All reported positive experiences, and described a range of benefits to individual students as well as the classroom as a whole. p. 17	Many demonstrated a capacity to transfer learned empathy into other social and familial relationships, and into more socially acceptable behaviours elsewhere. p. 43 Overall, the AAET group appears to have helped all the children and young people who participated in the	"Our rabbit always goes to her favourite student and jumps up on her lap while she is doing work and sometimes on to her desk too. The class gets a huge kick out of this." p. 106		Childone repositions herself in the web of her family's relationships, enacting being a "big sister" as her mother watches from afar. p. 154 this story of a dog coming into this child's life reorganized the family narrative and repositions the child with autism as a

	different ages and diagnoses. p. 1054 Transferability to similar contexts could be possible by taking in account the experiences from the present study. p. 1055	May be effective for some, but not all. p. 17 not appropriate for all students p. 19	pilot evaluation reconnect with peers and society giving them the opportunity to resume more beneficial development. p. 43 "Yeah the people there were really friendly as well and you got to meet other people from the other schools." p. 37			powerful protagonist who is able to will his desire into reality. p. 158 Childtwo's stubborn willing the black and white dog into reality transformed what his family members believed about his limitations. Moreover, the story of a black and white dog quickly spread across the parent advocacy community as further evidence that children with autism have extraordinary abilities. p. 160 The changes in this child's and this family's life, and their family narrative have been dramatic p. 160 Childtwo's mother reported that they went out more often as a family

| | | | | | | for dinner, to visit friends, to movies much more often than "before Simon," and they never left Childtwo home anymore. p. 160

but also they themselves also changed: Childtwo was no longer standing out in the family. Having the dog in the family restructured this child's interactional ecology in a way that enables Childtwo's communication and participation in his family's life much more fully than before. p. 160

This analysis demonstrates that child dog interactions afford an experience of emotional connection between an autistic child and family members, as well as |
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						between the child and the dogs. p. 161
Support Mechanisms	pain decreased when they had the dog nearby since the dog made them think of something else. p. 1053

could gain pain relief from a dog. p. 1053

"It helped me not to think of the pain for a while". p. 1053 - [helpful distraction]

it made the time go faster. p. 1053

The children mentioned how they felt more relaxed, tired and that they did not think so much about their pain when they had received animal-assisted therapy. p. 1054 | "They bring out the best in people and give teachers more insight into students strengths" p. 17 [support teacher]

"This calming nature allowed good discussion time and focus for students" p. 18

"they have keen senses and naturally helpful attitudes" p. 18

"It depends on the student and their situation but if they like animals it might be a different perspective to helping them" | "Like animals, like a dog, they can help you if you're upset, they can make you happy" p. 29

"like animals won't hurt them and humans will help them and then they will help us" [reciprocal] p. 29

One boy felt that the interaction with the animals helped children settle into the group p. 36 | Melson's (2001) discussion regarding the value of intimate dialogue between children and pets, as a means of coping with typical pressures in childhood that can be alleviated by feeling heard, understood and not judged. p. 107

the anthropomorphisation of pets-assigning them 'human-like' characteristics-can provide a type of social support for the human owner (Serpell, 2002). p. 108

a wealth of emotional benefits reaped by students p. 108

may be an ideal means of instruction to target such growing concerns as childhood obesity and overall general lack of exercise. p. 110

companionship and social support p. 111 | 'he gets inside your boots' (see comic panel D in figure 6) the children animating Dave's capacity for empathy, bringing it to life that which may otherwise be lost in purely intertextual methods. p. 206

His warm touch and presence infusing and shifting their bodily state. p. 207

affords these moments of security and well-being. p. 207

becoming and being well together. p. 207

through his becoming a comic 'crusader' Dave has metamorphosed into is a champion for children's well-being p. 208 | she is initiating a new activity while building on her embodied engagement with Crystal, and the conversation with Susan p. 153

The contribution of dogs to social interaction involving children with autism is in providing the children the opportunity to practice nonlinguistic but highly social actions and to coordinate these actions with others, human and canine. p. 156

"Anybody who has autism, anybody in the world would just benefit from this. She's just like a healing dog." p. 143

"wherever we go Childtwo insists on it [bringing the |

Safe space						
				"the anthropomorphisation of pets-assigning them 'human-like' characteristics-can provide a type of social support for the human owner (Serpell, 2002)" p. 108	"Because of Dave I have become a very popular teacher; I stroke and hug the children, just like I do with Dave." p. 202	dog], no exceptions." p. 159
Safe space			"And people got to express their feelings and stuff. And also when we're holding the animals, makes you feel more calmer and stuff. " p. 33		The affectual capacities of both child and dog also co-create an affective atmosphere and emotional spaces. p. 199 Through their interspecies relationship both child and dog … occupy a space of shared relations and multiple subjectivities. p. 199 the child-dog relationship is mutually co-productive in terms of increased agency and spatiality. p. 201 The moments of intricate and intimate touching and stroking occurring in a 'smooth' space (unregulated)	Interactions between a child with autism and a therapy dog generate a social universe, a habitus (Bourdieu 1990a…1990b), where speech is not a prerequisite…. p. 157 "wherever we go Childtwo insists on it [bringing the dog], no exceptions." p. 159 is in providing the children the opportunity to practice nonlinguistic but highly social actions and to coordinate these actions with others, human and canine p. 156

					which is safe and part of the classroom (sub) culture. p. 202 Deleuzian attention to creative processes, as well as being deconstructive, allows for the consideration of the affective dimensions of the classroom atmosphere and environment, given its relevance to fruitful learning. p. 202 classroom carpet… This space enabled feelings of playfulness, a becoming-with, a becoming-together of Dave and the children. p. 202 being and (be)coming together p. 202 co-creation between the children and Dave reveals a distinct relationship in which spaces are shared equally and disrupted	

					dynamically from being territorialised to becoming deterritorialised p. 203 the children and Dave share 'common worlds' p. 203 an egalitarian relationship on the same level quite literally (becoming an assemblage sitting on the floor together, and Dave's body sharing chairs and tables p. 203 Dave in becoming part of the children's material culture is affording the children more spaces and more places for becoming agentic, autonomous, competent and powerful. p. 205 "'feel like home" p. 205 Thus, the children state how Dave makes the classroom 'feel like home' and how such material, multisensory	

					memories, evoke and play a part in changing and transforming the atmosphere and structured, authoritarian power of the classroom environment p. 205 these spaces are transitional, which then enable alternative ways of being and becoming together. p. 205 'holds' them- not only just physically but emotionally. It's like Dave is providing me with the same sense of a 'holding and containing' environment and a 'second skin' to comfort and sooth me p. 207 Dave and the children create and re-enact 'contact zones' (Haraway, p. 4) which open up spaces of shared becoming's and multiple	

				subjectivities. p. 208 His own well-being and flourishing is emergent alongside them, bringing together common worlds for improved learning communities p. 208	
Happiness	The children described mixed experiences before and mainly positive aspects of joy, satisfaction p. 1049 Experiences of meeting the dog brought joy p. 1053 it was fun to have a visit from a dog. p. 1053 'It was funny when Livia brought toys. But it was especially fun when she played with the dice". p. 1053 they enjoyed petting and playing p. 1053	"Positive opportunity for teachers to engage children in games and fun" p. 18 "Dog made some children very happy" p. 18	The research participants expressed enjoyment of the group p. 08 Many identified the fun aspect of the group p. 28 "Yeah. It was, yeah well really, really fun. It was like something to look forward to." p. 28 Many research participants said they loved the many aspects of the group and that it was fun p. 29 Nearly all participants had enjoyed the group immensely and		nearly all of the children.. was that Dave made them feel 'happy'. The deterritorialising potential in the BwO allegory translates into a sense of well-being that could not be apprehended by more concretised measures. p. 206 The happiness… could be seen and emotionally felt through the children's glowing faces and beaming smiles. The ethnographer felt it too, as a warmth in their body and relaxation of tension in their	

	expressed being happy having the dog with them. p. 1053 [presence]		experienced it as fun and friendly, and something they had looked forward to every week. p. 42 Many talked about feeling sad when they had completed the group p. 42		neck, shoulders, arms and legs p. 206 The 'happiness' that Dave gives the children could be seen as an affective embodied, reciprocal encounter, not just as a result of their biophilia, or an innate need to connect with nature. p. 206 Dave was equally as animated as the children p. 207 "the use of yellow with the word 'refreshing' " p. 206	
Interspecies Interaction	The dog was calm and obedient according to the children and performed nicely what they asked for p. 1053 the dog was nice and kind p. 1053 Experiences of the dog's nice	Animals were identified as being able to offer something unique to the therapeutic and/or classroom environment. That is, animals resonated specifically with children with ASD, and could be useful in a	Research participants enjoyed the different animals that are part of the group p. 31 The animals in the group were identified as the major appeal. p. 42		new ways of interacting are emergent. The attunement, rhythm and tone (or musicality) of their moving bodies afford close physical contact. p. 201 'learning how to flourish together in difference'	Childone immediately showed interest in the therapy dog p. 150 She had a special connection with living things of all kinds, insects, birds and mammals, and in that sense she was truly

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	characteristics p. 1053 they enjoyed petting and playing p. 1053 The interaction with a therapy dog could be a distraction and an amusement, creating positive effects in the body and in the mind. p. 1054 Thus, possibly the attention of and interaction with a living creature, in the shape of a dog, could create profound satisfaction leading to an elevation of the sense of well-being as well as the experiences of the hospital stay. p. 1055	wide variety of contexts. P. 17 "Have always believed that animals have a way of reaching children that don't always respond well to adults or their peers" p. 17 apprehension surrounded the reaction p. 19 There also may be some confusion among participants as to the nature of animal-related interventions (for example, around the differences between 'formal' animal-assisted therapies, and 'informal' animal-assisted activities). p. 20 "Animals do not discriminate nor judge others and can be trained to provide specific therapy to individuals" p. 17	"Me and B (brother) go before school. And we go see animals, basically guinea pigs and rabbits, and yeah. (and) patting new creatures and stuff" p. 30		(Haraway, p 301) being exemplified. p. 203 Eye contact was also a noteworthy feature of interactions where Dave and the children mutually gazed at one another for sustained moments during physical contact. p. 205 children's enhancement of sensory and perceptual awareness but also of their shared sense of well-being and flourishing. p. 205 unfolding companionship between the children and Dave in a process of 'becoming-liberated' and being-well-together during challenging times (such as SATS) p. 205 dynamic moments of 'affective attuning' p. 205	"biophilic" (Wilson 1984). p. 150 Looking admiringly at Crystal, Childone professed her love for Australian shepherds ("I love Australian Shepherds!"). p. 153 The remarkable ordinariness of these moments is what makes dog's contributions to social interaction so transformative. p. 154 Such seemingly ordinary moments of contingent discourse and embodied reciprocity serve as the loci of affective connections among the children, the trainer, and the dogs. p. 154 Social interactions with therapy dogs minimally involve highly local

