Educating the Young Child 8
Advances in Theory and Research, Implications for Practice

Mary Renck Jalongo *Editor*

Teaching Compassion: Humane Education in Early Childhood

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EDUCATING THE YOUNG CHILD

VOLUME 8

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Teaching Compassion: Humane Education in Early Childhood

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Foreword

Teaching Compassion: Humane Education in Early Childhood is a timely and urgently needed book. We, all seven billion of us on earth, are at a pivotal moment in history (McKibben, 1998). We are on course to outrun our ability to produce food, provide adequate water, control carbon and nitrogen gases that heat up the planet, and protect the other beings with whom we share the planet. It is estimated that there will be nine billion of us by 2050. Children who are here now as well as those yet to be born are the inheritors of our dilemmas and will be bound to the solutions we now struggle to devise (U.N. Panel on Global Sustainability, 2012).

"Humane" has traditionally meant being kind to animals. "Hurt no living thing," advised the nineteenth-century poet, Christina Rossetti. Now it is extended to all living things. "Use your words . . . hands are not for hitting . . . gently, gently" are caroled and commanded through many young children's lives. There is a new emphasis on empathy, self-control, and kindness because children and all of us are living in a changed and changing world. The world we evolved in is gone.

Some scientists call this time the "Anthropocene" meaning the age/era/epoch when humans have had the biggest effect on the planet (Zalasiewicz, Williams, Steffen, & Crutzen, 2010). After the last Ice Age ended, many humans made settlements and became farmers as well as hunters, changing the surface of the land by clearing it, building irrigation systems and dams, and breeding useful plants and animals. Then trade routes over land and seas brought new items and plants to different places. Columbus' connecting of the Eastern and Western hemispheres brought enormous changes to the plants and animals of the continents. The industrial revolution, dating about from 1800, speeded up everything. With trains, then cars and trucks, and then airplanes, practically everything and every person could travel around the world. To fuel these travels and manufacture goods, we took coal then oil from under the surface, processed, and burned it, creating the excess carbon and nitrogen concerning us now. Coal and oil are the basis of manufacturing and agriculture. Furthermore, what we are doing is not sustainable—pesticides, fertilizer, and farm equipment deplete energy at a rate that far outstrips the energy of the food produced. Each of us in the industrialized parts of the world consumes

enormous amounts of energy with our food, houses, cars, computers, clothes, hospitals, schools, and so on. Not only is the energy imbalanced, but the pollution from pesticides and fertilizer is tremendous.

In addition, the industrial model has, in the last half century, come to dominate agriculture. Meat animals—cattle, chickens, pigs, and horses—endure well-documented misery (Pollan, 2006). Despite being sentient beings, their lives are harsh. The injunction "hurt no living thing" conflicts with our meat production. This is a dilemma for humane education.

Furthermore, the majority of the seven billion people on earth aspire to a more abundant standard of living. Yet collectively, we do not know how to have material abundance be sustainable. If what we are doing is not sustainable, what is the compassionate path toward more equitable distribution of perhaps fewer goods and services? How do we teach fairness to children?

Another crisis is the worldwide destruction of species, the Sixth Great Extinction. Not since the era of dinosaurs ended has so much biodiversity been lost. Much of this destruction is from the loss of habitat—our seven billion have very successfully colonized the world, marginalizing the animals. So the dilemma is how to share the world with the wild organisms. Sharing the world requires more than saving individual species; it is also saving places for them to live. How do we educate our children in stewardship?

Environmental activist and author Bill McKibben (2011) states that

> Earth has changed in profound ways, ways that have already taken us out of the sweet spot where humans so long thrived. We are every day less the oasis and more the desert. The world hasn't ended, but the world as we know it has—even if we don't quite know it yet. (p. 2).

This radically changed Earth is where our children are growing up and will become the adults in charge. How do we educate them and ourselves as well?

Humane educator Zoe Weil (2003) advised in the title of her first book, *Above All, Be Kind.* This is a good starting place. A leading expert on relationships between children and animals, Gene Myers (2013), notes that, universally, children are interested in animals and often empathize with them. I once witnessed the anguish that a child may experience when first realizing that an animal must be killed to become food:

> Jesse, my son, was three when he caught a 10" bass and followed me to the kitchen where I smacked it on the head. Jesse shrieked, horrified. Fortunately, he was consoled as I ran to the pond and put the fish back in where it swam groggily away.

Another 3-year-old, Katie, was relishing Easter dinner and heard she was eating "leg of lamb." Unlike the fish, the lamb was distant, and Katie imagined it. "Oh, the poor lamb," she sighed, "now it has only three legs and it has to hop" (Polly Greenberg, personal communication, February 1, 2012). What does an educator make of these early sensitivities? These ordinary stories indicate, I think, that children are born primed for humane education.

Relationships with animals and relationships with other people are the developers of children's brains. Neurons and synapses are created from experiences.

Experiences of kindness and fairness leave their lasting mark—they help make us kind and fair (Gordon, 2009). As children grow into the increasingly populated, increasingly diverse world, their kindness and fairness will be valued. The disposition to be active in the cause of kindness and fairness rounds out the development.

The changed Earth has daunting challenges including "bad news" that even young children can recognize. Wild fires, tornadoes, floods, and droughts are experienced by children around the world. Gene Myers (personal correspondence, January 19, 2012) advises us that the role of parents [and teachers] is paramount. They should live

> a life dedicated visibly and collectively to making the world better . . . and taking some joy in that and the meaning derived from working on something bigger than yourself . . . .[if there is bad news], if it is just how the world is, the way we live is an engagement with that.

This volume is a thoughtfully assembled collection of perspectives which sets the contours of humane education, explores the relationships between children and animals, illuminates the family context for compassion, and offers constructive curriculum suggestions. This is welcome guidance for engagement with a difficult world.

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Contents

Part I Foundations of Humane Education

1 **Humane Education and the Development of Empathy in Early Childhood: Definitions, Rationale, and Outcomes** 3
Mary Renck Jalongo

2 **Short-Term Interventions That Accomplish Humane Education Goals: An International Review of the Research Literature** 23
Virginio Aguirre and Agustín Orihuela

3 **Using Interactions Between Children and Companion Animals to Build Skills in Self-Regulation and Emotion Regulation** . 33
Wanda Boyer

4 **Teaching Preservice Early Childhood Educators About Humane Education** 49
Tunde Szecsi

5 **Humane Education and Education for Sustainable Development: Initiatives with Common Goals** 67
Nicole B. Stants

Part II Homes and Communities

6 **The Treatment of Animals Within Families of Young Children: Antecedents of Compassion and Cruelty** 77
Marjorie L. Stanek

7 **Including Animals in Play Therapy with Young Children and Families** 89
Risë VanFleet and Tracie Faa-Thompson

8 Foundational Humane Education: Promoting Love of Nature and Affinity for Animals in Schools and Communities 109
Nancy Bires and Dana Schultz

9 Children and the Human-Animal Bond: Minimizing Pet Loss During Disasters 133
Holly J. Travis

Part III Humane Education in the Early Childhood Curriculum and Beyond

10 Establishing a Climate of Care and Safety: Considerations for Volunteers' Entry and Sustained Involvement in Animal-Assisted Literacy Programs in Elementary Classrooms ... 149
Lori Friesen

11 Beyond Words: Using Language and Literature to Teach Compassion for Others 161
Patricia A. Crawford

12 Promoting Humane Education Through Intermountain Therapy Animals' R.E.A.D.® Program 175
Kathy Klotz

13 Guardians of the Earth: Teaching Children to Care for All Living Things 197
Audrey C. Rule and Ksenia S. Zhbanova

14 Humane Education in an Early Childhood Science Education Curriculum 213
Amanda K. Onion

15 Epilogue: Humane Education for a Humane World 227
Zoe Weil

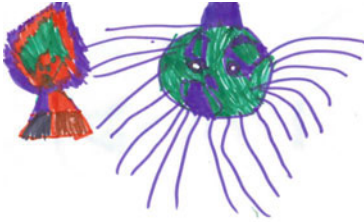
Erratum E1

Introduction

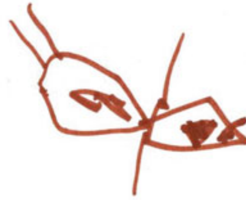
"But Aren't They Too Little?" Challenging Assumptions About Young Children's Capacity for Understanding Humane Education Concepts

"You're too little to . . . "—that phrase can spark powerful emotions in children, and with good reason; one sentence can sweep aside the young child's eagerness to be included. My experiences with the burgeoning field of humane education as a speaker, writer, editor, and community member have been marked by a similar phenomenon. Over and over again, I meet adults who presume that humane education concepts are too abstract, too complex for little minds to comprehend. To illustrate, a speaker at a national humane education conference stated that their organization "never" makes presentations to children younger than 4th or 5th grade because they "just don't get it"—and the audience laughed. I made it a point of taking the person aside and gently suggesting otherwise. Such attitudes seriously underestimate not only young children's intellects but also their capacity for deeply felt emotion. As the experts in this volume have so amply demonstrated, this dismissive attitude toward young children is entirely wrongheaded. It is not that young children are incapable of learning the skills of kindness, altruism, and compassion. It would be more accurate to say that the thinking of the adults frequently is too limited and developmentally inappropriate to communicate effectively with the very young. In many ways, educating misguided adults is far more challenging than educating young children about these matters.

In 1960, constructivist Jerome Bruner challenged prevailing assumptions about children's capacity for learning when he wrote that "Any subject can be taught effectively in some intellectually honest form to any child at any stage of development" (p. 33). Effective early childhood educators know this. We must begin "where the child is" and guide her or him in building enriched understandings; both content and pedagogy need to be matched to young children's developmental levels. To illustrate, a group of us met with 3- and 4-year-olds to share a program on interacting safely with dogs. One of the rules was that you should never tease a dog, so I asked



"A big spider and a pig. They are friends" by Xander, age 4



"A flying dog. He flies around everywhere" by Chelsea, age 3

"This is a walking, talking kitty" by Mareya, age 4

Children's ideas about living creatures blend the real with the imaginary to create personified animals

them if they had been teased. Several children commented about family members who teased them, all in good fun. Then a boy shared that older kids would steal his winter cap and throw it against the school building (where it would stick to the rough surface of the bricks) and he could not reach it. With that, the conversation turned to mean-spirited types of teasing, and a solemn young girl recently immigrated from China defined teasing this way: "It's when someone says, 'Here is a very nice toy for you' and then, 'Nya nya nya—you can't have it!'" From that starting point, preschool children could say what would constitute teasing of a dog as well as why you should not do it. At another such presentation, we role-played, with dogs, the recommended ways to interact. We had emphasized that you should ask before petting a dog, so a person stood with her dog, and an adult came up and asked to pet it. "No, I'm sorry," the owner replied, "he has been playing very hard and wants to get a drink and rest—maybe come back in a little while." The inquirer walked away, looking dejected, and then whipped around to energetically ruffle the fur on the dog's head. With that, there was a collective, audible gasp from the preschool audience. When asked what was wrong, children said, "That's not what she said!" "She didn't listen to the lady!" "Some dogs don't like that." and so forth. Young children can "get it"—it simply needs it to be more *real* than what might pass as instructive for adults. When adults neglect to educate young children about kindness to all living things merely because it requires something different from them as communicators, an irreplaceable opportunity to foster humane education concepts early in life is missed.

Children acquire gentle, supportive ways of interacting with others by modeling the kindness they observe from their parents and other role models

Indeed, there is a growing body of research to suggest that social and emotional learning occurs much earlier than previously thought (Gunnar, Herrera, & Hostinar, 2009). As young as 3 months, infants can reproduce an action they have observed up to 2 weeks later if they are given opportunities to practice (Rovee-Collier & Cuevas, 2009). Children as young as 1 year show “empathic distress” and cry when they see others cry or look sad if a caregiver is unhappy (Quann & Wein, 2006). By 14 months, they may try to help—bring a tissue to someone who is crying or tug on an adult’s clothing to solicit aid for someone in distress. By 18 months, many toddlers will help a stranger who is having difficulty, for example, picking up an object if the adult seems unable to do so (Warneken & Tomasello, 2006). During preschool, children become more intentional, and the behaviors associated with empathy, helpfulness, kindness, and concern for others can emerge well before that terminology becomes part of the child’s vocabulary. With positive adult role models to follow, they learn prosocial behavior, defined as “voluntary behavior intended to benefit another” (Eisenberg, Fabes, & Spinrad, 2006, p. 646). Prosocial behaviors are foundational in any high-quality early childhood program; they include such things as sharing toys, negotiating disagreements peacefully, comforting others in distress, giving others a chance to play, giving and receiving compliments graciously, warning others of danger, and seeking adult assistance if another child is in trouble (Hyson & Taylor, 2011). In the early school years, young children begin to understand others’ thoughts and feelings, regulate their own behavior, and learn socially acceptable coping mechanisms for dealing with powerful emotions (Pizzolongo & Hunter, 2011).