		"Kids love animals- yes, it's a generalization but 'generally' they do. The children in my class would talk all day, if I let them, about their pets and their antics". p. 18			intimate encounters between Dave and the children, and Dave and ethnographer p. 205 affective mechanisms and sensorial aspects involved in child-dog interactions p. 205 child-dog interaction is mutually co-constitutive and deterritorialising (liberation from the usual boundaries and structures of the classroom routine) p. 205 the place of multispecies relationships in childhood and how they have potential effects on well-being and flourishing p. 206 through their innate desire for human and human-animal relationships and encounters, which extend beyond	sequences of actions that do not require speech and are usually highly repeatable and practicable. p. 156

					cute, cuddly charisma. p. 207	
Connection to animals		animals resonated specifically with children with ASD p. 17 "I was very impressed at the calm that they bought to a classroom and the obvious affection that the students had for them" p. 17 "ASD students often show a strong bond with their pets and the ability to be open and expressive with these animals" p. 18	Many described what aspects of the animals they connected with p. 32 Participants engaged with and became personally connected with the animals, knew the names of the animals and their histories. p. 42 "I liked the group, mainly the animals." p. 31 "Dogs just like everybody" p. 32 "...soon as I walked by they'd be getting up, saying hello, and purring and …" p. 32 "Yeah they don't really, really judge you or anything. They're always wanting a lot of attention" p. 34 [non-judgemental beings]	between children and pets, as a means of coping with typical pressures in childhood that can be alleviated by feeling heard, understood and not judged	Dave would initiate many of these 'pathways' through his 'rhizomatic' ball game, in which he would roll his ball back and forth between the children. This had a notable element of communication, with some of the children whose first language was not English, using this game to engage with other children and connect with them in a non-verbal manner. p. 202 classroom carpet… This space enabled feelings of playfulness, a becoming-with, a becoming-together of Dave and the children. p. 202 Dave and child/children entwined together p. 202	Goodwin's (in press) analysis of human-dog interactions contributes to understanding of recipiency from the addressee's perspective and the role of gaze and joint attention as action in social interaction p. 156 In these interactions, possibly for the first time, the child with autism interacts with a communicative partner whose social dispositions match his or her own p. 157 The allure of pet animals, and dogs especially, is that they are able to interact with humans in an entirely embodied way, without any need for spoken language p. 157

					material-semiotic process illuminated the children's affective encounters with Dave, making visible the invisible (the transmission of affect), non-conscious, unthought, sensory elements which are grounded in Deleuzian actions and concepts. This enabled a two dimensional 'unflattening' of the experience to see and view the surface below the experience which is 'teeming with possibilities' (Sousanis, p 16) p. 203 close relatedness through Dave allowing them safe permission to touch, clearly showed a mutual sense of connectedness, p. 205 Dave is a sentient being with an	"When they get back Simon pillows next to Childtwo in the play room, and Childtwo does homework. Then at dinner time, Childtwo brings Simon down and gives him dinner..." p. 159

					'animal mind p. 208

"Dave makes pathways that connect us" p. 202 | |
| **Attunement** | | | "And sometimes like when you're scared they're scared too." p. 33

"what they like, the way you hold them. Like if they like brushing on the head or underneath them or … the more you play with them and stuff, like you work it out" p. 33

"(You can tell from) their actions, their eyes and just sometimes they don't eat when they're scared" p. 33

"I can tell if a dogs happy, if its tail's wagging (when he's scared) you can feel he's vibrating" p. 34

"Pat them nice and slow so their heart doesn't … | | "he gets inside your boots" P. 206 the children animating Dave's capacity for empathy, bringing it to life that which may otherwise be lost in purely intertextual methods.

This attuned relationship moves beyond hedonistic desire or pleasure as Dave's vitality and energy-'thing power' (Bennett, p 18) p. 207

both child and dog transform one another p. 199 | |

			because if you pat them fast their heart will start racing" p. 35 "Well (when they are scared) usually their eyes go really big and sometimes their ears go back, and sometimes they'll freeze up. (When they are happy) … they'll come to you, they'll purr, they'll rub up against you" p. 35			
Connection to others (people)			The group appears to have helped them reconnect with peers and society giving them the opportunity to resume more beneficial development p. 26 Several research participants commented on their interaction and contact with the other children and young people in the group. p. 36	way the students interacted with one another during viewing times p. 107 teachers can appear 'human' [talking about their own pets] even bond with them at a personal level. it helped students 'to connect with me'. p. 108 "I often talk a lot about animals that I have at home and show my students pictures of my cats and dog. This helps them to connect with me when telling them a story about one	Dave is affording a different kind of relationship with others in the classroom. It feels hugely monumental. p. 205	Childone then offered, "Here, let me help," took the girl's hand p. 155 In this interaction Childone competently improvised as a peer mentor p. 155 "Here, I am holding while my sister brushes." p. 153

			"It was good to have other kids there. Some kids were ummm very nice" p. 30	of my own animals." p. 106

"it helped students 'to connect with me" p. 108 | | |
| **Autonomy** | | | "… it was fun. I was just being myself. I like being myself." p. 28 | | they moved in a nomadic way around the classroom, deterritorialised and liberated p. 205

Importantly, Dave is not passive, subordinate or boundaried entirely. He is free to roam and wander, avail himself to the children, initiate his rhizomatic ball game or 'tummy rubs' through his charismatic and cute 'springer sprawl'. p. 206

ethic of care framework which encompasses and acknowledges both children's and dog's agency. Both have a voice and a need to become more 'visible' in the | The dog organizes her actions and her bodily orientation to make something happen next, and this something is a locally relevant next action: p. 156

there is an ebb and pull between the embodied non-lingusitic habitus where children with autism and dogs can freely engage with one another p. 158

Childone acts agentively to make the same experience that she herself enjoys possible for her sister. p. 154

there is an ebb and pull between the embodied non-lingusitic habitus |

| | | | | | spaces and places they inhabit to ensure their ongoing growth of competence, autonomy and relatedness. p. 207 [empowering]

Organisations can then give animals a 'voice', making them 'visible' and part of an ethic of care p. 207

Through their interspecies relationship both child and dog exercise agency p. 199

Dave then affords movement, freedom, control, motivation, enthusiasm, participation and more choices p. 202

the child-dog relationship is mutually co-productive in terms of increased agency and spatiality. p. 201 | where children with autism and dogs can freely engage with one another p. 158 |
|---|---|---|---|---|---|---|

					they moved in a nomadic way around the classroom, deterritorialised and liberated p. 205 ethic of care framework which encompasses and acknowledges both children's and dog's agency. Both have a voice and a need to become more 'visible' in the spaces and places they inhabit to ensure their ongoing growth of competence, autonomy and relatedness. p. 207	
Skill development		A variety of the social deficits, improved considerably when animals were present. p. 18 "Teaching students turn taking skills" p. 18	Most significant was the knowledge and insight they had gained about animals p. 08 Many also demonstrated a capacity to transfer learned empathy into other social and familial relationships, and	delivered a 'teacher-designed curriculum' and lesson plan… the remaining indicated no formal curriculum. p. 106 taking students on field trips to conservation areas, farms and zoos. p. 106		Childone was attentively and competently engaged with the dogs and Susan for over an hour p. 151 Childone remembered every command that she learned a week before and could immediately

			into more socially acceptable behaviours elsewhere p. 09 Many described gaining in confidence p. 26 Some talked about becoming independent p. 27 Several felt that some of the skills they learnt in the group helped them become more sociable p. 27 A few talked about growing up and feeling more prepared for the challenges in their lives p. 28 Many children talked about what they learnt about animals: p. 33 Many participants developed much insight and knowledge about animal behaviour p. 34	Teachers assign value to using animals within the curriculum p. 106 appears to be a presumption on the part of educators that pets somehow advance humane education and that there is a value to using animals in the classroom. p. 106 Teachers conveyed their belief that having pets in the classrooms in some way contributes to students' development, socio-emotionally and also with respect to their academic development. p. 107 [it is perhaps most common for teachers] to presume… animals and pets increase student compassion and empathy. p. 108 [humane education programs] as a means of intervention to counter 'the cycle of abuse' [stopping children abusing animals] p. 109		give these commands to the new dog. p. 151 I began to see an emerging difference in social competence when Childone interacted with her sisters and the dogs p. 151 Childone's use of language is generative and, to a degree, improvised: she builds on Susan's utterance and reconfigures it to express her own meaning and her own intentions p. 154 [language development]

			Others were able to acknowledge their sensitivity and softness as positive qualities. p. 42 "I'm more confident and more safer around the animals" p. 26 "I think it's because of the group, because I learnt how to talk to everyone there and make friends." p. 26 "Independence. I think if you go through rough times then it readies you for the world. Yeah." p. 26 "Yeah, most of them I talked to, pretty much all of them actually. " p. 37	"we had contained pets, such as goldfish and turtles in the classroom. The students enjoyed the book study and observed them daily which was a source of language development and increased the development of their social skills." p. 106 "I think students would show more empathy…demonstrate more responsibility…it would be something that would encourage discussion…for those who do not get to have pets it is a great opportunity and motivational." p. 107 teachers… regarding and identifying pets as unique and important sources for extended learning that can actually expand students' learning and increase their development. p. 107 "pets were 'a source of language development'" p. 107		

Refutational Themes

	Nilsson, Funkquist, Edner & Engvall (2019)	Smith & Dale (2016)	Mudaly, Graham & Lewis (2014)	Daly & Suggs (2010)	Carlyle (2019)	Solomon (2010)
Regulation	felt calmer and more tired after the interaction with the dog p. 1053 The interaction with a therapy dog could be a distraction and an amusement, creating positive effects in the body and in the mind. p. 1054	Decreased student stress and anxiety. p. 18 Reducing problem behaviours. p. 18 "I was very impressed at the calm that they bought to a classroom and the obvious affection that the students had for them" p. 17 "Minty (Animal Assisted Therapy dog) calmed the student while waiting" p. 18 "Dog was overwhelmed by students who had not yet been able to have their own needs met and therefore were unresponsive to the animals' needs" p. 19 [some	One boy felt that the interaction with the animals helped children settle into the group and enjoy it p. 36 "Probably seeing all the animals, patting them and feeling them so soft" p. 32 "And also when we're holding the animals, makes you feel more calmer and stuff" p. 36		new ways of interacting are emergent. The attunement, rhythm and tone (or musicality) of their moving bodies afford close physical contact. P. 201 The moments of intricate and intimate touching and stroking occurring in a 'smooth' space (unregulated) which is safe and part of the classroom (sub) culture. p. 202 these touches were carried out in varying, intricate ways, either patting, stroking or massaging the contours of his body. His ears and	Dogs' highly anticipatory, unhurried, structurally simple and easy to interpret social actions may be generating a locally organized interactional ground against which the next move is easily projected and realized by children with autism. The dogs reside not only in "here and now" but also in a "here and now" that happens over and over, allowing the children to practice being intentional, intersubjective agents. p. 157 "She helps me, she calms me down,

| | | situations inappropriate - animal welfare concern]

Another apprehension surrounded the reaction of the students to the animals. Teachers felt that not all students would react well to having an animal in the classroom. p. 19

"Kids with ASD can be just as unpredictable as a frightened dog. There are many factors that affect the success of a program like this" p. 19 | | | face were regularly stroked rhythmically p. 205

children's enhancement of sensory and perceptual awareness but also of their shared sense of well-being and flourishing. p. 205

children used his body and fur in a rhythmical and regulatory way. p. 205

sensory ways of knowing and learning p. 205

Touch can be soothing, rhythmic and self-regulatory p. 205

His physical bodily presence is a palpable part of the classroom rhythm and tone (James Ash, 2013) p. 206

This marking of territory, produces regularity and repeated, changing | she lets me know she's there when I'm about to have a meltdown." p. 143 |
|---|---|---|---|---|---|---|

					patterns of sound, place and space. p. 207 'snuggling in' together, seen in etude 13 (figure 8) and the warmth, softness and sensation of weight and pressure from one another's body is calming and emotionally regulating both their shared states of mutual becoming's. p. 207 tactile and embodied process seems to be both comforting and enriching for both the children and their teacher p. 207 the gentle pressure on my feet from Dave is somehow making me feel grounded and connected to everything around me. p. 207 a non-human relationship that is fundamentally sensorial in nature	

| | | | | | (tactile, visual, olfactory and auditory) and equal. p. 203

"I am an extension of Dave and he's helped me feel able to comfort them through touch or a hug, when this is often not seen as 'politically correct." p. 202