"My Pet. I have a dinosaur at my house. It's outside in the back yard. He likes to play throwing catch ball and volleyball. He went to the beach with me and my parents and he went in the water and floated all the way to Homer City. You can barely see him cus he is so far away." by Aniyah, age 4

"It's a farmer monkey and it's guarding apple seeds" by Janelle, age 5

"A sad elephant with a trunk—but, watch out for a storm! It will turn into a stinkin' frog" by Alex, age 4

Children's initial efforts at narratives often focus on animals

The Center on the Social and Emotional Foundations for Early Learning (CSEFEL) lists key skills that support children's success in school and in the community:

- Confidence
- Capacity to develop relationships with peers and adults
- Concentration and persistence on challenging tasks
- Ability to effectively communicate emotions
- Ability to listen to instructions and be attentive
- Ability to solve problems (Hemmeter, Ostrosky, Santos, & Joseph, 2006)

As this volume will document, there is a growing body of research to suggest that each of these skills can be supported through humane education initiatives.

There is little question that young children have an affinity for and curiosity about the natural world (Stebbins, 2012; Wetzel, Foulger, Rathkey, & Mitchell, 2009; White & Stoecklin, 2008); they also can derive emotional comfort from their relationships with animals (Meadan & Jegatheesan, 2010). Effective early childhood educators use real-world experiences to make abstract concepts such as kindness, caring, respect, responsibility, patience, and helping more understandable (Meadan & Jegatheesan, 2010). Educators build on the young child's intimate knowledge of

the need to have her or his own basic needs for food, shelter, water, exercise, and rest met; they use the pedagogy of humane education to extend that knowledge to a sense of guardianship of and concern for the welfare of all living things and the environment.

Children learn to protect and care for other living things when they see these behaviors exemplified by adults

Recently, a concept referred to as “a circle of empathy” has captured the popular imagination in conjunction with virtual reality expert Jaron Lanier’s (2010) popular book, *You Are Not a Gadget*. He defines a circle of empathy as an imaginary circle that each person draws around him/herself; things that fall inside the circle are deserving of empathy while those on the margins, much less so, and those outside, beneath consideration. Education can extend the perimeter of those circles as children learn to accept, respect, appreciate, and collaborate with persons very different from themselves (Derman-Sparks & Edwards, 2010) and to protect other living creatures that are neither cute nor cuddly (Randler, Hummel, & Prokop, 2012). As Lanier (2010) points out, “When you change the contents of your circle, you change your conception of yourself” (p. 37). The major mission of humane education is to widen each child’s circle of empathy; to help it grow beyond self and beyond family, friends, and pets; and to lead children to embrace what was categorized previously as “other.” The objective of humane education is an abiding respect for all forms of life, a capacity to identify with suffering, and a sense of responsibility for protecting the environment. In stark contrast to much of the conversation about education today that is dominated by benchmarks and test scores, humane education is predicated on the assumption that a high-quality education

consists of much more than academic achievement. Education could and should be the lifewide and lifelong process of becoming a better human being.

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Part I
Foundations of Humane Education

Chapter 1
Humane Education and the Development of Empathy in Early Childhood: Definitions, Rationale, and Outcomes

Mary Renck Jalongo

Keywords Humane education • Compassion • Empathy • Neuroscience • Aggression • Violence

Introduction

Contemporary conservationist and animal behavior researcher Jane Goodall probably is best known for her extensive study of apes. In *The Ten Trusts: What We Must Do to Care for the Animals We Love* (Goodall & Bekoff, 2002), she shares the story of an early childhood experience that shaped her attitudes toward other living things. As a preschooler, she brought a handful of soil and worms into the house and placed them on her bed. Rather than being repulsed or scolding, Jane's mother gently but firmly stated that these creatures needed to be taken outside because "they need the earth." In 2011, two picture books about Jane Goodall were published. The first, *Me . . . Jane* (McDonnell, 2011), shows her outside, daydreaming of visits to Africa, accompanied by her most treasured toy, a plush chimpanzee named Jubilee. The second, *The Watcher: Jane Goodall's Life with the Chimps* (Winter, 2011), describes the curiosity, persistence, patience, and gentleness that led to her groundbreaking research with animals. Both books help children to see that the way they spend their time today has consequences for their lives tomorrow. These picture books introduce children to a person who has earned international respect because she lives simply, cares deeply, and works tirelessly for humanitarian and animal activist causes. Her life is the antithesis of much of what is celebrated in the media—extravagance, superficiality, and indifference.

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Cruelty and violence are pressing concerns with broad implications for society, so much so, that many recent books have attempted to analyze human kindness, including Marc Bekoff's (2010) *Expanding Our Compassion Footprint,* Frans de Waal's (2009) *The Age of Empathy,* Dacher Keltner's (2009) *Born To be Good*, Jeremy Rifkin's (2009) *The Empathic Civilization*, and an edited book *The Compassionate Instinct* (Keltner et al., 2010). Simons (2005) characterizes the underlying reasons for this surge of interest when she writes:

> To navigate the wild changes ahead, decrease the violence of this tumultuous time, and shift our civilization's direction, we will need to invest the same authority and value in our relational intelligence and learning as we've previously given to our intellectual development. If we can do that, we will build a contagious energy that will ultimately lead to real healing and restoration . . . of our deep and fundamental interdependence with each other, other species, and the whole interwoven web of creation. (pp. 8–9)

Many Americans believe that children today are not learning core values such as responsibility, honesty, and respect (Lewis, Robinson, & Hayes, 2011). Where education is concerned, preventing cruelty in school settings has become a major issue for families, communities, and school personnel (Crick et al., 2006; Dupper, 2013; National Center for Education Statistics, 2009). The National Center for Education Statistics reports that bullying occurs daily or at least once a week in 20.5 % of all reporting primary schools.

In response to highly publicized incidents of school violence, educators across the country and in nations throughout the world are seeking to find effective ways to modify aggressive and antisocial behaviors in students (Kochenderfer-Ladd & Troop-Gordon, 2010). A research team who conducted a meta-analysis of school violence prevention programs concluded that "Youth violence and related aggressive behaviors have become serious public health issues with physical, economic, social, and psychological impacts and consequences" (Park-Higgerson, Perumean-Chaney, Bartolucci, Grimley, & Singh, 2008, p. 465). Indeed, "challenging behavior"—a general term that refers to externalized behaviors (i.e., disruptive, aggressive, and violent actions that inflict mental or physical harm to others)—has become a major concern of educators throughout the world (Pickett, Iannotti, Simons-Morton, & Dostaler, 2009; Stephenson, Linfoot, & Martin, 2000). Conversely, internalizing behaviors (i.e., depression, anxiety, and withdrawal), while not disruptive, can have equally negative consequences for children (DellaMattera, 2011).

Young Children's Challenging Behavior

Although children's beliefs about socially appropriate behavior are guided by family and faith, research suggests that unprecedented numbers of students are arriving at school with problematic behaviors and attitudes that interfere with their learning and social relationships (Brannon, 2008; Mayer & Patriarca, 2007). At one time, such behaviors were associated primarily with older children; however, challenging behaviors are being exhibited at younger and younger ages (Kupersmidt, Bryant,

& Willoughby, 2000; Ostrov et al., 2009; Zaslow & Martinez-Beck, 2005), and the harmful effects of aggression are well documented (Crick et al., 2006).

Although many schools have implemented anti-bullying interventions, character education programs, and other initiatives designed to teach prosocial skills (Berkowitz & Bier, 2007; DeRosier & Mercer, 2007), the focus has been on older students (Lewis et al., 2011; Sprinkle, 2008). Yet, in a 2006 report from the National Institutes of Health (NIH), the major recommendation was to begin much earlier to *prevent* children from becoming aggressive (Tremblay, 2006).

Across the centuries—whether it was Friedrich Frobel's kindergarten, Jane Addams' Hull House, Maria Montessori's Casa dei Bambini, or Project Head Start—early intervention, teaching social skills, and promoting self-regulation have figured prominently in the field of early childhood education. Olivia Saracho (2011) contends that the early childhood curriculum is an expression of our most cherished beliefs about who young children are and what is most important for them to learn when she writes:

> The values that we, as a society, hold also provide us with principles upon which to base our curriculum. We believe that children need to be physically capable, should have good social relations with others, have the right to live in a safe and healthy environment, should be honest and trustworthy, and should respect the individual characteristics of others. These values suggest the things we need to teach young children. We teach about health and nutrition; we help children develop physical skills; we want children to learn how to get along with others, to develop and maintain friendships, to manifest prosocial rather than antisocial behavior, and to resolve conflicts peacefully. We want children to respect their environment and do things to sustain a safe and healthy environment. We want children to be aware of the diversity of cultures . . . (Saracho, 2011, p. 73)

Modern concepts of humane education surely are foundational to many of the values on this list. This chapter begins with definitions of key terminology, including humane education, compassion, and empathy; next, it supplies a research-based rationale for integrating humane education concepts into the curriculum. It then turns to discussion of the formative role that the child-animal bond can play in building young children's empathy. The chapter concludes with an analysis of early childhood professionals' roles in fostering young children's empathic development and the strategies, resources, and outcomes that promote humane education goals.

Definitions: Humane Education, Compassion, and the Development of Empathy

When most people hear the words "humane education," they immediately think of the ethical treatment of animals; however, this is just one aspect of the concept. Humane education today not only includes human-animal interactions but also broader humanistic, environmental, and social justice frameworks (Arbour, Signal, & Taylor, 2009) and guardianship of the earth, or sustainability (Jabareen, 2011). As such, humane education is "a process that encourages an understanding of the

need for compassion and respect for people, animals and the environment and recognizes the interdependence of all living things" (World Animal Net, 2012). In addition to being a process, humane education is founded on compassion. The word "compassion" comes from the Latin *compati,* meaning to be conscious and aware of another's difficulty and distress while simultaneously seeking out possible solutions and alternatives to alleviate anxiety and troubles (Kirylo, 2006, p. 268). Humane education is linked with social emotional learning (SEL), defined as teaching children to recognize and cope with powerful emotions in themselves and others, develop empathy, arrive at good decisions, and establish positive relationships (Gunter, Caldarella, Korth, & Young, 2012). Humane education extends SEL beyond human interactions to encompass all living things; it is predicated on the assumption that "...the conditions that lead to the opening and softening of the human heart—for example, a full awareness of how profoundly divided our lives have become, coupled with a capacity to treat ourselves, each other, and Earth with love and kindness—can be cultivated" (Uhl & Stuchul, 2011, p. 15).

Empathy is the ability to identify with another living thing's emotional states, both negative and positive (Dewar, 2008; Gordon, 2005); it relies on feeling *with* (rather than for) another person (Cooper, 2011). Although there is debate over whether the brain is "wired" for empathy, whether it can be taught and, if so, how early (Zahn-Waxler, 2010), leaders in the field tend to concur that the elements of empathy emerge early. To illustrate, even newborns will join in the crying of their hospital nursery companions, possibly as a result of "mirror neurons" in the brain that prompt imitation—although this line of research is preliminary (Berrol, 2006; Izard, 2009).

David Elkind (2010), a leading expert on child development, explains empathic development in young children as follows:

> Empathy is the earliest social disposition to appear in the course of human life cycle. Toddlers will try and comfort another child who is obviously unhappy or in pain. Young children are, however, not yet able to empathize with those who do not give any obvious signs of emotional distress. Preschoolers might, to illustrate, comment loudly on the size of stranger's nose, or ears, totally unaware of the impact this might have on the other person. This is not cruel, it just represents the fact that young children do not yet understand what another person might be feeling if they have no visual clues to guide them. (p. 1)

There is ample evidence that toddlers respond to other people's distress if those emotional states are accompanied by the appropriate observable behaviors (i.e., crying, facial expression). Zahn-Waxler and Radke-Yarrow (1990) found that, as early as 2 years of age, children show (a) the cognitive capacity to interpret the physical and psychological states of others, (b) the emotional capacity to experience the states of others on an affective level, and (c) the behavioral resources that enable the possibility of attempting to alleviate the discomfort of others. Thus, empathy has both affective and cognitive components (Goleman, 2006; Zahn-Waxler & Radke-Yarrow, 1990).