"felt like an 'extension' of Dave and how he affords her 'permission' to touch the children 'safely'." p. 205 | |
|---|---|---|---|---|---|---|
| **Caregiving role** | | Animal welfare concerns. Teachers expressed concern for the well being of the animals when interacting with the children. p. 19

cause additional work beyond the classroom… outside of school hours p. 19

"treating animals with respect" p. 18 | Most significant was... the empathy they experienced in comforting scared, frightened animals p. 08

Several talked about what it felt like to respond to animal's need for comfort and safety p. 36

Through animal care activities, they learnt how to read when animals were | The most common activity involved caring for the pet and for its home. p. 105
Teachers… were the caregivers for the pet during these times. [School Holidays] p. 105
students were often invited to share in the caring responsibility by taking the pet home p. 105 | Our ethics of care towards children and animals means by 'becoming together' in multispecies relations and entanglements we must reconfigure non-human relationships and give their significance greater attention. Through such rhizomatic thinking, we can become well together and | "Childtwo gets Simon fresh water, takes him to the trees, and runs him around the cul-de-sac 3 times" p. 159 |

| | | "Issues arose when the dog was sick and required careful management and support for students and staff and when therapy dog had to be retired" p. 19 | afraid, anxious or feeling unsafe. They also learnt how animals could be comforted and made safe. p. 42

Many participants demonstrated a growth in empathy. Several described the warm feelings they experienced in nurturing, comforting and caring for these vulnerable animals and especially in reducing the animals' fear and making them safe. p. 42

"we were looking after guinea pigs, rabbits, we looked at some dogs and cats and goats" p. 30

"(I learnt) How to care for them to help them feel relaxed and stuff like that. And how you treat them" p. 33

"Yeah, I give him a pat like that, and I | top student of the week was given the opportunity to take the pet home for the weekend. p. 105

question of whether or not animal-directed empathy can be generalised to human-directed empathy p. 108 fostering prosocial behaviour toward humans. p. 109

respecting life, fostering humane attitudes and promoting responsible pet care. p. 109

it is in everybody's best interest to consider incorporating pets into more classrooms by way of more formal curricula. p. 111

"I try to teach my students that all animals require respect…they should not kill ants, | flourish alongside one another. p. 203

the children developing a eudaimonic sense of well-being through the care-giving behaviours that Dave activates in them, and their acquisition of virtuous and moral behaviours that strengthen their character. Its bidirectionality enables a mutual flourishing, being and becoming well together. p. 207

The collective nurturing (of both Dave for the children and the children for Dave) p. 207

"'bundles of love" p. 202 | |

			just umm they fall asleep and I talk quietly" p. 34 "Yes and just let them hide in between your arms if they are scared you just hold them like that, give them a nice den, a nice area. Yes. It feels really warm and safe." p. 35 "I used to pat them very nicely and I fell them asleep. It made me feel good" p. 36	spiders or bees in our room." p. 106 "Pet day for younger students…teaches them about compassion, care etc." p. 106 "[An animal] teaches the children that they are not all to be feared, but respected as well. It teaches them compassion, responsibility, caring, love and brings out the innate abilities in some to show feelings that most sometimes hide behind to protect themselves." p. 108		

Appendix B: Parent Information, Consent Form and Debrief

<u>Information Form for Parents</u>

<u>About the Project</u>

My name is Monica Wilson. I am a Trainee Educational Psychologist working for _____. I am carrying out a research project to explore children's experiences of animals in school as part of wellbeing support. The research aims to find out children's perceptions of animals in school and explore the perceived impact animals may or may not have on wellbeing.

I am doing this research as part of my doctoral training at Newcastle University.

Your Child's Involvement

- If you consent to your child taking part in the project:

  I will meet with them at school, during school hours, to discuss their experiences of animals in school. A child friendly information sheet and a consent form will be given to them the day before and we will go through these together. The following day I will return to school for the discussion and check that your child is still happy to take part. It will be made clear that they can choose not to take part.

Your Involvement

- This project will be exploring children's views, so you will not be required to take part.

Further Information

- It is not compulsory for your child to participate in this project. You and your child can decide whether they take part. You and/or your child can withdraw your child from the project prior to, during, or after the discussions. They can also choose not to answer specific questions if they wish.

- Notes will be taken throughout our discussion about what they say, and I will audio record the conversation with your permission. Your child will also be given the choice about whether or not their voices are recorded. If you agree to this, the recording will be stored anonymously and securely (so your child cannot be identified). Only myself and my supervisor will have access to this recording. It will be destroyed as soon as the project has been written up.

- I will be writing a report based on this research. Your name, your child's name and your child's school's name will not be used when the project is written up, so answers will remain confidential and anonymous.

- Should you wish, you and your child will be able to see the research report when it is finished.

- You have the right to refuse permission for the publication of any information that your child shared during the discussion.

If you have any further questions about this research project, please feel free to contact me or my supervisor at any time. I have included my contact details on the next page, and those of my supervisor, _____, who is based at Newcastle University.

[contact details provided]

Parent Consent Form

Dear [Parent's name],

Your child is invited to be involved in a project which will explore children's experiences of animals in school. Your child's school has been selected as a school that has [animals residing/animals that visit regularly] that the children in school can interact with. I am interested to find out more about human-animal interactions that take place in schools, particularly where animals are part of wellbeing support for children.

I am writing to provide you with information about the project and what it will involve. I have attached an information sheet with details about the project and information about how to contact me or my supervisor if you would like to discuss anything further or have questions about the project. My research supervisor is _____, who is based at Newcastle University. I have also included his contact details.

When you have looked over the information, please could you complete the form below to let me know if you are happy for your child to take part in this project. If you have any questions or would like to discuss the project further prior to filling out this form, please don't hesitate to contact me.

Yours Sincerely,

Monica Wilson
Trainee Educational Psychologist

....

Parental consent form for child participation

Please circle your responses below and return this form to your child's school by [Insert date].

I am happy for my child to meet with Monica Wilson in school to talk about their experiences of animals in school:

Yes	No

I have read and understood the information provided about the project and had opportunity to ask any questions:

Yes	No

I am happy for the discussion to be audio recorded:

Yes	No

I am happy for my child ……………………………………………. to take part in a discussion.

Signature …………………………………………………………………… Date ……………………………………

Parent Debrief Form

Thank you for allowing your child to take part in the project; their participation is greatly appreciated. The aim of this project was to explore children's experiences of animals in school, as part of wellbeing support systems. Hearing their views has been very important.

I would like to reiterate that all information collected will be anonymised and that your child will not be identifiable in any form of data recording. Once transcribed, the audio recordings from the discussion will be deleted. If you would like to withdraw your child's data from the project, this can be done up until the point of data analysis on [*insert date*]. After this date, the data will become part of a larger data set and therefore it will not be possible to remove an individual participant's data.

If you have any further questions about this research project, please feel free to contact me or my supervisor. I have included my contact details below, and those of my supervisor _____, who is based at Newcastle University.

Thank you, once again, for permitting your child to take part in this study.

[contact details provided]

Appendix C: Child Information, Consent form and Debrief

Child Information Sheet

<u>Research project on animals in school</u>

My name is Monica Wilson. I am a Trainee Educational Psychologist working for _____. I am doing a research project looking at children's experiences of animals in school.

I will be visiting your school to have a chat with children about the animals in your school. You can decide if you would like to help me with my project by talking to me about the animals in your school. Taking part is your choice. You do not have to take part.

We will talk about what animals you have in school, what the animals in your school do, and how you think you and other people feel when with the animals. I will use what you and other children tell me, to write a report about animals in schools.

Your real name and the real name of your school will not be used in the project. If I use anything you have said, I will make sure that nobody will know who said it. This is called making the data 'anonymous'.

If you don't want to answer a question, you don't have to. You can also ask me questions at any time.

You can stop at any time, if you want. You won't have to give a reason for why you want to stop, we just stop.

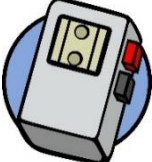I will record our voices (using a Dictaphone – this just records our voices on a tape) whilst we are talking so that I can remember all of the information tell me. The recording will be private and kept securely. It will not have your name attached to it and only me and my supervisor can listen to it. It will be deleted when I have written the report.

Your parents have said that you can take part in this project if you want to.

Child Consent Form

Please read the statements below and tick the ✓ boxes if you agree. If you tick in the boxes, this means you are happy to be involved in the project.

	I have read the information about the project and talked to the adults involved about it.	
	I have had time to think about the information.	
	I know that I can leave the project at any time, and I won't have to give a reason.	
	I understand that my real name will not be used.	
	I understand that notes will be taken about what I say.	
	I am happy for my voice to be recorded during the session.	
	I am happy to take part in the project.	

Child's signature:………..…………………………………………Date: ……………………..

Researcher's signature:…………………………………………… Date: ……………………..

Children's Debrief Form

Thank you for taking part in my project. I hope 🙂 that you enjoyed it.

Your answers will help me to understand more about animals in schools. It was really important for me to hear about your experiences because this means I can understand things from your point of view.

I will now write this information up in a report so that other people can hear about what it is like to have animals in school. They may be thinking about whether or not to have animals in their school, and your answers might help them to decide.

Just to remind you, I won't use any names in my report so no-one will know your name or what school you go to.

If you want to talk about anything to do with the project, you can contact me or my supervisor, Billy Peters, using the details below. Or you can tell your teacher or your parents, and they can let me know.

Thank you again for taking 🙂 **part!**

[contact details provided]

Appendix D: Semi-Structured Interview Questions

<div align="center"><u>Starter Questions / Context</u></div>

- **Do you like animals? What do you like about them...?**
- **What kind of animals do you like? Do you have a favourite animal?**
- **Can you tell me about the animals in your school? What animals are here in school or come to visit?**
- **Do you have any animals at home?**

<div align="center"><u>Main Questions</u></div>

[Alter language used according to animal discussed e.g. what is the dog's name?]

About the animals

- **Tell me about the animals... / what can you tell me about them?**
- Do you like seeing the animals?
- What is the animal's name?
- Does the animal come into your class? Where does the animal go?
- What do you do when you see/meet the animal?
- What do the animals do in school? What is the animal's job in school?
- Where do the animals go?
- What are the good things about having animals in school? What are the bad things about having animals in school?
- Do the animals in school have a special place to go to? Their own space?
- Who cares for the animals in school?
- What do the animals in school need? How are they looked after?
- When do you go to see the animal? How often?
- Do other people get to see the animal in school too?
- Where do they live? Who looks after them?
- Do you think the animals in school happy?
- Do the animals in school help you with anything?
- Are you allowed to touch the animals?
- How do the animals respond / react when you go to visit?
- Animals can't talk, so how do they communicate what they want?

Types of Activities

- **Can you tell me about the things you do when you are with the animals?**

- What do you do when you go to see the animals?
- Do you get to play any games with the animals or do any exercise?
- Do you spend time outside with the animal or inside or both? Where is your favourite place to be with the animal?

Agency

- **A) what can you do with the animal?   B) What is the animal allowed to do?**
- Can you decide what you do when you see the animal? Do you get to choose? Does the animal ever get to choose what you do together? Or do the adults choose? What would you choose to do if you could?
- Is there anything you can do by yourself with the animal? What have you learnt to do since you have been seeing the animal?
- Do you have any memories of spending time with the animals in school?
- I haven't met …... yet, can you tell me a bit about what the animal is like? Does the animal have a character?

Feelings

- **How do you feel when you are spending time with the animals?**
- **Do you like spending time with the animal? Can you tell me about what it is that you like?**
- **Are there ever times you see the animal when you are not expecting it? How does this make you feel?**

Questions about Learning

- Has the animal taught you anything? (inferred / implied)
- What does the animal like to do when you visit? What do they like you to do? What is their favourite thing to do? How do you know?
- **Is there anything that the** animal **has helped you to do?**
- **Do you do anything differently now since you have been spending time with the** animal**?**
- **How do you think the animal feels about being in school?**
- Have you talked / written about the animal in your work at all? Have you done any school work or learning about the animals in school?
- **What have you learnt since you have been spending time with the animal?**

Safety

- **Do you feel safe when you are with the animals?**

- **What is the most important thing to remember when you are spending time with animals?**
- **What do you do to make sure you and the animals stay safe in school?**

Perception of change

- Did you notice any changes in yourself between before you started seeing the animals and now?
- Do your feelings change?
- **What has been your favourite moment when spending time with the animals?** What is your favourite thing to do with the animals? How do you feel when you do this?
- Do you like having animals in your school? Do you think other children like having animals in school? Do you think the adults here like having animals in school?

Social aspects

- **Is there anyone who gets to visit / see the animal with you? Do you go on your own?**

Sharing experiences

- **Do you tell anyone about what you have done during your time with the animals?**
- Does your teacher know what you do in your session with the animals? Do any of your friends know?

Goals

- **Do you have any goals for when you spend time with the animals?** What are you working towards? What do you want to do with them in the future?

Generalisation

- Why do some schools have animals in school? Why does your school have animals here?
- **Can you tell me which animals you think would be okay or good to visit schools? (Provide visuals of different animals)**
- **Do you think all schools should have animals or not?**
- Are there any other activities that you think the animals in school could do?

Others' perspectives

- What do you think the adults in school think about having animals in school?
- Are there people who don't like the animals in school?
- Is the school proud to have animals? Are you proud that your school has animals in it?
- Are the animal's part of your school community?
- Do the animals like seeing the children and adults in school? How do you know?
- Is there anything that the animals in school need?

Change / Areas for development

- **Is there anything you would change about the animals in school?**
- **Is there anything that you think could be different?**
- What do you think should happen in the future with animals in school?
- **Do you have any other ideas about what animals could do in school to help children?**

Appendix E: Thematic Analysis

Deep Ecology			
Data extracts	**Code**	**Sub-theme**	**Theme**
"Caus they go right over to stroke her!" "They feel really excited! Because they always cheer!" "Because when Lola comes in, after lunch, caus lunch is before the last two lessons we do, people get excited when they come in because Lola's there. [they] Get excited! Really excited." "But can I tell you why I'm always happy caus when, caus when dad said Max was in I was like "Max!!" "Just really the, just really Max he's the only person who actually, who people get excited about!" "Uuummm, well he helps people get excited? I wouldn't that that's a good thing about." "[maybe good for] Ur, people who like to be excited?"	Excitement	Attraction	
"Well, he's a cute dog" "Um, very, a very cute dog" "I don't know how old he is, but, when he very first came, he was very cute" "it's not my fault I like baby pandas?! They are just so fluffy and cute!"	Animals are cute		
"How energetic they are" "And I think that she's a nice doggy" "Because I like any animal, I just don't show much interest in them, but I am interested, I just don't show it" "I do, I really like them, I wanna, I wanna elephant." "Yeah, I love animals! And I love cats, and dogs and other stuff like animals. And, I like bears". "Just an, just anything really, just the fact that it's a dog! Just the fact that it's an animal really. And I just, because I just like animals" "Just everything in general, I just like animals. I like seeing them, and pretty much I just like them being around, seeing them" "I usually really do love horses and I'm on a waiting list for horse riding!" "Um, I like about, I like horses, um because they're just like, they are nice to ride, and just peaceful and they don't bark as much as dogs do" "And they are just very nice and calm animals" "Happy cause I love dogs." "And I think that she's a nice doggy" "I just like to see dogs!"	Attraction of animals in school		
"She's kind of very happy"	Greetings		

"Yeah, because she's excited to come in our class because she knows that we might give her some biscuits" "Because whenever she comes, before Mr. **** even opens the door she tries to get in!" [she is] "Happy… Because, um, when she comes in to our class, and when we walk in the door, Lola will come over" "I like how he comes and just like he wants to like give you a cuddle, like he comes to ya then jumps up at ya and puts ya paws like, there [points to shoulders]" "He runs around us, like he's really excited! [laughs] to see us!" "[laughs] he comes and jump on us… As in cuddling us. He comes for a cuddle!" "Um, everyone likes her when she comes in" "Ur, I think they just look at her when she comes in"		Interspecies connection and communication	
"She normally goes to the front because Miss ****** is at the front" "Well she likes Miss ******* because she always used to follow her at playtime!" "And then she always jumps on Miss ******!"		Dog approaches adults	
"Yeah, she probably always, like if you were sitting on the chair and someone got hurt she might come like next to the chair and like just look at them"	Dog approaches CYP	
"Sometimes people get chose to go and read to Lola in there" "By reading when you're told to and helped doing good. With your work" "Caus they go right over to stroke her!" "Some kids play fetch, some kids, chase aft, like have a race with her, or some just sit there with her" "like sometimes a free time, he would always go to the gate and go like, Lola, and click his fingers so she could come."	CYP's autonomy	
"If she doesn't like it, she'll probably just walk off." "Um, well Mr. **** brings in, her beanbag. So, she can sit on that whenever she wants" "Um, not really, only sometimes he's allowed to be let off the leash." "So, she can sit on that whenever she wants, um to, and if he feels like she need ta" "Yeah but if she doesn't, if she doesn't want her tummy rubbed then she doesn't rollover" "She is free to walk around, you can stroke her and stuff when walking around, unless she is allergic to dogs." "Well she just like wanders around the classroom" "she might like go like on the table when there is no children" "because she goes everywhere round the class". "So, she can sit on that whenever she wants" "If she doesn't like it, she'll probably just walk off." "Yeah but if she doesn't, if she doesn't want her tummy rubbed then she doesn't roll over" "but um, I kinda think she decides what she wants to do" "And she goes over to ya and she sits next to ya" "Um, she really can go anywhere in the class, but we have to close the door every time." "Um, about like, he has let people stroke him a lot, that's what he does!"	Dog has autonomy	Autonomy	

"like sometimes a free time, he would always go to the gate and go like, Lola, and click his fingers so she could come." "If you go, if you go down like that he jumps and licks ya!" "But if you like say "naughty girl", then she probably won't do it." "Urr, you just tap your knee and she'll come to you and she'll drop it" "So when you are trying to get it off her, you have to hold it really high." "She brings it back to whoever's standing still" "Because whenever we stroke her she either sits, um down, or she either lies down on the floor." [when you stroke her] "Urr, she normally lies down, and just sits there." "Caus sometimes they can take of you?" [knows she likes it because] "Caus, she wags her tail." "She brings it back to whoever's standing still" "She follows other children too"	Dog responds to CYP	Dog and CYP communicate with each other	Connectedness
"He, he barks a lot when he wants to go to a different class" "He um, he like, he has this little room and little bell. I think he rings the bell when he is in" "Yeah like he puts his paw on the bell"	Dog communicates		
"But she probably won't get a lot told off because dogs don't really understand what you're saying... and um, she does understand that we're upset"	Dog's understanding		
"Well if she wants her tummy rubbed, she rolls over" "she will always be there like looking up at her [teacher]."	Dog seeks attention		
"[laughs] well he just likes everything to be honest! Yes, yes he does [likes everybody]! If you go, if you go down like that he jumps and licks ya!"	Dog likes everybody	Non-judgemental other	
"she goes out everywhere with Mr ****, if he goes out of the classroom then she follows him." "Well she normally follows Mr **** anyway!" "He looks around!"	Dogs connection to / bond with owner	Hierarchical authority	
"Well, the thing I like about dogs is that, that my dog kind of likes me as the top person because I take him out for walks around our block"	CYP's authority		
"Uh, if like you have finished …………so one of teachers would pick some that could just go and just like sit there and play with her." "We normally get to keep her until home time. And sometimes she'll let me take her back" "Um, Miss ****** chooses five people that have been good, and they get to throw it for Lola." "And Miss. ****** let us to" "Well, it depends if we're good because Miss ****** says if you're too noisy then you can't like, then she can't come" "Um, Lola is Mr ****' s dog and the headteacher said that Mr. **** is allowed to bring Lola in." "Mr **** said I was um a treat lady because every time in the mornings since my mam works here, I come in early um I used to always give her treats." "sometimes she'll like chose a few people like to drop her off with her."	Teacher's authority		

Quote	Subtheme	Theme	
"Uh, if like you have finished …………so one of teachers would pick some that could just go and just like sit there and play with her."			
"Well, it's not just, it's not just humans in his school, there's more, well its actually, there's different people that aren't man or women, they're smaller than us, or, well mostly smaller than us"	Wider ecosystem		
"She just sits in her bed" "Well, he digs through the bins and eats food I think! Yeah, he's one of those dogs" "Well sometimes, she might like go like on the table when there is no children. I don't really know, like when the children are at breakfast club" "she will either like play with her um, toys and stuff" "she doesn't really bark like a lot" "Well she can jump really high! Yeah, she can walk…" "She is either, um, sat down nicely, um, uh, not like barking or anything. Or she's either sat in her bed asleep or listening to us read." "Ur, play with toys, do what normal dogs do, wee, poo and that" "Max chews lots of things!" "Very calm. Yes he does, yes he chews stuff a lot, but my, and my dog chews stuff a lot" "He goes on the tables! And he, sometimes he tries to get in the bin! [laughs]" "Scuttle, scuttle, scuttle [acting out what Max does] he just runs around on the table, sometimes bumps the chair like eeee, ja [laughs] on the chair." "and then just gets into her bed" "Um, so, um he goes out with Miss ********* to go like, well we saw in PE throwing the ball for Lola on the field" "Um, and then we see other boys and girls, in Mr. ****'s class take him out for break and they walk him, well her"	CYP's observations of the dog in school	Observational learning	
"Very excitable, playful and he, and he likes strokes" "He is kind, generous, hmm, good" "Um, very, a very cute dog" "Very calm. Yes he does, yes he chews stuff a lot, but my, and my dog chews stuff a lot" "Very calm."	Dog's personality		
"And I can know, I know about from my cat ******" "Um and you have to be very good, if you want to get a pet" "Because I've had experience with a dog, caus my grannie, caus my grannies dog, she, she really knows, I , I, sometimes I spend time with her and I walk her sometimes and I know how to keep her safe." "Well, he, I've never catch, I've catched him a few times like chasing his tail! When he sees his tail, he just goes round!" "And then, then he spins! Once he actually caught his tail. I can't believe he actually caught his tail!"	Drawing upon experiences from home environment	Familiarity and transferable skills	

"I think my favourite time with her was when we were having break time on the field and she came out" "And I was playing with her and I think that was my best time" "When I was in the den in year 3 and I used to always hug her" "and one time she was like asleep on like my leg like that was her head there, she's asleep on my leg". "Well, I remember this one time where, where thingy on his ear, round his ear, dogs love that don't they?" "So, when you are trying to get it off her, you have to hold it really high… Yeah, she always gets it anyway! [laughs]" "Um, not really, no [no favourite moment]" "At break time" "Probably walking him" "No, I always get to give her treats" "Um, getting to throw the ball for her." "Well, he made, he made me, he made all of laugh once caus he picked up, urr ****, one of *****'s socks caus he went around the edge of ******'s chair and down and he grabbed up a pink sock that was ********'s"	Memorable moments	Life experiences	Experiential learning
"I mean it's helping the environment. Because there's more animals around" "Like what it looks like and how it feels caus if there's no animals, how would we live without food?"	Helping wider environment	Conservation	
"I save quite a lot of animals, in like the world... if they are in trouble, I would save them because I like saving wildlife"	Conservation		
"Caus she is always going for movement and she is always running along" "Caus she is always jumping in school!" "Yep! She is always running around the corridors" "Because, I like, I kinda feel like I know what animals are feeling… Yep, and thinking" [he is happy because] "um, he wags his tail a lot" "Yeah, he likes being here [in school] a lot" "Yeah, I think he's happy" "Happy. Because, um, when she comes in to our class, and when we walk in the door, Lola will come over" "um, he wags his tail a lot"	Dog is perceived to be happy		Mutually beneficial
"I feel happy!" "Happy cause I love dogs." "Well, people feel happy with dogs" "And she makes them happy" "Ur, yeah, I'd reckon they are happy." "[children feel] Happy" "[when the dog is in school, feel] Um, happy."	CYP are happy		