Contemporary neuroscience suggests that human empathy begins with a vicarious emotional response, requires an apprehension of emotions in others, and relies on efforts to regulate emotions; as such, it forges links among empathy, prosocial behavior, and regulation of aggression (Decety, 2010). There is little doubt that

complex constructs such as empathy and compassion develop over an extended period of time. New information, concepts, and ideas are integrated with the brain structures formed from past experiences to realize new skills, understandings, and knowledge (Bowman, Donovan, & Burns, 2001; Bransford, Brown, & Cocking, 2000; Shonkoff & Phillips, 2000).

As is the case with other complex values and attitudes, empathy and compassion are learned primarily from role models (Arluke, 2003; Dewar, 2008). For example, in an extensive review of the literature on the significant life experiences of environmentalists, Lewis (2007) found that most of their formative experiences occurred during childhood. Adult environmentalists credited such things as (1) frequent interactions with natural, rural, or other relatively pristine habitats; (2) family, adult role models, and school curriculum; and (3) witnessing commercial development of habitats or environmental destruction through war or land exploitation that conflicted with their interest in protecting the environment. Further study of 13 adult animal rescuers from the Chicago area, led Lewis (2007) to conclude that experiences in childhood were the dominant influence; 85 % of the respondents credited having a childhood bond with an animal and having positive adult role models as children with their decision to commit their lives to the protection of animals. Despite the obvious importance that empathy has for society, some researchers have concluded that, in modern western societies that place a high value on individualism, children are at risk of compromised empathy development (e.g., George, 1999; Thompson & Gullone, 2003).

Rationale for Humane Education in Early Childhood

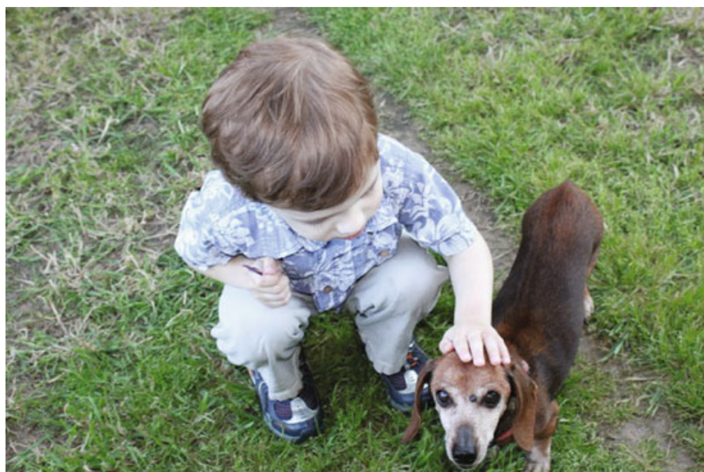
Throughout history and up to the present day, guiding young children's social and emotional development has been a time-honored priority as early childhood educators teach children to look closely, be considerate of others, manage and interpret feelings, and behave in socially acceptable and respectful ways (Miller & Pedro, 2006). Young children must learn "to work with others, care for others, verbalize feelings, support friends, show kindness and exhibit other character skills and traits"; this learning is important because "When these life skills are lacking, it affects the ways in which children interact with one another and form relationships with peers and others" (Priest, 2007, p. 153).

Hyson (2002) contends that childhood educators have an important responsibility to help young children understand and regulate emotion by modeling genuine, appropriate emotions and responses to emotions, to teach about emotions and coach children in appropriate behaviors, and to use positive emotions as a means of fostering student engagement in learning (e.g., Denham, Bassett, & Zinsser, 2012). Humane education has special significance during early childhood because young children's experiences are formative and often set a lifelong course of beliefs, values, and attitudes in motion (Arluke, 2003; Jalongo, 2004a, b; Lewis, 2007). As the next section discusses, positive interactions with animals are an important way of furthering the socioemotional development of the very young.

Human-Animal Interaction (HAI) as a Route to Empathy

The American Veterinary Medical Association defines the human-nonhuman animal bond as "a mutually beneficial and dynamic relationship between people and other animals that is influenced by behaviors that are essential to the health and well-being of both" (Wollrab, 1998, p. 1675). Throughout the 1970s and 1980s, the phenomenon variously referred to as the "human-animal bond" (HAB) or "human-animal interaction" (HAI) was the focus of numerous national and international studies and conferences (Blazina, Boyraz, & Shen-Miller, 2011; Hines, 2003). In a recent book published by the American Psychological Association (McCardle, McCune, Griffin, & Maholmes, 2010), there is a growing body of evidence that human-nonhuman animal interaction affects the course of development in general (Esposito, McCune, Griffin, & Maholmes, 2011; Kruger & Serpell, 2010) and expressions of empathy in particular across the human lifespan (Daly & Suggs, 2010; Ellingsen, Zanella, Bjerkas, & Indrebo, 2010; Taylor & Signal, 2005).

Studies suggest that ownership of dogs and cats during childhood and adulthood is associated with higher empathy scores in later life (Daly & Morton, 2009). Whereas positive role models and interactions with companion animals are linked to compassion for animals, witnessing adult carelessness and cruelty toward animals is a powerful predictor of later conduct disorders that is well documented, both in the United States (Ascione, 2005; Flynn, 2000) and other countries (Yamazaki, 2010). In fact, cruelty toward animals and violence toward human beings are so strongly connected that it has resulted in mandatory reporting of animal abuse perpetrated by children or families in the United States (Arkow, 2012; Baron-Cohen, 2011).



Young children can relate to an animal's vulnerability and dependence on others to have basic needs met

In many ways, healthy and positive connections between children and animals are the "ideal" first relationships because animals are comparatively more forgiving, expressive, and nonjudgmental than people (Fawcett & Gullone, 2001). Animals also are more accessible as companions; 75 % of children in the USA are more likely to grow up with a companion animal than with both parents in the same household (Melson, 2001). Thus, many children spend more time in the company of an animal than with any other living creature (Melson). As further evidence of children's fascination with animals, they predominate in children's dreams, hopes, fantasies, and fears as well as in their drawings and writings (Crawford & Mutuku, 2004). Perhaps young children form bonds with other species because they identify strongly with the animal's vulnerability, innocence, and dependence on others for care, all things with which the young child has extensive personal experience (Ross, 2005). In addition, animals can play a key role in the young child's construction of self, those ideas that describe and define the kind of person they believe themselves to be: "We are who we are as much because of our relationships with non-human animals as because of the human ones, and we do ourselves a great disservice—and probably great harm—by denying or ignoring this" (Podberscek, Paul, & Serpell, 2000, p. 2).

Events, such as this Bible school summer camp, promote behaviorally healthy and positive interactions with community members—both human and nonhuman

Children who forge positive relationships with companion animals and accept responsibility for pet keeping tend to have more opportunities to practice social behavior, develop tolerance, form friendships, and learn sensitivity to the needs of another living creature (Berkinblit, 2004), and the presence of animals may aid focus

and memory (Gee, Gould, Swanson, & Wagner, 2012). This is the basic premise for bringing animals into the classroom (Gee, 2010).

For example, a group of trained, registered, and insured dogs and their handlers had just begun a series of visits to a group of elementary school students (1st–3rd grade) enrolled in a learning support class. In preparation, the dogs were health checked and well groomed and parent/guardian permission to participate was obtained so that children with allergies (see Thelen & Cameron, 2012) or phobias could be accommodated. However, in the words of the building principal, it was the fastest response on record with 100 % of the families returning the signed forms within 2 weeks. During the first visit, one of the children studied a black lab's face and asked, "Is Pepper winking at me or is there something wrong with his eye?" The dog's owner said, "Pepper was chasing rabbits out in the field one day and got a big thorn in his eye. The veterinarian could not save the eye, so the doctor removed the eye and sewed the eyelid shut." With that candid explanation, the class was buzzing about Pepper's injury. The children had more questions (e.g., "Does it hurt him?" "Will it get better?" "How does he know where he's going?"); they made cards and wrote notes to the dog, saying how sorry they were about his terrible accident; they drew pictures of the animal that represented his calm and gentle ways; and, as children throughout the school encountered Pepper, they were exceptionally solicitous of the kindly old dog instead of being repulsed by his disability. Pepper's situation also sparked heartfelt conversation about other accidents involving their beloved animals. One girl said, "I got a puppy from a pet store and he was real sick after we took him home. We took him to emergency vets and my Dad said it cost a lot of money, but Fluffy still died. Then my Mom saw about puppy mills on Oprah and she said, 'no more pet stores'. The dog we have now is from the shelter." Thus, the presence of a mellow animal in the classroom affected the children's thoughts, feelings, and ways of communicating. Given that empathy is early to emerge, shaped by adult role models, and affected by interactions with other living things, early childhood educators are capable of exercising a powerful, positive influence on the development of humane education concepts (The Latham Foundation for the Promotion of Humane Education, 2012).

A concept that is fundamental both in the development of empathy and in humane education is *transference*—the assertion that positive interactions with animals teach children respect for all living things and promote the understanding that setting limits and mutual respect are important aspects of relationships with others (Arluke, 2008; DeLisle & Iltle-Clarke, 2011; Melson, 2001; Robin & ten Bensel, 1985). Indeed, research has identified a link between the strength of children's bonds with their companion animals and children's scores on measures of empathy (Poresky, 1990; Vidovic, Stetic, & Bratko, 1999). Ascione (1997) explained the relevance of transference to these programs as follows: "teaching children to be attentive to animal needs and to treat animals with kindness, compassion, and care will, in turn, affect the way children will treat each other" (p. 61). Yet, in order to harness the benefits that humane education can exert on young children's empathic development, their teachers need to understand, embrace, and incorporate humane education goals into early childhood programs.

Transference refers to the concept that caring for animals can influence ways of interacting with all types of living things. This 5-year-old girl raised Lightning the goat and showed him at the fair

Early Childhood Educators as Humane Educators

The Association of Professional Humane Educators (APHE) (2006) recommends that humane educators have "familiarity with the principles of teaching techniques and child development, including (1) age and developmental appropriateness, (2) learning styles and theories, (3) cultural considerations, and (4) addressing sensitive issues." On all four counts, the professional early childhood educator is uniquely well prepared. A humane educator is "anyone who teaches and promotes humane attitudes toward people, animals, and the environment. This includes, but is not limited to, anyone who teaches animal welfare, animal rights, animal behavior, environmental concerns, character education, cultural studies and any combination of the above" (APHE, 2006, p. 1). Given this definition, "Every teacher can be a humane educator. Whether in math, science, language arts, health, or social studies, humane education can become imbedded in the curricula so that it infuses the standard subjects" (Weil, 2004, p. 7).

At first, teachers may assume that humane education is "one more thing" that has to be added onto an already overburdened curriculum or that there simply is not time

to teach the skills of compassion to their students. Humane education is not a "stand-alone" subject; rather, it is a powerful process that transcends curricular boundaries to include the entire classroom community as well as the world outside, both now and in the future (Arbour et al., 2009; Selby, 1995; Weil, 2003, 2004). Increasingly, early childhood teachers are expected to create standards-aligned learning activities by combining subject areas (McLennan, 2011), and this is where humane education can serve as an organizing principle. To illustrate, rather than merely teaching one lesson about friends, a humane education approach as applied to kindergarten could (1) identify the behaviors that demonstrate kindness, (2) share several picture books about peer conflict, (3) encourage students to dramatize some of the scenes, (4) link them with new friends who are nursing home residents, and (5) use a protected social networking site to connect with kindergarten children in another country. The theme of friendship might be extended further by three award-winning children's books that depict unusual bonds between animals: *How to Clean a Hippopotamus: A Look at Unusual Animal Partnerships* (Jenkins & Page, 2010); *Two Bobbies: A True Story of Hurricane Katrina, Friendship, and Survival* (Larson & Nethery, 2008), in which a dog and a blind cat become inseparable after going through a traumatic experience together; and *Little Pink Pup* (Kerby, 2010), the true story of a piglet that was the runt of the litter and raised by a dachshund along with her puppies. Other recently published books tell the story of a bond between a dog and an orangutan (Antle & Feldman, 2011), a rescued elephant and a dog (Buckley, 2009), and a collection of 13 different animal duos (Thinmesh, 2011).

Children's literature and the media are a major resource for becoming a humane educator. Picture books encourage kindness in children through (1) demonstrating and modeling the skills of caring, (2) teaching the vocabulary to describe caring behaviors, and (3) providing a common ground for discussing compassion toward humans and other living things (Jalongo, 2014; Larson, 2002; Maderazo, 2009; McNamee & Mercurio, 2007; Zeece, 2009). To illustrate, in the book *Nico & Lola* (Hill, 2010), a young child's aunt asks if he "would be so kind" as to take care of her little pug, Lola, while she is away. Photographs of Nico's actions that demonstrate care for the dog offer a definition of kindness that is understandable to preschoolers; children also can watch a video of Nico talking about the dog and sharing excerpts from the book at (www.youtube.com/watch?v=NcOvVMY-ntw). This expository text can be paired with *I Want a Dog!* (Bansch, 2009) in which an apartment-dwelling child who is not allowed to have a dog gets one on loan from an elderly neighbor who can no longer walk it and the humorous role reversal*, Children Make Terrible Pets* (Brown, 2010) in which a bear brings home a human child with the familiar, "Can I keep him?" plea.

The picture book *Let's Save the Animals* (Barry, 2010) was numbered among the best books in the International Reading Association's Children's Choices 2011 project. This book succeeds in explaining animal activism in ways that the very young can understand, blends collages of animals and habitats with interesting information, and suggests developmentally appropriate animal protection and activism activities to young children.

Two reliable sources for high-quality books on humane education topics are the American Society for the Prevention of Cruelty to Animals and American Humane Association. The ASPCA recognizes outstanding picture books through the Henry Bergh Award and the AHA recognizes excellence through the KIND Children's Book Award. Books with a humane education message—such as *Molly the Pony: A True Story* (Kaster, 2008), the amazing story of a miniature horse that had to have its leg amputated and was fitted with a prosthetic leg, and *A Home for Dakota* (Grove, 2009), the story of a puppy mill dog that finds a home—have earned recognition from these groups. Various humane organizations identify outstanding films (www.lathamfoundation.com); confer awards on outstanding teachers, animal heroes, and kind children (www.americanhumane.org); and offer mini-grants to teachers involved in humane education initiatives (www.humanesociety.org; www.petsintheclassroom.org). The Humane Society of the United States is a good source of lesson plans and practical advice, for example, how to decide about, select, and care for various classroom pets (http://www.humanesociety.org/parents_educators/classroom_pet.html). Another important resource for teachers is free software such as the International Education and Resource Network iEARN (www.iearn.org) that networks children from 130 different countries to collaborate on projects that make a difference in the world. Teachers can find many helpful guides and materials for 3- to 8-year-olds at the Best Friends Animal Society (http://bestfriendsnextgen.org).

When educators embrace the principles of humane education, it gives their programs relevance beyond the classroom (Wirth & Rosenow, 2012). It also develops the concept of kindness, coaches children in the skills of negotiation, builds emergent literacy and technology skills, and gets students involved in community service. Indeed, humane education enriches and enlarges pedagogy.

Critically Reevaluate the Curriculum

Although it is customary to emphasize the "3Rs" in curriculum for young children, building relationships is—or should be—one of the basics. Establishing a learning community to which each and every child belongs and feels responsible for is foundational to success in early childhood programs (Jalongo & Isenberg, 2011). Increasingly, early childhood teachers are expected to create standards-aligned learning activities by combining subject areas (McLennan, 2011). Teachers may be surprised to learn that, according to TeachKind–the children's version of the controversial animal activist group People for the Ethical Treatment of Animals (PETA)–12 states in the U.S.A. now have humane education goals in their academic standards (see http://teachkind.org/laws.asp for a complete list). Thus, critiquing the tired, old, taken-for-granted curriculum is an important first step.

Take, for example, the typical unit or theme on pets (Jalongo, 2006). What is it, exactly, that young children learn from it? Most typically, it is that different children have different companion animals, something that is already known to them. But what if the focus were on each animal's requirements—what each animal

needs in order to survive and to thrive? A teacher might begin with the APSCA's online resource *Animaland* (www.animaland.org) to allow children to explore this concept, then follow up with a thought-provoking picture books such as *Lucky Me: A Children's Guide to Animal Companionship and Safety* (Dunlap, 2009) and *Little Dog Lost: The True Story of a Brave Dog Named Baltic* (Carnesi, 2012). Both books endorse animal rescue, emphasize the unique traits of particular companion animals, and coach children on responsible pet care and safety issues with animals. With this fresh perspective, a whole new world of basic concepts about the compassionate care of companion animals becomes possible. Children begin to see that some animals, no matter how intriguing on a nature show, do not make good pets. They begin to glimpse a concept that is sorely lacking in adults, namely, that even those animals that are widely favored as companion animals, such as dogs, should not be selected on the basis of appearance alone. They begin to appreciate the importance of choosing wisely because one dog is a far better match with the resources and lifestyles of one family than the next. They learn that animals should not be impulse buys from a pet store nor are they toys to be discarded when the novelty wears off. They recognize that companion animals require time and money as well as care and commitment from their keepers. Finally, they recognize that accepting responsibility for an animal will cause inconvenience and require them to put the animal's needs above their own at times and that, if a time comes when they cannot "do right by" an animal, they have an obligation to figure out a responsible way of meeting its requirements.

Promoting more "behaviorally healthy pet-child relationships" (Bergman, 2006) is a good example of a specific lesson that would address all of the APHE goals and integrate subject areas. Developmentally speaking, the youngest children are more apt to treat animals in an unintentionally harsh and unfeeling way; it is not until they are taught and see models of care and concern for animals that these behaviors change (Kellert & Westervelt, 1983). Encouragingly, a growing body of empirical research on intervention efforts suggests that even short-term programs with moderate resources can produce significant changes in young children's understandings of and empathy for other living things (Aguirre & Orihuela, 2010; Arbour et al., 2009; Hummel & Randal, 2011; Nicoll, Trifone, & Samuels, 2008). One of the problems with young children's behavior can be "unintentionally provocative" of aggression from animals (Lang & Klassen, 2005). Experts agree that otherwise docile pet dogs and cats lash out when they are in pain, cornered, startled, or feel threatened in some way (Bergman, 2006). Dogs and cats tend to respond favorably to slow, steady, and quiet behavior—and that does not describe the typical young child's ways of behaving. Yet by teaching young children to "read" animal behavior and adjust accordingly, teachers not only prevent injuries (Presutti, 2001) but also teach them to control their impulses—an important life skill. Even brief interventions appear to be effective in making young children more knowledgeable and cautious as they interact with animals (Chapman, Cornwall, Righetti, & Sung, 2000; Rud & Beck, 2000, 2003; Spiegel, 2000; Wilson, Dwyer, & Bennett, 2003). Transforming the routine curriculum into programs that promote empathy requires early childhood educators to reevaluate and replace "traditional" topics and themes

with new ones that focus on humane education goals. Young children's hearts, minds, and hands are engaged when they participate in collaborative across the curriculum projects such as promoting animal adoptions, collecting donations for an animal care facility, visiting an animal sanctuary, or learning about service dogs.

A strong, mutual bond formed between children and animals during the early years can influence beliefs, values, and attitudes throughout life

Conclusion

Thus, "...teachers are uniquely positioned to be societal change agents. After acknowledging this, we might ask: At this juncture in history, what kind of change is most essential so that our species might not merely survive, but flourish?" (Uhl & Stuchul, 2011, p. 2). There is little question that affectionate bonds with companion animals influence our beliefs, attitudes, values, and actions as human beings. That influence is sufficiently powerful to span the range of developmental areas—social, physical, cognitive, and emotional.

Perhaps the most persistent and fundamental debate in the field of early childhood education has been the disconnect between those who would, above all else, strive to accelerate children's academic achievement on tests and those who staunchly advocate a pedagogy that works to the young child's strengths—their natural playfulness, intense curiosity, and active imaginations (Gullo & Hughes, 2010). Humane education addresses this ongoing debate in our field by showing how it is possible to balance the cognitive and affective realms and, in so doing, to elevate the overall quality of early childhood programs for the child, family, and community. The concept of humane education unifies two pressing needs of the international community of early childhood educators: addressing challenging behaviors and

teaching the skills of compassion. Promoting the development of empathy in young children requires a concerted effort on the part of early childhood professionals. They need to embrace their role in teaching the very young how to get along with peers, function in a diverse society, become animal guardians, and preserve the planet. We need to promote compassion for, respect of, and thoughtfulness about all living things. Perhaps now, more than ever before, the field of early childhood education needs humane education.

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Chapter 2
Short-Term Interventions That Accomplish Humane Education Goals: An International Review of the Research Literature

Virginio Aguirre and Agustín Orihuela

Keywords Humane education • Early childhood • Short-term interventions • Humane education programs

Introduction

The rationale for humane educational programs is that teaching children kindness to animals will result in animal-directed empathy, which in turn will generalize to human-directed empathy and a concomitant overall reduction in aggressive behavior (Nicoll, Trifone, & Samuels, 2008; Thompson & Gullone, 2003).

After about 30 years of programs and research, several studies are now available highlighting the importance of relationship with animals, and how this relationship can benefit a young child, particularly those with behavioral issues (Bodmer, 1998; Friedmann, Thomas, Stein, & Kleiger, 2003; Levinson & Mallon, 1997). Even though several attempts have been made to standardize and establish a nationwide humane education program, this purpose has failed around the world. Nowadays, more than 2,000 short-term programs currently operate only within the United States (Kruger, Trachtenberg, & Serpell, 2004), consisting mainly of classroom visits and tours of animal care and control agencies facilities (Ollin, 2002) and developed mostly by humane groups from nongovernment organizations.

In general, education efforts have varied in length, ranging from brief, one-time classroom visits by an educator (Vockell & Hodal, 1980) to programs spanning an entire school year (Ascione, 1992). In terms of the resources used, these programs vary from the use of printed material only (Vockell & Hodal)

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to multimedia presentations (Cameron, 1983) and games, lectures, or excursions (Ferland, 2005; Prothmann, Brattig, Ettrich, & Prothmann, 2007). Outcomes of the program have differed with respect to other variables as well, with heterogeneous effects observed in boys vs. girls (Race, Decker, & Taylor, 1990), influences of the geographic location (Szagun & Pavlov, 1993), the use of local or foreign programs (Lakestani, Aguirre, & Orihuela, 2011), the cultural context (Ganea, DeLoache, & Ma, 2011), the ages/developmental levels of the children (Barraza, 1998; Dennis, 1972), the influence of pet ownership (Hurley, Kovack-Lesh, & Oakes, 2010; Wedl & Kotrschal, 2007), or the children's opportunities to interact with farm animals (Ogino, Fujita, Ohta, & Turner, 2007).

Although attempts have been made to document the salutary effects of humane education, in most of the studies published, the scientific information remains insufficient to make necessary assertions about how and how much humane education programs affect children. Much of the writing in this area is anecdotal or theoretical in nature. Even though results such as these are useful, they lack the methodological rigor needed to advance the field. To date, therefore, there are few published reports on the empirically validated effectiveness of these ubiquitous programs that have used a rigorous methodology, compared treatment and control groups, used valid and reliable measures, and subjected pre- and posttest results to statistical analysis (Arbour, Signal, & Taylor, 2009). This chapter presents a critical review of some of the successful interventions published in the scientific literature that have demonstrated statistically significant results during the past three decades (initial research has been reported by Muldoon, Williams, Lawrence, Lakestani, & Currie, 2009). The studies are arranged in chronological order. Many of the studies include children older than eight years of age; however, the findings have implications for future research with young children.

Fitzgerald (1981) conducted a study in the USA. He assessed the maintenance of the effect of a year-long school-based humane education program on fourth-grade children's attitudes toward animals. He also measured the generalization to human-directed empathy. Using pre- and posttest in year 1 and a follow-up in year 2, he found that in the experimental group (children who experienced the program), scores on a humane attitudes scale were higher than those of the control group. Furthermore, at both 1- and 2-year posttesting, the enhancement of attitudes toward animals generalized to human-directed empathy, especially when the quality of the children's relations with their pets was considered as a covariate.

Malcarne (1981) studied a small group of third and fourth graders, ranging from 8- to 9-year-olds, assessing the effects of role-playing on children's empathy and pro-social behavior toward humans and animals. One-third of the subjects received role-playing experience related to human victims of distress, one-third with animal victims, and the remainder were read a story on dogs followed by a discussion.

There was no pretest in this experiment; however, all the children were posttested and those in each of the three intervention groups scored higher than children did from the other groups, in the areas for which they received training. The author suggested that 8- and 9-year-old children are able to learn about humane behavior toward animals and humans through role-play.

Cameron (1983) investigated two forms of humane education programs and their effects on animal-related attitudes in 13-year-old children. Two classrooms received reading material and media presentations, two others attended presentations and lectures, and three were more considered control groups. The program in the treated groups lasted for 3 weeks (approximately 14 h total). All children were pre- and posttested, and the results revealed more positive posttest attitude scores in the treated groups. Cameron concluded that printed materials and lectures were both effective means of educating adolescent children.

Ascione, Latham, and Worthen (1985) assessed the effects of a humane program implemented by teachers. The subjects were children from kindergarten through to 6th grade, ranging from 4 to 11 years of age. Children within grade were randomly assigned to an intervention or control condition group. In the treated groups, teachers implemented the "National Association for Humane and Environmental Education's" curriculum guide over the course of the school year (10 h in total).