Data extracts	Code	Sub-theme	Theme
"Really, really happy. And like, joyful!" "[they might feel] Happy, but like scared. [CYP with phobias]"		Happiness	
"Well, he made, he made me, he made all of us laugh once caus he picked up, urr ****, one of *****'s socks caus he went around the edge of ******'s chair and down and he grabbed up a pink sock that was ********'s" "And she just makes you want to laugh" "Caus he is always so funny!" "And he just ran around with it!" "And we all laughed!"	Laughter		
"Just an, just anything really, just the fact that it's a dog! Just the fact that it's an animal really. And I just, because I just like animals" "Yeah! [likes dog in school]" "But can I tell you why I'm always happy caus when, caus when dad said Max was in I was like 'Max!!' Caus I always like him!" "Yeah, I really like it [dog in school]" "I mean, it's nice to have pets in school" "Well, not really much different but it's good to have Max in school. Just everything [is good about it]"	CYP like having a dog in school		
"Yeah, he likes being here [in school] a lot" "Caus she is always jumping in school!" "Yep! She is always running around the corridors"	CYP perceive dog to like being in school		

Development			
Data extracts	**Code**	**Sub-theme**	**Theme**
"I think it's because the class is quieter. People put their hands out to stroke her. Our class is really loud, but when the dog's there everyone is a lot, really quiet" "When the dogs not there, they are putting their hand up a lot, when Lola's there, they don't, they just get on with their work." "And, people listen more when Lola is there." "Um, well, we normally have to be a bit more quieter" "So we started being a little quieter for her" "Well they normally feel upset when ya, when they can't do the work." "I mean if [cough], I mean if the student can't do the work and they are just put off by everything. They could have an animal with them. Caus it would make them feel comfortable with the animal" "But then, Lola, Lola helps them."	Positive impact on learning	Affective learning principles	

"They just get on with their work, mostly" "Like gives them more courage to do it." "Urrr, normally I would, normally I would be walking about in the classroom ur, but, he comes in and I'm, an I'm sitting on a chair, trying to make sure he doesn't come near me." "And she makes people concentrate more and feel happier" "So, like, oh, I don't know actually." "Hmmm, I think it's good, because when we, like if we really focus, hard, hard, you get to see em, but, the naughty people don't get to see him"			
"Ur, it helps people kinda like, sometimes it concentrates people, sometimes it can distract though." "Sometimes I can concentrate but it's mostly distraction" "Helped me to concentrate" "And she makes people concentrate more and feel happier" "When she is walking around the classroom, I always do that with her [actions reaching out and stroking her]" "Yeah, but like, I sometimes look, but he will look at her a lot more than me. But like, he is good with her, but he will look at her a lot more than me, but he still does his work."	Concentration / distraction		Learning
"Um, well I've heard that when we were in year 3 that she likes to sit and listen to you read" "but when its Friday we normally do the big write so she comes in the big write." "Well, sometimes we used to get her to sit next to us when we were writing up our big writes" "or listening to us read. Well not read, like, do our work. she's got good ears for us to read to her. I like read to her." "And she helps us with our reading" "You can read to her." "definitely let them read to her, Lola falls asleep. " "Yeah, she helped with their reading and their learning" "Well, sometime your like reading, and spellings, because they always encourage them to practice them." "Well, they always go in the group room, sometimes. To read. And to um, practice spellings. And do their English and maths if they get told off." "Sometimes people get chose to go and read to Lola in there. By reading when you're told to and helped doing good. With your work"	Dog involved in literacy activity	Dog alongside CYP in learning activities	
"And then, Lola just gives them courage. To do that" "Well they normally feel upset when ya, when they can't do the work." "But then, Lola, Lola helps them. Like gives them more courage to do it."	Dog gives CYP courage		
"She's definitely taught some, you know like bad kids to start like sharing" "Caus normally……….. if people are arguing, she wouldn't give you the ball or anything" "She's taught people how to read. Kind of. And then she helps people with their spellings and all that. Caus normally they're next to her, they are learning how to say words and all that. Like Reception, and then, Lola just gives them courage. To do that"	Dog as teacher		

"Hmm, I think he's taught people to learn about him - To learn about dogs" "Um, no [hasn't taught people anything]" "[the dog has taught some people] Ss, to, sometimes to be calm and sometimes to be hyper" "Ah, well, I'm taught, he hasn't taught me anything, but he's taught *** [child with phobia] a huge lesson." "I don't really know but she might have like taught her like, you should always have fun and stuff" "I mean, [taught them] it's nice to have pets in school" "Well I think she's taught people to be nice and kind to people Even if you don't like that person, like I don't like this girl in my class"		
"Well, [coughs] if any schools want [coughs] any pets, like school pets, they could like, go on field trips, on, no, to ur, pet shop. And go and adopt some pets. I mean, probably the odd trips. Just trips in general. With Max and without. Both really"	Learning activities / trips	
"Do chickens lay eggs or…? …Ah, or do ducks do?" "Yeah! I wonder where he is right now?" "In dog years, how old do you think he'd be?"	CYP's curiosity	
"The way he wags his tail caus its sign that he likes, he's enjoying and, when he likes …. [imitates panting] Does that!" "Um, yes, sometimes he goes outside. Runs about, he goes.. [actions and makes noise]" "Scuttle, scuttle, scuttle [acting out what Max does] he just runs around on the table, sometimes bumps the chair like eeee, ja [laughs] on the chair." "They just go like that…!"	CYP imitate dog	
"[regarding play] Yeah, but sometimes I think like they get like a little bit too rough. I think that's mostly bad dogs." "Be quiet in the classroom, dogs hearing is better than ours." "That's how I know animals are injured, caus they normally just isolate thereself, from danger" "I would wanna learn about animals, but why would we have to learn about Max when we already know?" "If you want to have a dog, how to take care of her." "Caus you don't want them to, um be biting ya, otherwise it's not really a good animal to have" "It's, hmm. Or getting damaged by a dog, but I don't think Max would do that, he's really kind." "And um, they might get very annoyed and start barking or biting" "And um, I think if you swing on your chair, then it's not just the dogs that are gonna get hurt there, it's gonna be you as well." "Caus you don't want them to, um be biting ya, otherwise it's not really a good animal to have." "And they might start biting other people not just that one person… and that wouldn't really be that good" "She's a spaniel." "He's a cocker spaniel and a springer" "He's as big as he'll ever grow"	Knowledge of animals and potential behaviours	Learning about animals

"Yeah, he's fully grown" "I don't know how old he is, but, when he very first came, he was very cute" "No, no, he's one-and-a-half-year-old" "Well you might already know this, but we share about 98% of our DNA with chimpanzees" "because it's winter now and then it will get cold. But when its winter, you can't really take it outside."			
"I do research em. Yeah! I go on YouTube." "I've seen on this programme called operation ouch. Well there's Dr Chris and Dr Xand, you might have heard them" Um, they recommend a dog is a thing, is a, a dog is something to relax a person, to give them happiness or something."	Knowledge from outside of school		
"Sometimes people get chose to go and read to Lola in there. By reading when you're told to and helped doing good. With your work" "as long as you were reading" "Whether you are good or not." "Well, it depends if we're good because Miss ****** says if you're too noisy then you can't like, then she can't come" "And Miss. ****** let us to" "Like when someone's been good and stuff" "So, if we're good, then we get to give her one but if she's not good, then she doesn't get one." "Uh, if like you have finished …………so one of teachers would pick some that could just go and just like sit there and play with her." "She just gets them for being good and if we're being good, then she gets treats off us." "Because if when we're finished we always used to read next to her and give her treats" "I think it's good, like, people get to like, see animals of like being rewarded." "Um. Hmmm, I think it's good, because when we, like if we really focus, hard, hard, you get to see em, but, the naughty people don't get to see him" "but one time she tricked us caus we were having lunch and then she was in and Miss ****** said you have to quiet when you go in, and then we just saw Lola." "By reading when you're told to and helped doing good." "Um and you have to be very good, if you want to get a pet" "That, if sometimes, we have a second break, because we've finished all our lessons" "urr, he comes round when we give out the [unintelligible – some form of rewards/certificates]" "Um. Hmmm, I think it's good, because when we, like if we really focus, hard, hard, you get to see em, but, the naughty people don't get to see him" "Yeah, they have to have a definitely well behaved, behaviour to go and see Max." "[if we finish our work] early, then, we get to take her ball out with her and throw it for her." "Sometimes people get chose to go and read to Lola in there" "By reading when you're told to and helped doing good."	Interaction as a reward	Promotes positive behaviour and engagement in learning	

"That, if sometimes, we have a second break, because we've finished all our lessons... Early, then, we get to take her ball out with her and throw it for her." "Because, normally when you're next to them, people don't want to do it, but when Lola's next to them, they always want to" "Every class sees her weekly, if they have been good" "Well, sometimes we used to get her to sit next to us when we were writing up our big writes" "Well, sometime your like reading, and spellings, because they always encourage them to practice them."	Motivator for learning		
"He likes to play with one another" "I have never played with him before, but what about if I chose, if I was to describe playing with him" "To play for a bit" "Well we did, we used to [play on the field], but now we can't." "Um hum. Dogs like to play, don't they?" "When its break, she comes outside with us and like has a run around" "We would like throw a ball or something, like a ball and then she would catch" "Well she always played with her ball." "He can sometimes but no wait, when we go we just go on the field" "Well you can, you can, if, if you have the swing ball, he will normally just run around and get the ball… Yeah [laughs] it's attached to a sting, so it's like a wild goose chase!"	Engaging in play with the dog	Shared play	Play
"She goes outside sometimes we used to like throw the ball with her! At break time." "Um, yes, sometimes he goes outside" "And I was playing with her and I think that was my best time" "He can sometimes but no wait, when we go we just go on the field" "Well you can, you can, if, if you have the swing ball, he will normally just run around and get the ball." "Yeah [laughs] it's attached to a sting, so it's like a wild goose chase!" "At playtime you can play ball and stick" "I think my favourite time with her was when we were having break time on the field and she came out" "To be able to play with children" "When its break, she comes outside with us and like has a run around" "Some kids play fetch, some kids, chase aft, like have a race with her, or some just sit there with her" "Early, then, we get to take her ball out with her and throw it for her." "She goes outside sometimes we used to like throw the ball with her! At break time." "We would like throw a ball or something, like a ball and then she would catch" "Well she always played with her ball. We always used to give her treats, caus Miss ***** let you to." "She always plays with me!"	Utilises outside space for play		