Children were pre- and posttested on their attitudes to companion and non-companion animals. The results showed higher attitude scores in the groups that attended the humane program, but only for kindergarten children and first graders (6-year-old), suggesting that age is clearly an important factor that needs careful consideration.

Ascione (1992) implemented and evaluated the impact of a year-long school-based humane education program. The Humane Society of the United States developed the intervention program based on a weekly newsletter, covering animal-related issues. During the experiment, 6-, 7-, 9-, and 10-year-olds and their teachers in the intervention group spent a minimum of 40 h on the subject. A control and a treatment group were formed, and children were pre- and posttested on humane treatment and empathy toward animals. Ascione reported that the program promoted positive animal-related attitudes within the experimental groups but that this effect was moderated by the age of the children. The program had the largest impact on the youngest students.

Ascione and Weber (1996) carried out a 1-year follow-up experiment to investigate if the effects found in the previous study could be maintained. With that purpose, over 80 % of the original sample was located and retested. As a result, they found that the elevated levels accomplished in the treatment groups on the empathy and attitude toward animal measures were still present 12 months later. This study is one of the few that have evaluated the long-term effectiveness of humane educational programs and provides evidence that humane education can be effective and sustainable over the long term.

Chapman, Cornwall, Righetti, and Sung (2000) conducted a study with 346 seven- to eight-year-old children from eight primary schools in Australia, to investigate the effectiveness of a "dog bite prevention program." The educational program consisted of a 30-min lesson about how to recognize friendly, angry, or frightened dogs, how to react, and how to interact with them. For example, children were taught how to pet a dog safely: approaching slowly, extending the hand palm down and allowing the dog to sniff it, and petting the dog under the chin and/or chest

while avoiding eye contact. For the evaluation, 7–10 days after participating in the program, children from the control and treatment groups played unsupervised in the school grounds with a docile Labrador dog tethered 5 m away from his owner. Children did not know that the dog would be there. The researches recorded the children while interacting with the dog, with the help of hidden video cameras, to see if the children interacted with the dog as they had been taught to do. The results showed that children who attended the program displayed greater precautionary behavior than children in the control group, who petted the dog almost immediately, engaging in unsafe behaviors. The authors concluded that this prevention program was effective and demonstrated that young children were able to use what they learned to interact safely with a real dog.

Paul (2000) assessed the effects of a 40-h humane education program on fourth- and fifth-grade children, comparing human-directed empathy levels of children that participated in the intervention, in comparison with same-aged controls. Children who participated in the program had higher levels of human-directed empathy at the end of the program than children in the control group. In addition, as in the study of Ascione and Weber (1996), this difference persisted 12 months after the intervention. Paul concluded that animal-based humane attitudes are generalized to human-directed empathy.

Spiegel (2000) conducted a study in the United States that was aimed to inform elementary school children ($n = 486$, 7- to 9-year-olds) about interacting safely and effectively with dogs, through a better understanding of dog behavior, and coaching on how to prevent or avoid threatening situations that may lead to dog attacks. He used the "Be Aware, Responsible, and Kind" dog bite prevention program of the Humane Society of the United States, consisting of one, 60-min educational intervention that included an introduction, interactive discussions, game-like activities, and a video and coloring book on preventing dog bites. Evaluation included pre- and post-questionnaires, which led the researcher to conclude that the program was highly effective in helping children to understand how to prevent or avoid potentially threatening situations involving dogs. In addition, children also learned to identify particular signs in dogs' behavior. For example, after the program they were able to distinguish between scared and angry dogs, signs that the children appeared to be confused about during the pretest. This study corroborates that children can learn about dog bite prevention and that they can remember the information for at least 2 weeks after the program.

Page and Fragar (2001) evaluated the effectiveness of the "Spot the Hazard" farm safety resource in Australia. This program employed 3-D visual stimuli that showed the children how to prevent injuries on farms. Seventy-nine students, on average 8 years of age, from three local primary schools, participated in the study. Children were assigned to one of three groups. The researchers used a pre- and posttest to evaluate the effects on the prevention of child injury on farms. Students assigned to treatment one (exposed to model farm during pre- and posttest) recalled the greatest number of farm hazards. Students in treatment two (model farm only during the pretest) recalled fewer hazards. However, both treatment groups performed

better than the students in the control group. The authors concluded that programs that include both visual and verbal stimuli are more effective than purely verbal approaches.

Wilson, Dwyer, and Bennett (2003) conducted an experiment in Australia, with 192 four-year-olds. The preschoolers were assigned to one of four groups: (1) control (no intervention), (2) parents were given an information brochure, (3) children attended a 30-min "dog bite prevention program" based on photographs of dogs that were safe and not safe to approach, and (4) parents and children were given the brochure and attended the program together. Children were tested before and 4 weeks after the program. In addition, during the pretest, researches applied a questionnaire to all children, in order to identify how children normally relate with familiar and strange dogs.

The authors observed that the benefits were lower in the children who did not receive training but whose parents gave them the information. Benefits were highest in children who attended the program with parents, particularly if parents reinforced the information at home as well. In addition, the pretest questionnaire revealed that many children display unsafe behavior around dogs and many parents are unaware of the dangers associated with such behaviors.

Coleman, Hall, and Hay (2008) investigated in Australia the effect of the "Responsible Pet Ownership Program" aimed at improving children's interactions with dogs in order to prevent dog bites, which are most prevalent among young children 5–6 years of age. Researchers evaluated the effect of this 30-min humane program within 2 weeks, at 2 months, and at 4 months after the intervention. The program assessed children's ability to identify potentially dangerous dogs through canine body language, their knowledge of how to interact with dogs, and their knowledge of different aspects of responsible pet ownership. To assess effects, authors established a control group and used structured interviews within the pretest and two posttests. They assessed children's responses to cartoon and photographic images of three dog emotions, short-answer questions, and role-play. The results showed that children who attended the program identified dog emotions correctly more often than those who did not. In addition, child participants in the program displayed a higher knowledge of responsible pet ownership. Children's role-play responses to interactions between a dog and its owner also persisted for 4 months after the program.

"Me and my pet cat" by Willow, age 4

"That's my dog and her name is Maggie" by Hunter, age 4

Children's drawings often depict bonds with companion animals

Nicoll et al. (2008) investigated in the USA the effect of an in-class humane education program called "We Love Animals!" and the efficacy of a popular printed humane education publication designed for children by the Humane Society of the United States, called "Kind News Newsletter." A six-lesson program was carried out over a 4-month period, with each lesson approximately 25–30 min. The goals of the program were to foster positive attitudes, encourage empathy and understanding of animals, and heighten awareness of animals' needs and their quality of life. Researchers assessed the attitudes of 154 first-grade children and the extent of bonding with a companion animal before and after the intervention, using the "Pet Attitude Scale" and the "Companion Animal Bonding Scale." Results showed that the program enhanced the treatment groups' attitudes toward nonhuman animals, when compared to the control group's attitudes. However, no difference was found between children who attended the program and controls when assessing their interactions with a pet, suggesting that an in-class approach can change children's attitudes, but it might not change behavior.

Arbour et al. (2009) conducted a study in Australia, with 37 fourth-grade students that were, on average, 9 years old. The experimental group underwent a humane educational program, while the control group did not. Each lesson of the humane program took 1 h, with the experimental group receiving two 1-h lessons per week for four consecutive weeks. Researchers evaluated, through a pre- and posttest questionnaire, the children's humane behavior toward animals. They found an increase in the treatment of animals and empathy index post-intervention in the treated group, particularly in boys, suggesting that gender is a variable of interest in humane educational programs.

Aguirre and Orihuela (2010) conducted a study to assess the impact of an animal welfare education course with first-grade (6-year-old) children in rural public schools in Mexico. Students were distributed in two groups. The treatment group consisted of 177 children and a 10-week animal welfare education program that covered ten, 1-h animal welfare topics, published by the International Foundation for Animal Welfare. There were 99 children in the control group. Children were pre- and posttested on attitudes toward animals, and no differences were found between groups during the pretest. However, children in the treatment group offered more correct answers and richer responses than those obtained from the control group in the posttest, with no difference between boys and girls. The authors concluded that short humane education programs could make changes in attitudes toward and knowledge about animals among first-grade children.

Mariti et al. (2011) studied the effect of a project of educational anthrozoology called "Animal Friends," on primary-school children in Italy. The study focused on 201 students, ranging in age from 9 to 11 years old. The intervention consisted of four 40-min meetings discussing dogs', cats', and rabbits' behavior; the animals' ways of communicating; and their requirements for a healthy existence. Children were pre- and posttested with questionnaires that included demographic details and the assessment of children's knowledge about animals, as well as their self-reported perceptions of animals, their concepts of and responsibility toward the three pet species, and their actual relationship with animals. Students who attended the

lessons reduced their fear of pets, increased knowledge and education of the animal world, improved their relationship with pets, and developed higher sense of responsibility toward animals.

Based on this review, we can conclude that (1) effective short-term courses can vary in length from 30 min to 40 h distributed during one semester; (2) children exposed to these programs generalize animal empathy with human-directed empathy; (3) children between 6 and 13 years of age are able to learn about humane behavior toward animals and humans through role-play, printed materials, and lectures, which have a synergistic effect; (4) short-term humane education programs can be effective and sustainable over the long term; and (5) children's stage of development affects humane learning. To synthesize, keys to success for short-term humane education programs seem to be beginning at an early age and providing for active engagement of students (e.g., role-play activities).

However, while several promising findings emerge from the limited number of studies investigating humane education programs, there remains a scarcity of comprehensive research in this field. Encouragingly, a growing body of research on the recent years in the area of short-term intervention programs that accomplish humane education goals is reflected in this review. Carefully planned and developmentally appropriate programs appear to make significant changes in young children's understanding of and empathy for other living things. Future research needs to focus on how this process takes place in young children. A growing body of research on intervention efforts suggests that short-term humane programs can produce significant changes in young children's understanding of and empathy for other living animals. The general finding that humane courses as short as 40 h length can have long-term lasting effects is promising. However, more longitudinal research is needed to see if this effect can endure beyond 1 year.

Conclusion

The evidence presented throughout this chapter suggests that humane education is an effective way to reduce children's fear of pets, develops a sense of responsibility toward animals, increases their knowledge and education of the animal world, and improves their empathy toward animals and humans. These facts support our hope that, by teaching compassion toward animals, we will raise more compassionate human beings and reduce violence and cruelty in the world.

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Chapter 3
Using Interactions Between Children and Companion Animals to Build Skills in Self-Regulation and Emotion Regulation

Wanda Boyer

Keywords Self-regulation • Emotion regulation • Human companion animal bond • Companion animals • Human-animal interaction (HAI)

Defining Self-Regulation and Emotion Regulation

> I try to remind my four year old daughter about the consequences for behavior and uncontrolled emotions based on what happened on some other occasion when she did something inappropriate. For example, we have a hamster and there are certain rules for holding the hamster, speaking to the hamster, and treating the hamster. When she hasn't followed these rules, then she has no contact with the hamster for a couple of days. So that's a consequence and so, if she's starting to act inappropriately with the hamster, which we've told her not to do before, we remind her, "remember when you couldn't hold Jerry last week? Well that's going to happen again unless you are more careful." So, a reminder of what could happen is how we help our daughter regulate her behaviours and her emotions. (Mother of a four-year-old girl)

Self-regulation and emotion regulation are the cornerstones of positive interactions and empathy, whether with other people or with other living creatures. When defining self-regulation, it is therefore important to consider the learning and living contexts into which the child is inserted. Self-regulation is the ability to initiate, modulate, and cease behavioral responses to learning and living experiences within varied learning and living contexts (Boyer, 2008). This definition emphasizes the full experiential context and the external factors that impact a child's behaviors. *Emotion regulation* is the ability to initiate, modulate, and cease emotional responses and emotion-based behavioral responses, in order to achieve personally significant goals (Boyer, 2009). The emphasis is on the internal factors which impact external

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behaviors including goal orientation, selection, and setting, as well as attitudinal modifiers for strategic goal attainment.

Self-regulation and emotion regulation skills provide personal control and agency over our present and future inclinations across varied experiences. Bronfenbrenner (1981) identified the multidimensional forces that impact an individual over time, including biological, psychological, social, and cultural influences. Families and caregivers, schools, community, and available free-time activities, agencies, and services are spheres of influence that have the most direct ecological impact on children.

Young children can practice self-regulation and emotion regulation during gentle interactions with other living things that are closely supervised and guided by adults

According to Boyer, Blodgett, and Turk (2007), families and caregivers consider their active involvement in the child's life to be of vital importance in the acquisition of self-regulation and emotion regulation. Boyer (2008) identified the importance of synchronous adult affect in supporting a child's ability to self-regulate and emotion regulate. For example, adults found that if they were able to improve their self-regulation and emotion regulation in the presence of their children, then the children became more receptive to the process of learning these skills. Boyer (2012) further identified the role that families play as "emotion mentors" in the development of self-regulation and emotion regulation in their children.

According to Roeser and Peck (2009), school impacts the child via a plethora of schemas including political, cultural, economic, organizational, interpersonal, and instructional. This multilevel nature of schooling shapes self-regulation and emotion regulation processes through acts of leadership, teaching, and learning. For example, school offers numerous leadership opportunities via physical games and sports and interpersonal interactions during learning center experiences and circle time discussions.

Researchers continue to explore the impact of community on development (Rosenbaum, 1980, 1991). Jencks and Mayer (1990) identified collective socialization as a unified effort of the community to socialize the next generation. Those common goals that adults in the community have for the children are reinforced with abundant and consistent role modeling. Jencks and Mayer also identified resource exposure to community offerings such as schools, faith-based institutions, activity-based organizations, recreation facilities, health facilities, markets and stores, and police and fire department monitoring as a means of buffering children from risk-inducing experiences while facilitating growth through exposure to positive opportunities.

Free time activities are another forum for learning and living. According to Larson, Hansen, and Moneta (2006), there are two categories: relaxed leisure activities, which are characterized as enjoyable but not outcome-based (e.g., listening to music or petting a dog), and constructive organized leisure activities, which require passionate engagement and commitment (e.g., athletics, artistic performance, and volunteer activism). Constructive organized leisure activities provide children with the opportunity to acquire many intellectual, physical, and self-regulation and emotion regulation skills that enable children to actively contribute to the well-being of their community (e.g., helping at an animal shelter such as by making signs and writing appealing descriptions of the pets available for adoption), foster their sense of agency as a contributing member in that community (e.g., participating in SPCA fund-raisers with their family), and establish a nurturing social network for the present and future (e.g., helping others in the neighborhood by looking in on their cat or feeding/watering/grooming a pet) and empower them to deal with challenges and overcome adversity as they care for others who are in need during challenging times.

Another learning and living context arises when children require therapeutic services. According to VanFleet (2012), play therapy is particularly well suited to helping children learn to communicate, solve problems, and change negative behaviors into positive behaviors through the use of mental health, educational, or developmental intervention. VanFleet (2008) identifies play and playfulness as components in the learning of self-regulation, empathy, and problem-solving strategies.

It is this convergence of home and these varied social contexts where self-regulation and emotion regulation are acquired and where companion animals can have an impact. Specifically, companion animals can mentor; support leadership, teaching, and learning; collectively socialize; inject recreational calm; and therapeutically assist in the acquisition of self-regulation and emotion regulation. Jalongo, Robbins, and Paterno (2004) commend us to consider the developmental significance of companion animals, suggesting that they are "so much a part of the family life fabric, they can connect the home with other social contexts" (p. 12). The following sections of this chapter present the current conception and role of companion animals, how children benefit from interactions with companion animals, and specifically the self-regulation and emotion regulation skills that are nurtured when children and animals interact and bond.

Mutually Beneficial Bonds Between Children and Companion Animals

Social networks and societies have articulated the importance of the human-animal bond as a means of nurturing sustainable holistic development. The World Society for the Protection of Animals (WSPA) (2012) indicates that their educational aims are to develop compassion, a sense of justice, and respect for animals and people (Education section, para. 1). WSPA believes that understanding the principles of animal welfare can help people, specifically young children, understand the proactive role they can play in improving the lives of the world's animals. In turn, WSPA believes that educating young children based on the principles of animal welfare is crucial to improving interactions with people and the environment. Thus, these aims run in tandem with the goals of the UN Decade of Education for Sustainable Development.

WSPA is working to improve the quality of the world for human beings by promoting a "world where animal welfare matters and animal cruelty ends" (WSPA, 2012, footer). The Humane Society International (2012) articulates an inclusive definition of animal welfare, indicating that they work to "protect all animals including animals in laboratories, farm animals, companion animals and wildlife" (Section 1, para 1).

Companion animals figure prominently in policy and trade, in local empowerment, and in community education throughout the world. For example, the British Columbia Society for the Prevention of Cruelty to Animals (2009) has defined companion animals as

> Domesticated animals [species that . . . are dependent, docile, predictable and controllable] who have been selectively bred to live and thrive in mutually beneficial relationships with humans and who are kept primarily for the purpose of companionship. (p. 1)

In this definition, it becomes clear that, due to domestication, companion animals practice self-regulation and emotion regulation skills in achieving the goal of supporting the human-animal bond. Companion animals are those animals able to initiate, modulate, and cease their own behaviors as required by a trainer or a human companion. In addition, companion animals may serve in varied learning and living contexts, including home, school, community, constructive organized leisure, and therapeutic environments such as the play therapy playroom and hospitals.

The diversity of the learning and living contexts where companion animals live is reflected in the varied species of domesticated animals that are chosen for companionship. These species include: African clawed frog, Andean Marsupial tree frog, Argentine horned frog, Australian green tree frog, Axolotl (neotenic salamander), ball python, budgerigar, canary, cat, central bearded dragon, chicken, Chinchilla, cockatiel, common Myna bird, Cranwell's horned frog, degu (brush tailed rat), diamond dove, dog, domesticated rabbit, domesticated silver fox, Eclectus parrot, ferret, golden hamster, goldfish, Green Iguana, guinea pig, hill myna bird, horse, Japanese quail, Java sparrow, leopard gecko, lovebird, mouse, Mongolian gerbil,

parrot, parakeet, pig, turquoise parrot, and zebra finch (Hirst, 2012). Not all of these animals may be suitable as companion animals in the classroom or on visits to homes on the weekends or over term breaks or the summer due to a lack of dependency, docility, predictability, or controllability (Twiest, Twiest, & Jalongo, 2004). However, Hirst indicates that animal domestication and suitability is "a process of determining and developing the mutually useful relationship between animals and humans" (p. 1). One such relationship is the human companion animal bond.

The Benefits of the Human Companion Animal Bond to the Acquisition of Self-Regulation and Emotion Regulation

Current literature identifies the benefits of the human companion animal bond with young children. Using a repeated measures ANOVA research design, Howard and Vick (2010) investigated how 20 preschool children (35–57 months) approach different animal stimuli, including two robotic animals, a real dog, and two insect species (stick insects and hissing cockroaches). The results are noteworthy because the dog and the mammal-like robot evoked the most positive responses, including touch, proximity, and verbal expressions such as questions. In a quantitative experimental research study employing multiple regression and analyses of variance with repeated measures, Tsai, Friedmann, and Thomas (2010) explored the physiological, psychological, and stress responses of young children hospitalized with acute or chronic conditions while in the presence of a dog as contrasted to the presence of an adult. During the intervention with the dog, the companion animal was either positioned on the bed or beside the bed, and the young children were able to pet, touch, and brush the dog. During the comparison intervention with the adult, the child and adult assembled an age-appropriate puzzle. The researchers found that the young children had modulated systolic blood pressure in the presence of a dog and 6 min after the intervention with the dog.

The literature also correlates certain effects, such as anxiety relief and the relief of mental stress on healthy and unhealthy children, with the human-animal bond (Melson & Fine, 2010). Melson and Fine suggest that companion animals can act as an "emotional buffer for children coping with a stressful environment or emotional discord" (p. 230) or those children who may be dispositionally more emotionally reactive. Barlow, Hutchinson, Newton, Grover, and Ward (2012) also found that women who had experienced neglect as children identified using companion animals as a form of emotional support when they were children. In a quantitative single-case design with children with low incidence exceptionalities, Esteves and Stokes (2008) identified the benefits of the human-animal bond to emotional and behavioral control. Specifically, the young children in the presence of a dog demonstrated more positive verbal statements and nonverbal behaviors toward both the teacher and the dog, indicating pleasure or interest in the situation.

Literature on neuroscience informs our understanding of the functionality of certain regions of the brain, such as the anterior cingulated gyrus, which is crucial to self-control and emotion regulation (Mak, Hu, Zhang, Xiao, & Lee, 2009), and the prefrontal cortex, which is responsible for executive control of the brain, specifically self-regulation, reasoning, and organization of thought processes (Hepworth, Rovet, & Taylor, 2001; van der Molen & Molenaar, 1994). However, Johnson (2011) noted that tools related to brain imaging and the generating of functional maps of brain activity through blood flow or electrical activity, such as positron emission tomography (PET), are "of limited utility ... due to their invasive nature (requiring the intraveneous injection of radioactively labelled substances)" (p. 204). Their use with children is bioethically dubious. Some brain imaging techniques, such as functional magnetic resonance imaging (fMRI), have been applied to studying children's development. Durston et al. (2002) engaged children and adults in a "go-no-go" task where the difficulty of the task was increased with more frequent "go" items than "no-go" items. The "go-no-go" task had participants inhibit a physical response ("no-go"), such as pressing a button, when presented with a specific item in a sequence of presentations of other "go" items. For example, one "no-go" Pokemon character would be presented to the participant in a sequence of presentations of other Pokemon characters. Using fMRI, successful response inhibition (self-regulation) was associated with activation of prefrontal cortex regions of the brain for both children and adults. Moreover, response inhibition was poorer for children than adults, and the prefrontal cortex activation in adults demonstrated a gradient corresponding to the difficulty of the inhibition task. This suggests that the functional development of prefrontal cortex regions contributes to mature ability to inhibit responses. Notably, Durston et al. show that neuroscience results for children, while less articulated, are analogous to neuroscience results for adults.

Neuroscience is now investigating the impact of the human-animal bond in terms of these autonomic and regional brain activities. In their recent experimental research study, Sugawara et al. (2012) evaluated the effects of the presence of a familiar pet on mood, autonomic activity, and regional brain activity. This study found that participants had significantly reduced scores on a test of depression/anxiety, irritability/anger, and helplessness, suggesting that the "presence of a pet dog may improve the psychological state of the owner and relieve anxiety and stress" (p. 31). This study also found that some regions of the brain associated with the emotional stress were deactivated in the "presence of a familiar pet" (p. 32).

Companion animals have been identified as being significant in the lives of children who are typically developing, as well as for those who may need therapeutic assistance (Pichot, 2012), in the areas of self-regulation and emotion regulation. Specifically, in a quantitative study employing multiple regression analyses, t tests, and analysis of variance with repeated measures, Wedl and Kotrschal (2009) explored the social impact of animal presence for 50 preschoolers in Krems/Austria. The researchers determined that companion animal presence was beneficial for socially competent children as well as children who were not as socially confident or competent.

Levinson (1970, 1971, 1978) indicated that the manner in which children initiate interaction with animals could be a marker for potential problems, including interaction difficulties and mental health disorders. However, companion animals have also been found to be the first line of defense or a catalyst for positive social interaction, before difficulties need to be addressed professionally. Walsh (2009) indicated that individuals project their feelings and needs onto significant others, and because companion animals are nonjudgmental, children will often communicate matters of personal import to animals first and foremost as a means of emotionally regulating their initial responses to anger, sadness, and happiness. Beyond these fundamental emotions, the companion animal bond also enhances higher-order empathic responses, wherein empathy is the initiation of altruism (Darwin, 1872/1998). In a quantitative correlational study employing multiple linear regression, Poresky (1996) found that children with stronger companion animal bonds scored higher on empathy measures and demonstrated increased compassion for other children. Similarly, in a quantitative correlational research design, Daly and Morton (2006) explored the empathic effect of relationships between children and their pets, finding that "children who were highly attached to their pets were higher in empathy than those with pets who had lower scores on attitude and attachment scales" (p. 123).