"and I get to hold the lead and play fetch" "Um, getting to throw the ball for her." "I think she like'll take them out for Lola and like play with them, like an activity" "Caus you can play with them and stuff." "Um, getting to throw the ball for her." "Ur, you would just like sit in a corner, stroke her, and sometimes you get this tiny ball, and you would just throw it, but like, out of the children's way that are not finished."			
"I don't know, I don't, I think he's still got it, I don't know [allergies] It's a long time since" "I heard he had an allergy, like probably when I first started" "[thinks some CYP don't like the dog because he is] Playful, jumpy, terrifying" "Then, the people in the school would be very happy. If they didn't have a pet and they really wanted pets" "Probably, some not, but some [feel safe around the dog]" "I don't know, he just doesn't like him" "I'm not sure about everyone, but most people do like her." "Okay, well if, you, they're, pract, almost everybody in the school knows that [that a dog is a man's best friend]" "[I think they like] That, if sometimes, we have a second break, because we've finished all our lessons Early, then, we get to take her ball out with her and throw it for her." "Yeah, but like, I sometimes look, but he will look at her a lot more than me" "Um, everyone likes her when she comes in," "Ur, yeah, I'd reckon they are happy." "[CYP miss her] I think I just know because everyone just liked her" "They just said they are feeling they kind of miss her because they really liked her." "I'm pretty sure. Everyone in the school probably does [like the dog]" "Well, there is a couple of people like, a boy in our class, doesn't like Max" I think they do like it [adults in school, like the dog]" "I would, umm, I would say yes [teachers like dog in school]" "There's a boy in our class called ****** and he loves her." "I, I think that's a bit of a question that has no answer because everybody in the school likes him!" "I think some people are scared of dogs" "Well, people feel happy with dogs" "And she makes them happy" "[they might feel] Happy, but like scared." [CYP with phobias] "I mean, if they don't have a dog, then, they'd probably be happier, like if they were homeless" "Well like, when schools have animals they just like, obviously as I said before, a couple of minutes ago" "Then, the people in the school would be very happy. If they didn't have a pet and they really wanted pets"	Perception of others	Perspective taking	Social Support

Quotes	Code	Theme	
"They feel really excited! Because they always cheer!" "Because when Lola comes in, after lunch, caus lunch is before the last two lessons we do, people get excited when they come in because Lola's there"			
"Well, I'm, I'm an animal lover but I don't really, but I'm, I'm okay with one dog, my grannies dog" "Time to time I am kind" "No, I love dogs. I'm never scared of dogs" "And why, and well, and I'm okay with um, I was okay with this sort of bird, it was like a sort of, I'm pretty sure it was something Spanish, it was like a bird with green feathers, mostly white and orangish bill." "Um, well he's, I wouldn't say that he's my fr, I wouldn't say that I, I'm good around Max. There are other kids in the school who are but I'm not, I wouldn't day that I'm the best"	Perception of self / self-awareness		
"Caus normally……….. if people are arguing, she wouldn't give you the ball or anything" "She's definitely taught some, you know like bad kids to start like sharing" "Well I think she's taught people to be nice and kind to people" "Even if you don't like that person, like I don't like this girl in my class"	Dog as social mediator	Social mediation	
"An, even though we haven't even, caus none of us, I'm not sure in other years, but everyone keeps saying that we haven't had a turn of walking Lola, but I said at least we get a turn of having her in our class because it doesn't matter if you walk or not because, um, at least we get a turn in our class," "everyone's got a turn to play with her, and a turn to stroke her because most, we've all had her, I think we've all had her, um in our class before" "Maybe not in the same day" "But she does eventually get to, um, go in each class" "He comes to visit, come to visit all the classrooms" "He goes to different classes and stuff" "Maybe not in the same day. But she does eventually get to, um, go in each class "Caus if they didn't then they won't know what's going on and they would think, if they see a dog in the classroom they would be like "what's that dog doing at school?" in other years, but everyone keeps saying that we haven't had a turn of walking Lola, but I said at least we get a turn of having her in our class because it doesn't matter if you walk or not because, um, at least we get a turn in our class" "Caus they just normally sit in the tank and then they can have turns to feed them." "If it's in their time. If you put in a time for playtime on the timetable." "Um, I don't think there's any bad things, because most, we've all had her, I think we've all had her, um in our class before" "So, there's nothing really bad because everyone's got a turn to play with her" "Um, I think that if you are going to have a pet, that um, you will have to be more, like responsible"	Interactions are perceived as fair	Fairness	

Quotes	Code	Subtheme	Theme
"Um, and I'm okay if we don't take her out for break times or stuff" "Caus if they didn't then they won't know what's going on and they would think, if they see a dog in the classroom they would be like "what's that dog doing at school?"" "If it's like in a cage, and everyone gets to take it around" "And I think that that's fair if people get to, if all of us, but only if one of us, like one class um gets to do it, then I don't think that would be fair" "because most, we've all had her, I think we've all had her, um in our class before everyone's got a turn to play with her, and a turn to stroke her." "Every class sees her weekly, if they have been good, I think that's fair perception"			
"Um, um, since we are mature enough, we get to. [hold the lead]" "I don't swing a lot [on my chair]. Caus now I'm more older I don't swing."	Maturity	Growing up	
[favourite moment] "At break time. I always get to give her treats" "then we give her treats. That she always likes." "That she always likes. And then she always jumps on Miss ******!" [What did she get treats for?] "For doing tricks!"	Feeding the dog treats		
"well I mean, he has toys, he has care, he is cared by people in the school" "and I get to hold the lead and play fetch" "I always get to hold the lead" "Some children will go fetch her water" "Mr **** said I was um a treat lady because every time in the mornings since my mam works here, I come in early um I used to always give her treats." "No, it's just ******* that does it [CYP don't help]" "well I mean, he has toys, he has care, he is cared for by people in the school"	Care giving activities	Developing caregiving skills	Preparation for adulthood
"He um, he like, he has this little room and little bell. I think he rings the bell when he is in" "it's a gate with like a door and then there is like a dog couch and beanbags in". "He keeps him in the special room when, when, when he's done looking in all the classes." "Well, they would need a cage too" "Yeah, Mr **** has one [a cage], but we never have one in our class because it would take Mr. **** ages to move it." "Yeah. A cushion. She has a sofa too!" "Lola's Den". "It's like that but it's like photocopied and says Lola's Den". "Her bed, and then there's a basket of toys for Lola" "Yeah, he does actually. He has like this little room in **'s office." "has her toys in though. It sometimes very messy caus she always takes her toys out!" "I think it's ****'s office." "And it's like a little play area" "I'd like recommend it, but I don't know" "If, we've got one or not" "Um, nah, ****'s office"	Dog's own space		

"So sometimes she likes to sit on her beanbag" "Like her beanbags there next to Miss ******'s chair" "Yeah, she brang a cushion to um sit on, and sometimes she brought some toys." "Shakes head [indicating no] [doesn't bring anything with her]" "Like all comfy" "Um, well Mr. **** brings in, her beanbag" "So, she can sit on that whenever she wants" "Yeah, she brang a cushion to um sit on, and sometimes she brought some toys." "Well, firstly, we always have to make the classroom comfortable, like she's at home." "Well, we put her on a cushion, we get this big cushion out, and then we give her treats." "Um, they would, they would have to make the classroom feel like, like at home for the dog." "And they would have to get a cushion, and treats and a lead" "When she comes to your class her mat comes in with her and 4 treats" "well, I mean, he has toys, he has care, he is cared by people in the school"	Dog's comfort		
"Because if you get a small dog then you might trip over it, so you need to be really responsible of where your walking" "Umm. Safe and careful" "Well say that if you were annoyed and you were being mean to a dog, that, that wasn't really good thing to do because you always have to be nice to them otherwise they will start being mean to you when they see you again and you don't really want that to happen." "You respect him, you give him food, you give him entertainment and water. That's why they say, a man's, a dog, is man's best friend." "Like, umm, like, how you would treat her and all that like kinda stuff" "Well first thing, obviously be careful with dog, don't kick him, punch him. Pretty obvious." "well, I mean, he has toys, he has care, he is cared by people in the school" "I mean, not to threaten him or hurt him" "And um, we needed to be very careful with her"	Respect and responsibility		
"Well, for instance, a kid in, called ***** in my class, ur, keeps bringing him stuff and he keeps, last time he brought a ball and Max almost absolutely wrecked it. He liked it so much! And this time he brought in a doggy treat" "me and ****** put our coats down [for the dog to lie on]" "I bought her, this Ariel and a rainbow thing" "I used to force my mam to buy some treats for me" "Caus, if you lose it, then it's just a waste of money."	CYP make investments in animals		
"and I get to hold the lead and play fetch" "I always get to hold the lead" "Some children will go fetch her water" "Mr **** said I was um a treat lady because every time in the mornings since my mam works here, I come in early um I used to always give her treats."	CYP have a special job		

Object Relations Theory and the Holding Environment			
Data extracts	**Code**	**Sub-theme**	**Theme**
"It's, hmm. Or getting damaged by a dog, but I don't think Max would do that, he's really kind. I wouldn't say [there is] anything about Max that is bad" "Like she won't hurt you at all" "but if there was then she would probably say, she is really nice, and she won't hurt you." "Umm, yes. [people feel safe]" "I mean, well not necessarily safe, but you know what I mean. It's just like good having him around" "I mean if people don't feel safe, they, could be with the animals in the school?"	CYP feel safe around the dog	Feeling safe	Safety and belonging
"No not really [feeling safe, linked to phobia]" "I mean, he's not a dog that's, that I know that often, so I just feel like, will he do something to me?" "[in order to feel safe adults can] Keep him distracted. Or keep, keep the kids distracted?" "*** was literally super scared of Max, but he's overcome that fear" "Probably, some not, but some [feel safe]" "I was crying because I hate cats" "I'm okay with one dog, my grannies' dog" "[thinks some CYP don't like the dog because he is] Playful, jumpy, terrifying" "Hmmmm. A little bit [got more confident]" "Well first of all, overcome a phobia of dogs." "Um, well he's, I wouldn't say that he's my fr, I wouldn't say that I, I'm good around Max. There are other kids in the school who are but I'm not, I wouldn't say that I'm the best" "So, Max has helped him to overcome his fear of dogs [by] coming into the class all day!" "She has also helped some people to feel okay about dogs, stopped their fear" "Ah, probably not, I'm pretty, I'm pretty sure they just don't really like animals" "If people are scared, give them a bit more time with Lola so they can have more time." "Yeah. He says he wants a dog in his house. That was last term." "Hmmmm. A little bit [got used to the dog]"	Phobias		
"Well, some, some schools, they, caus some, some people in schools can be allergic to that so I wouldn't say, that some school should really have pets." "Dogs, cats, but I have a cat and I'm allergic to them, but not as allergic as dogs" "Like allergic to fur" "Even if people, well not if people are allergic to animals but like if they're not then yeah!" "Like, someone else in this school is like, not allergic to animals, but allergic to nuts" "Any fur or hair"	Allergies		

"I'm also allergic to dogs" "But I'm not allergic, to, Max his name is" "But I'm not allergic to him, caus he doesn't come in that often" "unless it's the fluff that gives me my allergies caus I puff up and I also vomit". And I take a medicine, that, like a nasal spray it's called Paracetamol and that." "Yeah, but whenever I stroke him" "I can't touch my eyes or else my eyes will puff up. And I itch them"			
"shut the door" Every time someone opens the door, all of us shout [whispers] – "shut the door" "It could jump out the door if someone was having a break, as it will probably be able to get through the bars, the gates." "Mr. **** walks her and then closes the door so she doesn't run back out!" "Ur, be aware of them not carrying you everywhere, like if they run away" "Um, that, you have to be a bit more nicer, and not like swing on your chair or anything Because otherwise, she might like, get trapped" "And um, I think if you swing on your chair, then it's not just the dogs that are gonna get hurt there, it's gonna be you as well". "Um, she really can go anywhere in the class, but we have to close the door every time." "And sometimes, Mr. **** normally has her on a lead around school just in case she escapes" "only sometimes he's allowed to be let off the leash" "Well, we have to shut the door" "Make sure that they don't let it off the lead, in case it's not used to them… Caus it won't get used to the adults for a while yet."	Ensuring animals stay safe	Safe environment	
"and Lola was just about to come in so we got some sellotape, wrapped it around our hands and the sticky parts picked up all the stuff so if they're dropping anything that might smash, they might need to pick it up or anything before the dog goes in." "because there is, there could be stuff on the floor, that she might step on, so we need to make sure that there's nothing on the floor before we end up taking her out" "Um, that, you have to be a bit more nicer, and not like swing on your chair or anything" "He keeps him in the special room when, when, when he's done looking in all the classes." "Caus its full of naughty kids and they might, don't want the dog getting hurt"	Suitable environment		
"you have to like wash your hands after, sometimes." "Um, fleas? Caus sometimes, can dogs bring fleas into school?" "Well, fleas and that's really it"	Hygiene		
"And when she comes Miss ****** says don't swing on your chair because some people swing on their chair and then she'll like go 'argh'…" "Not to swing on your chair." "Um, not really, only sometimes he's allowed to be let off the leash." "If they turn on people. Sometimes, if you don't treat an animal the right way, they might just turn."	Boundaries / rules	Keeping animals safe	