The modulation of behavioral and emotional responses as a result of human-animal bonding has also been explored. Edney (1995) identified the physical benefits of companion animals where children may be able to modulate their physical activity to meet the needs of the companion animal. For example, a child may need to stop playing a video game, thereby modulating physical responses from a sedentary form of engagement to a more active game of fetch or scrimmage with a companion animal. In their quantitative two-way mixed-model factorial design, Gee, Harris, and Johnson (2007) explored a similar research question concerning whether the presence of a therapy dog would affect 14 four- to six-year-old children's performance of various locomotion, stability, and manipulation tasks. Gee et al. found that the young children performed time-relevant tasks more quickly when a trained miniature poodle was used to model or to participate in the performance of the task. This study is noteworthy in that the preschool participants significantly increased the accuracy of task performance and were able to modulate their performance and accuracy based on their interaction with the dog in the study. Gee et al. proposed that "it is possible that watching the dog perform these tasks or performing these tasks with the dog was particularly exciting to the children and they had an increased desire to emulate the dog's behavior" (p. 383). According to Edney, children can also modulate their emotional responses to situations based on observation of adult companion animal exchanges, such as when "an animal is corrected in its behaviour but is still loved" (p. 705) and when adults "model intense interest, genuine compassion, and effective ways of interacting with animals . . . " in order to ensure the animal is "safe, healthy, clean and well loved" (Jalongo, 2004, p. 224). In a quantitative correlational study employing survey methodology, Poresky and Hendrix (1990) studied the effects of pet bonding on young children and found that children's bonds with their pets positively correlated with their "reassurance" score or ability to soothe themselves and thus modulate events in their

lives in a socially competent manner. Edney's work complements these findings by indicating that the "soft furry nature of the surface of most animals kept as companions, appeals to the basic requirement for comforting textures from which children benefit (the 'security blanket effect')" (p. 705).

There are comparable results for children with special needs. For example, in a quantitative experimental study, Beetz et al. (2011) explored 7–12-year-old male German children's modulation of stress responses under three different support conditions, including: a real dog, a toy dog, and a friendly student. The 31 male participants were identified as insecurely attached (avoidant or constantly needing closeness) and displaying disorganized attachment (vulnerable and helpless). There was no control condition. The participants were subjected to a standardized stress test, and cortisol levels in five saliva samples were taken before, during, and after the social stress test with all three conditions. Video-taped observations were used to identify children who manifested interactions consistent with secure attachment behaviors such as "talking to" and "body contact – stroking/petting and holding" of the companion animal or toy dog. Despite limitations in the research study design, Beetz et al. found that the secure attachment behaviors with a real dog lowered the salivary cortisol levels for children with insecure and disorganized attachment, suggesting that the real dogs provided a stress-buffering and stress-reducing effect. Similarly, Mallon (1992) found that children who were diagnosed as depressed could modulate their depressive symptoms and responses by taking advantage of humor arising from the antics of a companion animal.

Finally, the literature supports the relationship between companion animals and the cessation of undesirable behaviors and emotional responses. In a quantitative study employing mixed-model factorial design, Gee, Sherlock, Bennett, and Harris (2009) explored 11 preschoolers' ability to follow instructions related to motor skills tasks in the presence or absence of a certified therapy dog. When the children were asked to stop all other behaviors, watch a model perform a task, and follow the instructions to begin and replicate the motor skill task modeled, the results were statistically significant when modeled by a certified therapy dog. In a quantitative experimental control group repeated measure design, Hansen, Messinger, Baun, and Megel (1999) examined "the effects of a companion dog on physiological and behavioral distress among children aged 2–6 years undergoing a physical examination in a pediatric clinic" (p. 143). The independent variable was a certified therapy dog: a 9-year-old Golden Retriever. The dependent variables were blood pressure, heart rate, finger temperature, and the Observational Scale of Behavioral Distress (OSBD). Although limitations of this study included the varying practitioners who examined the children and the time allotted per physical examination, the authors documented a cessation of behavioral signs of anxiety such as crying, screaming, flailing, and verbal expression of anticipated or actual pain.

More generally, Jalongo, Robbins, Stanek, Monroe, and Patterson-Uhron (2004) indicate that typically developing children under stress, children who have been abused or neglected, children who are ill or hospitalized, and children in correction facilities can derive permanent healing benefits (i.e., root cause cessation) from the human-animal bond.

"I like to play with my cat. Sometimes, he scratches me" by Ava, age 4

"Me and my kitty. My kitty tries to hide from me" by Savannah, age 4

"My puppy. Doug and me taking a walk with his leash" by Katarina, age 4

Children learn to adjust their behavior in order to interact in more behaviorally healthy ways with other creatures

Enhancing Self-Regulation and Emotion Regulation Through the Human/Companion Animal Bond

Melson (2003) indicates that companion animals present children with opportunities to be emotionally engaged and learn about the needs of others, to develop empathy and practice nurturance, and to improve cause-and-effect orientation and pro-social attitudes toward cooperating with others. Serendipitously, Stilwell's ten rules (2007) for respectfully training canine companions parallel the self-regulatory and emotion regulation skills that reflect good citizenship and stewardship in the world.

First, when working with a companion animal, Stilwell counsels us "to think like a companion animal." As individuals, we need to be able to change our emotional responses, and emotion-based behavioral responses, based on the perspectives of others. This requires development of executive cognitive processes that allow a child to appreciate the link between emotions, thoughts, beliefs, and expectations (Thompson & Lagattuta, 2006). For example, in order to care for pets, children need to accept that they have to forgo their own wishes out of a sense of guardianship for the animal. Specifically, if a child is having fun playing, the child may need to think about what it is like to be hungry, thirsty, or needing to go to the toilet and put their play on hold in order to attend to the animal's basic needs. According to Arluke (2010), "learning to think like an animal may enable participants to make emotional deductions to humans" (p. 410). For example, a child may see a fearful look on a friend's face while the friend is waiting to be picked up by her Mom after school. The child may have seen a similar fearful expression on the face of his companion animal and then recall the context was a fear of being forgotten. This perspective taking can encourage the child to reflect on the expectations and dependency their friend may have about being taken care of by a family member and someone who cares about their welfare.

Stilwell's second rule is to "talk like a companion animal." This addresses our need to develop self-regulatory communication skills that change how we interact with others based on their needs and our needs (Boyer et al., 2007). If the child does not like what the animal has done, the child may get angry and scream "no" because this parallels the child's interactions with humans. In both human and companion animal interactions, the child may need to learn and practice alternative and nonviolent ways to communicate. The children must first connect with their own needs and then express their feelings about these unmet needs in an alternative manner that reduces or eliminates their frustration. Specifically, using modulated vocal cues or cessation behaviors like excusing oneself and moving away interrupts the inappropriate behavior.

Thirdly, Stilwell advises that we need to demonstrate confidence as a companion animal leader and similarly as a human being interacting with others, and think through our behaviors with a clear rationale for our actions and how it can impact or benefit others. This self-regulatory behavior requires effortful processes such as response inhibition or the ability to control responses to stimuli (Thompson, Winer, & Goodvin, 2011). For example, there may also be times when a child would like to take her or his companion animal pet on vacation with the family, but it is not feasible. Despite feelings of anguish, worry, and anxiety over separation from the beloved pet, the child may need to think of alternative and appropriate forms of care for the pet while they are away. The child will have to manage her/his emotions by being involved in the planning and arranging of the animal's care and then relying on trustworthy substitute caretakers.

Fourth, Stilwell encourages us to "accentuate the positive" aspects of interactions while ignoring negative interactions or correcting them without using harsh punishment. In terms of human interactions, this can mean deliberate changes of communication behavior to exercise effortful control to ignore negative actions or

modulate one's response to them as well as explicitly convey what is going well when it is going well as positive reinforcement (Boyer et al., 2007). For example, a child could say to her classmate Sarai, "I like painting with you now Sarai because we shared two paint pots, and you also shared our favorite color, yellow."

Fifth, Stilwell identifies the issue of timing as important to giving feedback to companion animals, and the same is true of our human companions. The immediacy of the reward or correction can maximize responsiveness on the part of the receiver, emotionally and behaviorally. Sixth, consistency in the expression of what you believe, and how you act on what you believe, will tell the companion animal, and similarly humans, what your likes or limits are. For example, Charney (2002) describes the empowerment of "noticing good behaviors" and being noticed. The action of immediately noticing kindnesses and generosities directs attention to behaviors that demonstrate an ethic of caring. For example, "I noticed that all of you went to help Sandy when she fell on the playground, you reported the accident to the playground supervisor, and then helped her come back to the classroom for first aid."

Seventh, Stilwell advises us to "know your dog," and this is a good directive for human interactions as well. We must come to know and accept the strengths as well as the needs of others as a function of growing attunement and cultivation of strong interpersonal relationships (Boyer, 2008). In this way, the child's companion animal bond can be a precursor to compassion and caring for others. For example, parenting skills often require emotion regulation and self-sacrifice.

Stilwell's eighth and ninth rules are "varying the picture" and "lifelong learning," which are acknowledgement that self-regulation and emotion regulation skill development is a process that must unfold over time in varied learning and living contexts. Furthermore, this process is not only dynamic but also self-involved: "the individual is both the active producer and the product of his or her ontogeny" (Brandstädter, 2006, p. 516). For example, young children may assume the role of teacher of their companion animal, who will need to be introduced to skills such as sitting and coming on command. In addition, children may also learn through actively observing their pet demonstrate friendliness and care for others, such as learning to come to the door when a family member arrives home and giving the family member their undivided attention as a form of ritualized greeting.

Stilwell's tenth and final rule is "easy does it," which is a call to humility and empathy that includes managing the environment to help promote your companion's success as well as accepting failure as part of the learning process and instead taking small steps for small feet.

Conclusion

A decade into the twenty-first century, educators are becoming significantly more interested in the self-regulation and emotion regulation skills that children and youth will need in order to thrive in their learning and living contexts and avoid

alienation and loneliness that are becoming pervasive in our society. Although Levinson (1984) was the first to ask the question of whether or not the human-animal bond could promote behavioral and emotional regulation and healing, many researchers have continued to empirically identify the benefits of this bond as a catalyst for increased socialization and self-disclosure, as an aid to independence, as a sympathetic nonjudgmental ear, as contact with nature, and as a preventative measure to avoid alienation and loneliness.

Mere subsistence and survival are no longer enough for the children and youth of the world. We are now evaluating how to develop and enhance the skills that will allow children to be nimble, resourceful, and respectful of themselves, their environment, and others. Paradoxically, *animal* companions have the potential to be a crucial step toward making humanity more human.

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Chapter 4
Teaching Preservice Early Childhood Educators About Humane Education

Tunde Szecsi

Keywords Humane education • Early childhood teacher preparation • Multidisciplinary approach • Service learning • Action-research

Twenty kindergartners are sitting in a circle and listening to the preservice teacher, Maria, saying, "Did you know that when you run, it makes the dog want to chase you? If a dog approaches you, you should never run. Who knows what you should do instead of running away?" A few children offer some answers, even standing up to show the movement, while others are giggling and insisting on running away from the dog. Then, Maria selects a volunteer who demonstrates the action, as she instructs him, "Act like a tree – stand straight and still, with your arms at your side." Another volunteer comes forward, as Maria explains, "If you are on the ground when the dog comes up to you, curl into a ball, tuck your knees to your chest, cover your ears with your fists, and drop your chin to your chest." During the next five minutes, Maria uses a stuffed dog to demonstrate a loose dog that approaches and chases the children. Eagerly, they act out the appropriate behavior, in response to the loose dog. Close to the circle, a peer preservice teacher is taking notes on an observation chart recording character values such as respect, kindness, etc. Before the lesson concludes, Maria reminds the children about bringing old towels to donate to the local animal shelter, and then she says good-bye. Maria and her peer preservice teacher sit down in the hallway to discuss the lesson. They agree that the role-playing activity was an effective way to demonstrate and practice the appropriate behavior around a loose dog. They also commented that since there was no need for verbal interaction, Jose and Esmeralda, the two English language

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learners, were able to participate along with the other children. With excitement, the preservice teachers start brainstorming ideas about the activities and prompts for the next lesson on greeting dogs.

Introduction

Young children are inquisitive and fascinated by their environment including nature, animals, plants, and their neighborhoods. Through direct interaction with the environment, during these formative early years, children develop essential cognitive concepts and social skills such as perspective taking, sharing, empathy, and helping others, which ultimately become the foundation for their intellectual and emotional development and well-being (Faver, 2010). Humane education has the potential to create the various learning opportunities for young children to expand their understanding and skills for becoming responsible and knowledgeable citizens of the globe.

Humane education has traditionally focused on the awareness of animals' welfare and care (Thomas & Beirne, 2002). Even this narrow definition of humane education called parents' and educators' attention to young children's needs in terms of ensuring safe interactions with animals. Abundant statistical data indicate the widespread proximity of pets to children. In particular, almost 40 % of households in the USA have at least one dog, and 33 % have a cat (American Pet Products Association, 2011/2012). The interaction with these pets occasionally results in injury; for example, about 400,000 children are treated for dog bites annually (American Society for Prevention of Cruelty to Animals, n.d.). Therefore, with the purpose of educating children about animals' needs and safe ways to interact with them, numerous school-based humane education programs worldwide were put into practice and assessed for effectiveness. In general, the results indicated that children increased their knowledge about animals, awareness in appropriate behavior around animals, pro-social skills, and empathy (Arbour, Signal, & Taylor, 2009; Ascione, 1992; Nicoll, Trifone, & Samuels, 2008; Spiegel, 2000; Tissen, Hergovich, & Spiel, 2007; Wilson, Dwyer, & Bennett, 2003).