"Not really. When he is in the parking lot. But I think it's a bit bad him being in the parking lot though as he could get run over." "He is on a lead, but cars reversing in to him, they could get Max, but they obviously wouldn't mean it." "So, if she walks through the table, um, the chair leg, doesn't land on her paw". "When she walks round the classroom, you're allowed to stroke her if you walks past your table, where you sit." "we are allowed to stroke her." "Don't pick him up… Don't ur, hm, hmmm, don't give him stuff what dogs can't eat" "Well first thing, obviously be careful with dog, don't kick him, punch him" "Defo to stay quiet" "shut the door" "Not to swing on your chair… So, if she walks through the table, um, the chair leg, doesn't land on her paw." "They normally get told to not like be shouting, and not like, just when they would get out their seats and just pet her." "Be quiet in the classroom, dogs hearing is better than ours." "Um, well, we normally have to be a bit more quieter" "So, we started being a little quieter for her" "Ur, be aware of them not carrying you everywhere, like if they run away" "so, we all just stroke him caus we're not allowed to pick him up in school." "Don't pick him up" "Not to get out of your chair and go over to stroke her."			
"she explained to them what we do on Fridays" "No" [didn't have to be told anything prior to her visit] "Um I don't, um that he's jumpy probably [be told prior] You have to, you have to stay calm, and put your hand up like this, caus, caus all dogs respond to the hand"	CYP prepared for visit		
"Not really, just don't let her meet up. But, a teacher's always there so it will be kind of fine." "Normally the teacher will just put her leash and just take her out" "Um, well, Miss ******** used to be there because we needed an adult there"	Adult supervision		
"Yeah. I've always wanted to go to a school with a dog." "There is a massive photo of her outside of his classroom."	Proud	Belonging	
"If it's in their time. If you put in a time for playtime on the timetable." "Well she does, she sometimes visits different classes. But not ours." "She has her own timetable; the teacher puts it in" "I think she, comes, I thinks she's in here all the time." "Like whenever Mr. ****'s in school, I think she comes into school"	Structured interactions / timetabled		

"If he isn't in school, then I don't think Lola will be in" "He comes in like, it feels every day, but it's not…" "He only comes on certain days" "I think Monday…" "He goes to the classes on a Friday" "Maybe not in the same day" "But she does eventually get to, um, go in each class" "Or, he comes to classes everyday" "Well not every day, like some days" "she didn't really come in Thursdays" "I don't really know" "But he doesn't come in everyday"		Structure and predictability	
"She is either, um, sat down nicely… Um, uh, not like barking or anything… Or she's either sat in her bed asleep or listening to us read." "Um, she can sit when we give her a biscuit" "He got his doggy certificate, well like his doggy training certificate" "Well there's this saying 'you can never teach an old dog, new tricks' [laughs] so why don't you do it when its young?" "It seems, it seems weird to say, all dogs respond to the hand. Obey me! Obey the hand!" "Urr, she normally lies down, and just sits there."	Dog is obedient and well behaved		
"He, well all he does is, he doesn't have a special job, job". "Urr, nobody's blind" "no, nobody's got cerebral palsy, Cerebral palsy is about like bad movement"	Dog's special job		Support and regulation
"I think like with different people" "Um, and then we see other boys and girls, in Mr. ****'s class take him out for break and they walk him, well her" "Ur no." "Well she works with people individually sometimes, but she normally visits classes." "Well, they always go in the group room, sometimes."	Individual work		
"caus we see him on the field sometimes" "Um, no, he didn't come up to my class, we just saw him, outside." "I see him sometimes when there's like English or something." "Or after dinner, or when we are eating dinner." "I like seeing them, and pretty much I just like them being around, seeing them"	Where the dog goes		
"Yeah, She's still visiting your class, even if we're not walking her" "Every class sees her weekly" "We have her every Tuesday or Thursday morning" "get her every Fridays" "she brings Lola in Friday" "So, I get her tomorrow"	Dog visits class regardless	Consistent visits	

"like just like on Fridays" "today she came in this morning, for an hour" "She comes in every morning and then when it's our breaktime which is half ten, she has to go" "Um, it should be every Tuesday but um, sometimes she doesn't be able to come so she comes um, some day during the week, it doesn't have to be the same day, it could just be any day, because we are supposed to have her Tuesday this week but we didn't so we had her today instead" "Normally, like you would like pass her off down to classes, like she would stay for an afternoon or something" "Yeah 5*, we used to have her all, every Friday…" "Well, she used to be in my old class, 5*. Miss ******* used to bring her on Fridays" "We normally get to keep her until home time. And sometimes she'll let me take her back" "She comes into our class every Friday at the end of the day." "For the last two lessons" "*****, ur, ******* brings him out on a walk. He comes to classes when it's Friday" "Fridays, he came in today" "He comes and, um, normally he comes on a, or, on a, normally he comes on a Friday or Thursday and normally, normally come sin classes on Friday." "He only comes on certain days" "I think Monday…"			
"I like how he comes and just like he wants to like give you a cuddle, like he comes to ya then jumps up at ya and puts ya paws like, there [points to shoulders]" "He is kind, generous, hmm, good" "Because dogs are just most loveable, the most loveable pet I've ever met." "Well, like I said, some people don't like him, and some people love him or want to be him" "And then he just started kissing me and everything" "If you go, if you go down like that he jumps and licks ya!"	Affection	Affection giving	
"Um, they recommend a dog is a thing, is a, a dog is something to relax a person, to give them happiness or something." "Hmmm, cheer them up…. Make them relaxed" "And make them not angry" "Ss, to, sometimes to be calm and sometimes to be hyper" "Very calm [dog is]"	Relaxation / regulation	Regulation	
"Caus sometimes they can take of you?" "And sometimes if you are like down and upset you could go to them." "Yeah, she probably always, like if you were sitting on the chair and someone got hurt she might come like next to the chair and like just look at them" "Like if someone gets hurt she will probably come up to them" "Well if your sad then she helps you when your sad"	Dog comforts CYP	Dog provides emotional support and helps CYP regulate	

"Well, what I think she does, to make people like ni, better, is that she goes to sit with them, if they get upset" "Um, he helps people if they are stressed… He goes over and lets him stroke her… Because the fur is soft, and it stops stress." "I think he helps people when they are sad. Like, if hen they are sad, Max, he would come in and cheer them up. Sometimes. [Sighs] by cuddling and getting stroked by them"			
"And I think that's nice for her. Because she has feelings for us like my doggy" "And um, she does understand that we're upset" "Um, he helps people if they are stressed." "He goes over and lets him stroke her." "Well if your sad then she helps you when your sad" "Well, what I think she does, to make people like ni, better, is that she goes to sit with them, if they get upset" "Because the fur is soft, and it stops stress." "I think he helps people when they are sad. Like, if when they are sad, Max, he would come in and cheer them up. Sometimes."	Dog senses / empathises		
"[dog helps people with] Just like everything really. Um, about like, he has let people stroke him a lot, that's what he does!" "I would say it just gets them more hyper and more angry so no not really not in my opinion [child with phobia]" "Because they can help people" "I mean if people don't feel safe, they, could be with the animals in the school?"	Dog helps		
"I like how he comes and just like he wants to like give you a cuddle, like he comes to ya then jumps up at ya and puts ya paws like, there [points to shoulders]" "I think he helps people when they are sad. Like, if when they are sad, Max, he would come in and cheer them up. Sometimes. [Sighs] by cuddling and getting stroked by them" "[laughs] he comes and jump on us… As in cuddling us. He comes for a cuddle!" "When I was in the den in year 3 and I used to always hug her" "and one time she was like asleep on like my leg like that was her head there, she's asleep on my leg." "But I like to stroke her" "When she walks round the classroom you're allowed to stroke her if you walks past your table, where you sit." "He, well, like, he actually once let me hug him" "Um, about like, he has let people stroke him a lot, that's what he does!" "but like if you. Like hug her" "You can like stroke them and hug them." "When I was in the den in year 3 and I used to always hug her" "When she walks past you can stroke her" "People put their hands out to stroke her."	Physical and sensory support	Physical and sensory support	

Quotes	Code	Subtheme	Theme
"we are allowed to stroke her." "You can like stroke them and hug them." "But I like to stroke her" "And um, um, and she also likes to, likes us stroking her." "And a turn to stroke her" "When she is walking around the classroom, I always do that with her [actions reaching out and stroking her]" "When she walks round the classroom you're allowed to stroke her if you walks past your table, where you sit." "But he comes in and he lets us stroke all the time" "so we all just stroke him caus we're not allowed to pick him up in school." "Um, about like, he has let people stroke him a lot, that's what he does!" "I like the feel of the wool" "Because the fur is soft, and it stops stress." "As in cuddling us" "He comes for a cuddle!"			
"Sometimes when people are angry, when they don't even like, well they do like Max but sometimes they don't even stroke him or anything, they just ignore him… which is sad. But I don't think anyone does that in my class. I don't really know"	CYP not responding to dog		
"she doesn't really bark like a lot" "[school is] better with Max here." "And, sometimes they keep it lively and they keep the children happy and I don't, I don't want to say that like I'm a teacher!" "Yeah, it just keeps, it just keeps the place a bit more lively!" "Better with Max here." "Um, well, we normally have to be a bit more quieter" "So we started being a little quieter for her" "and there's more like of being quiet." "when we do our big write and stuff she's very quiet."	Impact on noise / environment		
"Well I'd say it's more, I'd, s, s, well I'd say if, well I'd say I somebody, I would say it's just company." "More company" "I mean, if they don't have a dog, then, they'd probably be happier, like if they were homeless" "It's just like good having him around"	Companionship	Social support	
"You can trust them caus they can't, caus they can't say anything, so they can't say that you hate them so you know that you can, so then you, know what they don't think caus people, they can speak and they can hurt your feelings, but dogs, but animals, they can just hurt you, they can't hurt your feelings." "No, I love dogs." "but dogs, but animals, they can just hurt you, they can't hurt your feelings."	Trust	Trusting relationships	Relationships

"And sometimes if you are like down and upset you could go to them." "I think it's because the class is quieter. People put their hands out to stroke her. Our class is really loud, but when the dog's there everyone is a lot, really quiet" "When the dogs not there, they are putting their hand up a lot, when Lola's there, they don't, they just get on with their work." "And, people listen more when Lola is there." "I'm never scared of dogs"			
"Because Lola wasn't used to me when she first saw me and then after a while she, she played with me." "It sometimes, sniffs your finger at first, but then it gets used to ya." "Make sure that they don't let it off the lead, in case it's not used to them." "Caus it won't get used to the adults for a while yet." "They still sniff your fingers once you get to know em for a while, and once they're used to you, they don't do it anymore." "Hmmm, it didn't really take a lot of time. But it did take some time. For me to get used to him." "So, Max has helped him to overcome his fear of dogs" "Well just coming into the class all day!" "Yeah. He says he wants a dog in his house. That was last term."	Building (interspecies) relationships over time	Relationship building	
"when it's our breaktime which is half ten, she has to go" "my fish died in lockdown" "I used to have two guinea pigs but we moved into our house like two or one year ago, so my mam sent them off somewhere, I don't know." "Um, caus then Mr. **** used to have Guinea pigs but they died." "We used to have ducks but one, ur, two ducks or a couple of ducks got stolen or dead" "we had two cats, but one ran off and one got ran over." "There used to be chickens. It's sad" "probably no ducks left though caus I think the ducks might have been like died I don't know"	Ending relationships / interactions	Experiencing loss	
"They really miss her!" "Ur, they probably like miss her caus I don't think, most of them haven't seen her in ages caus she went without going in the classes, she's just like staying with Mr. ****." "Yeah. Because every time we see Lola we always pat her. My best friend's ********** always likes to see Lola." "They sometimes feel upset caus they don't get to spend the whole day with her." "They just said they are feeling they kind of miss her because they really liked her." "I think I just know because everyone just liked her"	CYP miss the dog		

Appendix F: Additional Themes

Impact of the pandemic	
Data extracts	**Code**
"Yeah. I mean, I would be able to if covid wasn't a thing [walk the dog]" "Yeah, I've never seen her since year 5 [because of pandemic]" "Last year we hardly got her" "we are allowed to stroke her." "Yeah. Um, just when Mr. **** says." "But sometimes you do just go in it." "or probably allowed to stroke her." "Like if your teacher says you can go to them" "We are still aloud to touch her as much as we want" "because of corona" "you have to like wash your hands after, sometimes." "Well sometimes, well Miss ****** goes now because of corona" "Um, well we can't really go off our seats and go to other tables and touch her and stuff." "Well, we can touch her but like we can't go to other tables because of Corona because we have like separate tables" "Like basically all of the school is one bubble" "if it wasn't lock down, they would all go out and play together." "But no, it's like lockdown and corona virus, only one class can go out an like take turns." "We are still aloud to touch her as much as we want but like if we hug her, like we will probably have to wash our hands." "he has separation anxiety" "I don't think she goes to any other class no caus of the virus" "But they used to, like they used to stroke her maybe" "Only, on the morning I believe or during, or when covid wasn't a thing, people used to take him on walks and I actually took him on a walk" "Yeah. I mean, I would be able to if covid wasn't a thing [walk him]"	Impact of Pandemic

Data extracts	Theme
"Well first, well, I wouldn't change any animal in this school. No. no. no, no. I would never. Never." "Urrr, normally I would, normally I would be walking about in the classroom ur, but, he comes in and I'm, an I'm sitting on a chair, trying to make sure he doesn't come near me." "I don't think I would want to change anything about Max" "I would say it's perfect now" "Better with Max here." "Ur no, I didn't see anything. They just said they are feeling they kind of miss her because they really liked her." "Well they normally feel upset when ya, when they can't do the work." "Umm, well, then I'd say it's a small change, I would say, I would say it's just more, I would say it's just different" "But then, Lola, Lola helps them." "Like gives them more courage to do it." "I would give them loving homes" "I mean I would, like, I mean I would change the fact that they stay at this school and I would give them loving homes" "Well, first of all, I've asked if he could make tricks" "Well there's this saying 'you can never teach an old dog, new tricks' [laughs] so why don't you do it when its young?"	Things they might change

Perceived barriers to the inclusion of animals in school	
Data extracts	**Theme**
"Um, fleas? Caus sometimes, can dogs bring fleas into school?" "Well, fleas and that's really it" "Yeah so, I wouldn't, I wouldn't say anything about Max that is bad" "Um, I don't think there's any bad things, because most, we've all had her, I think we've all had her, um in our class before" "So, there's nothing really bad because everyone's got a turn to play with her" "And um, they might get very annoyed and start barking or biting. And they might start biting other people not just that one person."	Barriers to HAI in schools

"And that wouldn't really be that good. Caus you don't want them to, um be biting ya, otherwise it's not really a good animal to have" "Well, small ones, they can escape. Like in small places?" "No" "Yeah so, I wouldn't, I wouldn't say anything about Max that is bad" "Well yes, that people could, that people get more, more excited, more jumpy when he comes in the classroom, but not so much about the duck" "Ur, not really"	

Advice for others	
Data extracts	**Theme**
"Buy stuff ahead" "Like, umm, like, how you would treat her and all that like kinda stuff" "Defo to stay quiet" 'Defo read up on, like defo breeds and stuff" "Defo train them" "Well, it could come round different classrooms, but only if the dog like it" "Yeah, I would get a smaller one, because big ones can escape." "They could get a dog, but, yeah, it would be good. Just a school pet." "Um, they would, they would have to make the classroom feel like, like at home for the dog." "And they would have to get a cushion, and treats and a lead" "Well they would need a cage too" "Yeah. A cushion" "She has a sofa too!" "Um, keep it safe" "Make sure that they don't let it off the lead, in case it's not used to them." "So it doesn't escape round the playground." "Caus it won't get used to the adults for a while yet." "Get a well-trained dog." "To make sure they are taking the right amount of food off them for the treats they get at school. … to have food and water" "To be able to play with children" "So, you think that some animals, some schools should have animals" "But not all of them" "I'm not saying that they shouldn't, but I just don't recommend to some schools" "what I would recommend about having a dog in this school, I think I would say 10 out of 10"	General advice

"Yeah, having in school, in this sort of school, I would recommend to have a dog" "10 out of 10" "Because dogs are just most loveable, the most loveable pet I've ever met." "And, sometimes they keep it lively and they keep the children happy and I don't, I don't want to say that like I'm a teacher!" "Well first of all, you're gonna need to respect it." "Urrr, give it, a comfortable bed, comfortable bedding" "Ur, a little tank with water and a little bowl with fo, with food." "That you should, that you should definitely make sure, sure that you , that you know that this is a good decision. Caus if you don't, and you get something that don't like, you would be, you would be stuck with it, and you would have to clean it, and feed it, so no, so it need a lot of time to think, about what you want" "Um, that, that, that getting a, that getting a class pet, or a school pet, is a lot of responsibility." "Well, [coughs] if any schools want [coughs] any pets, like school pets, they could like, go on field trips, on, no, to ur, pet shop" "And go and adopt some pets" "house trained" "and have a trained dog" "Well, buy stuff ahead if you are gonna get an animal."	
"Um, caus the bowl could smash, people could, people could try and pick up the hamster, and or, well, I just don't think that it's a good environment, a school for hamsters or fishes." "Fish would be fine, caus they don't escape, they just need you to feed them." "Guinea pigs, cats, dogs, hamsters, once a lamb came in when we'd been to a farm the day before." "urr, you could have like birds. Defo not the copy birds, because they would get annoying from time to time! [laughs]" "Like being in a classroom but just one bird!" "That would be distracting for me!" "They could get cats, but they might have to keep the windows closed, when they're in that room, or, it could be like a cat that's fully trained and it knows where to go so maybe the first couple of months you might need to keep her or him, inside without the windows closed and let it go out, but it has to be, um, house trained, because you don't want it going to the bathroom, on the, in the school!" "A cat! Even though it would run off without permission. And a dog. But I think a cat would be good. I think it [a cat] would be good for, urr, playing? And urrr, jumping, being excited, relaxed, sit on people's knees. Like a normal cat" "we used to, we have chickens. Well, we do have chickens still" "We had some chickens, we had some geese" "There used to be chickens [but there isn't anymore?] Yes, it's sad" "We've got squirrels, foxes, chickens, probably no ducks left though caus I think the ducks might have been like died I don't know"	Type of animal

"We used to have ducks but one, ur, two ducks or a couple of ducks got stolen or dead"
"Well we have a duck, its, it's been quite sick."
"There's a duck on its belly, it I think it's injured because its leg is like, it's always hiding"
"I think there might be one more duck"
"If the one that hadn't got a bad leg is still alive then, then there'll be two"
"Maybe a fish. Caus they just normally sit in the tank and then they can have turns to feed them."
"Yeah, I would get a smaller one [animal], because big ones can escape. Like I wouldn't get a cat. A hamster would be fine or a fish."
"Fish would be fine, caus they don't escape, they just need you to feed them".
"Yeah, then we had geese"
"We had some chickens, we had some geese"
"Well, if they had a cage again, and saying that they wanted to get a guinea pig or something. Then they would need to do the same thing but keep more look for it because rabbits are a bit easier to find."
"Maybe like a hamster? Cays it goes round in a wheel and that will keep it entertained.
"Um, probably hamsters, caus they can just stay in the cage."
"I don't think a cat, because cats will go outside."
"Like, they are more outside, and cat food is not normally like dog treats."
"A cat because it will probably go out and try and, sneak out because even if it's really, really, fury and big, it can still go through tiny things"
"Well I wouldn't say cats."
"Because they can go round school easy and then just scratch the walls."
"Um… maybe not [horses] Um because they're a bit too big"
[any other animals?] "No" [just dogs?] "Yep"
"A rabbit maybe"
"Well, if you had a cage, you could probably have, well, maybe a rabbit?"
"If it's like in a cage, and everyone gets to take it around"
"It could jump out the door if someone was having a break, as it will probably be able to get through the bars, the gates".
"because rabbits are a bit easier to find."
"um and about rabbits I just like them so much because they just like not one that can go in your house unless you want it to go"
"Oh! I think a rabbit would be something…"
"Rabbits, rabbit"
"I think there's a snail as well, somewhere"
"Yeah, we used to have snails in year 2, but I don't know if it's still there".
"Bring them in, with like a tub from home I think"
"Sloth"
"Caus they're not harmful, they are just really slow, and they are not really fast to catch if they run away."
"Well maybe like a, you know like a, maybe like, um maybe like, maybe like a goat or, no not a goat, maybe like a, a glasshopper, like you know, like those"

"Like small things that, maybe quite big but not like, like I wouldn't say a goat's a good one, or a cow or a sheep" "Um, probably baby pandas! [laughs] it's not my fault I like baby pandas?! They are just so fluffy and cute!" "Squirrels" "Foxes" "Cats" "Yeah, I like a lot of animals, my second favourite animal would be, I think have to be the bullet-ant. It's a, it's the most, it's got, it's, it's a sting, and it feels like a bullet, you've been like shot, it stings like that" "And if, the pets I think would be most good for schools is like dogs, cats" "Pandas, specifically baby pandas" "Um, what else?" "Foxes. Um, what else? Squirrels, ducks, chickens" "And there's a lot more" "We've got squirrels, foxes, chickens, probably no ducks left though caus I think the ducks might have been like died I don't know" "Um dogs, pandas, baby pandas, pretty much mostly baby pandas And a lot of other things" "Ah, I just said, chimpanzee" "Yeah, I love animals! And I love cats, and dogs and other stuff like animals." "And, I like bears" "I love elephants!" "Well, I think we have a fox in the forest" "I don't know!" "Caus there is loads and loads of holes"	
"I think my favourite's a lion, but I don't think I would touch that! Unless it were friendly!" "A lamb" "I like the feel of the wool" "Um, we went to farms before and there's been lambs there. And when we go on holidays, we drive past fields with lambs." "A dog" "Dogs, cats, but I have a cat and I'm allergic to them, but not as allergic as dogs "Ur, I've got cats?" "And ur, tigers" "And ur, frogs" "Yeah, they are cute." "Ah, I just said, chimpanzee" "Um dogs, pandas, baby pandas, pretty much mostly baby pandas"	Favourite animal

"And a lot of other things" "Nope!" [favourite animal] "No" [favourite animal] "I like the babies, but I wouldn't have like a massive elephant, I'd have like a baby elephant"	