Recently, the definition of humane education has transformed into an inclusive concept that embraces environmental, consumer, and human rights issues as well (Tate, 2011; Thomas & Beirne, 2002). In harmony with this comprehensive definition, schools offer environmental education themes along with "kindness" curriculum that emphasizes responsibility and respect for animals and environment, e.g., PAL programs and the Shiloh Project (see details in Ascione, 2005). Accordingly, in these programs animal-based stories and activities are used to enhance respect, kindness, and responsibility in young children's interactions with their environment. Furthermore, linking concepts to state educational standards, humane education lessons are employed to boost empathy, while solidifying academic skills and values of character (Faver, 2010). Thus, humane education that prepares children "to be conscientious choice makers engaged in just and sustainable solutions"

(Donahue, 2011, para. 21) should begin in early childhood classrooms. Eventually, the curriculum should be interwoven with humane education that is action-based, often carried out through service activities, and responsive to current events while generating interdisciplinary connections and critical thinking (Donahue, 2011).

The infusion of humane education into the curriculum should occur on an everyday basis to ensure that children internalize the values of humane education. Although many local and national humane education organizations reach out to schools, their programs are often short term and disconnected from the curriculum. Moreover, they do not have sufficient funding for making a strong and sustained impact in the schools (Thomas & Beirne, 2002). Therefore, early childhood teachers, who are knowledgeable about young children's developmental accomplishments and individually and culturally appropriate practices, must accept the responsibility for efficiently embedding humane education into lessons across the curriculum. Nevertheless, teachers need preparation for teaching humane education. In teacher education programs, courses on animal welfare, animal rights, human-animal interaction, animal abuse, animal-assisted therapy, and environmental and human rights should prompt preservice teachers to construct knowledge, skills, and attitudes for shaping young children's minds and feelings about the environment, including the animals around them.

This chapter proposes an argument for the infusion of humane education courses in teacher education programs in order to prepare future teachers for interweaving humane education values into the curriculum. The chapter also provides a review of research on school-based humane education programs in early childhood followed by an overview of the humane education courses at the university level. Subsequently, an initiative piloting the infusion of humane education into early childhood teacher preparation is described including its effects on children and preservice teachers. The chapter concludes with recommendations about the infusion of multidisciplinary humane education courses in early childhood teacher programs.

Humane Education for Young Children: Review of Research

In response to the call for incorporating humane education in early childhood and elementary classrooms, humane educators, researchers, and teachers implemented various programs worldwide to measure the impact of humane education. An overview of current research studies indicated that children benefitted from such programs to various extents; however the findings should be handled with caution. As Faver (2010) reviewed the effects of the school-based humane education as a strategy to prevent violence, she concluded that "the evaluation research on humane education is in its infancy" (p. 368). Arbour et al. (2009) also pointed out the flaws in research on effects of humane education programs.

The impact of dog bite prevention programs for young children has been widely examined. For example, second through fourth graders in the United States participated in a three-session dog bite program using books, coloring books, and

video, which increased awareness about preventing dog bite injuries (Spiegel, 2000). With a similar age group in Australia, during a 30-min session, a trained dog handler demonstrated appropriate interaction with dogs, followed by the children practicing the petting dogs in an appropriate manner. Seven to ten days later, the test indicated that those children who participated in the program demonstrated more precautionary behavior than children in the control group (Chapman, Cornwall, Righetti, & Sung, 2000). In addition, a study found that those children aged 4–6 whose parents also had attended the dog bite program gained the most in terms of safe interaction with dogs (Wilson et al., 2003). This finding suggests that humane education is more effective when parents and caregivers also learn the information and possibly reinforce it at home.

Other intervention programs focused on animal welfare and human-animal relationships. A 10-week-long (1 hr/week) animal welfare education program was implemented for first grades in a rural area of Mexico (Aguirre & Orihuela, 2010). Those who participated in the program developed more knowledge and richer concepts about animals than children in the control group. In Australia, a group of 9-year-olds attended a 4-week-long (2 hr/week) literature-only humane education intervention class (Arbour et al., 2009). This pilot study indicated that the scores for both empathy and treatment of animals increased by the end of the intervention; however, the change in empathy scores was significant for the boys only. This result might suggest that young boys possibly profit more from these programs, perhaps because they initially scored low with more room to grow. Similarly, with the purpose of fostering children's positive attitudes toward animals and encouraging empathy to animals, twice a month during a 4-month period, a humane educator, often accompanied with therapy animals, delivered a program in first grades in the United States (Nicoll et al., 2008). Groups of children were exposed to various interventions: no instruction, only through printed newsletter, only in-class teaching, and the combination of the two latter. At the end of the program, there was a significant increase in empathy among those children who participated in the in-class instruction complemented with the presence of therapy dogs.

In terms of children's physical, cognitive, and social-emotional well-being, numerous studies assessed the effect of the presence of a dog in the early childhood classroom (see comprehensive review in Gee, 2010). A study on the effect of dogs used in various social trainings in classrooms for 8-year-olds suggested that all groups gained empathy irrespective of programs. However the long-term effect was stable only for the group which received the "social training with dogs." In contrast, the children in groups with "social training without dogs" and "dog attendance without social training" did not maintain the increase in empathy (Tissen et al., 2007). Similarly, Hergovich, Monshi, Semmler, and Zieglmayer (2002) examined the effects of the presence of a dog on dominantly immigrant children in Vienna, Austria. Although throughout the three months no specific instructions were given to the first graders, they were shown how to pat a dog, feed it, and give it a toy. The researchers found that by the end of the intervention, the children were better integrated and less aggressive. Although various studies have documented

the positive effect of therapy dogs on children with a disability – for example, children with severe emotional disorder (Anderson & Olson, 2006) and children with developmental disabilities (Esteves & Stokes, 2008) – Hergovich et al.'s study (2002) supports the notion that the presence of a dog positively influences the social and cognitive development of immigrant children in the new language environment. This finding appears indispensable for educators in the United States, a country with more than 5.3 million English language learners in public schools in 2008/2009 (The National Clearinghouse for English Language Acquisition, n.d.) in order to improve their learning and adjustment to the new culture.

Studies have examined teachers' perspectives on the effects of using pets in classrooms as well. For instance, Canadian teachers found that pets in the classroom contributed to students' academic and social-emotional development, such as compassion, kindness, and empathy (Daly & Suggs, 2010). The authors noted that humane education programs that promote moral awareness are needed and acknowledged by the participating teachers. Similar findings about American teachers' perspectives on animals in the classroom and their effects on children's intellectual and social well-being were found by Rud and Beck (2003).

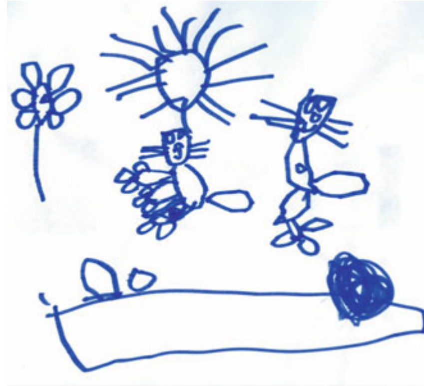
This review of literature indicates that school-based humane education programs in early childhood appear to positively impact children's knowledge about animal welfare, safety, as well as their overall development. Several research studies reported on first, second, and third grade children's reaction to these programs; however very few studies were found about younger children, e.g., children in preschools and kindergartens. Research is needed to examine the effectiveness of humane education programs for young children so that the findings can serve as an evidence base for the program development or modification. In addition, the studies reviewed here were conducted in various countries. The insights into these international endeavors should be highly appreciated yet the findings must be handled with consideration of the specific characteristics of the population, e.g., living in rural Mexican towns (Aguirre & Orihuela, 2010) or living in big cities like Vienna (Hergovich et al., 2002), especially in view of the relatively small sample size in each study. Overall, there is a need for research that evaluates programs reaching out to young children with different social, economic, and experiential backgrounds in order to guide the development of culturally appropriate humane education programs (Faver, 2010).

Humane Education in Teacher Education Programs

In higher education, various disciplines offer courses on topics related to humane education. Specifically, within the past 10 years, the number of law schools offering animal rights courses increased from 9 to 120 in Canada and the USA (Donahue, 2011). A similar increase of interest in human-animal studies was reflected by the number of courses: 110 higher education courses addressing the theme of

animals and society were offered between 2001 and 2006. In particular, although a high number of courses in law, philosophy, sociology, and animal science were found no comparable courses in the academic discipline of education were offered (Beirne & Alagappan, 2007). In terms of effectiveness, Beirne and Alagappan suggested that an animal rights-based course had engendered behavioral changes toward animal abuse and emerging sensitivities to meat consumption among undergraduate criminology students. The authors concluded that "if the aim of humane education is to develop empathy and critical thinking so that students can act in ethically-informed and compassionate ways, then humane education should obviously be integrated into curricula at all educational levels" (p. 10). Echoing the previous demand, Tate (2011) argues that all teacher preparation institutions should incorporate the field of humane education in their programs to prepare teachers to be global citizens "who are informed, responsible, creative, passionate, critical thinkers and problem solvers" (p. 303) and who are able to educate their students to develop the same qualities. These findings and recommendations are important to consider in light of the evaluation criteria for teacher education programs. For example, the National Council for Accreditation of Teacher Education (NCATE) highlights the significance of teacher candidates' dispositions that support fairness, care, problem solving, and critical thinking (NCATE, 2008). Thus, humane education courses in teacher education programs seem to have the potential to contribute to the process through which preservice teachers develop and demonstrate professional dispositions.

In higher education, another avenue for empowering advocates of humane education is offering education degrees in humane education. Among the limited number of universities, for example, the Cambridge College offers a master in education with a concentration on humane education in collaboration with the Institute for Humane Education (IHE). In addition, the IHE website notes that the only graduate program in humane education in the USA and Canada is housed in the Graduate School of Valparaiso University (Institute for Humane Education, n.d.). Although graduate degrees and/or concentrations in humane education are available, no undergraduate early childhood education programs that offer humane education courses were found. In teacher preparation programs, the persistent request from humane educators, early childhood educators, and researchers (e.g., Faver, 2010; Jalongo, 2004, 2008; Melson, 2001; Nicoll et al., 2008) for distributing knowledge and skills in humane education to young children and for preparing future teachers for this task (Tate, 2011) is barely heard and/or mirrored. There has been little attention to solutions such as the infusion of humane education courses in early childhood teacher preparation with the intention of preparing teachers of young children for effectively weaving the values of humane education into early childhood curriculum.



"A cat that's playing with a ball of string" by Rylee, age 5

"A snake" by Amelia, age 3

"Monkey has a nose" by Rain, age 4

Young children's fascination with animals frequently is reflected in their drawings

Pilot Project: Teaching Humane Education to Future Teachers

With addressing the needs for incorporating courses related to humane education in the teacher education program, a pilot project with two courses was launched and co-housed in the College of Education and in the Honors program at a university in Southwest Florida. Early childhood preservice teachers and undergraduate students majoring in various disciplines such as communication, psychology, biology, music, environmental studies, and forensic science were enrolled in these elective courses.

Course 1: Animals in Children's Life

The course titled *Animals in Children's Life* (one credit) offered an introduction to the interdisciplinary approach toward child development and humane education with the purpose of enabling students to explore the impact of animals on children's development with a special emphasis on character values and to construct knowledge about humane education practices. In addition to current articles, two textbooks – *Children and animals: Exploring the Roots of Kindness and Cruelty* (Ascione, 2005) and *The World's Children and Their Companion Animals* (Jalongo, 2004) – were used for class discussions about the history and scope of humane education, major influences of companion animals on child development, and the interrelationship of cruelty and animal abuse. Through the many application activities, students explored and evaluated children literature by themes, e.g., animals as helpers in fiction picture books, and designed lessons for young children with a focus on character values: respect, responsibility, fairness, and kindness. Furthermore, students engaged in a small-scale research on children's perception of companion animals in their lives. First, they reviewed the research about children's attachment to animals as reflected in children's drawing and writing, and then they collected and analyzed data – second graders' drawing and writing samples about companion animals. Finally, students presented their findings on posters at the university Research Day.

Course 2: Research and Service in Humane Education

The following semester, the course titled *Research and Service in Humane Education* (3 credits) – a unique combination of service in humane education and a scientific research application – was offered with the following proficiencies in mind: (1) participating in service in humane education, (2) designing and implementing action-research during the service, (3) interpreting qualitative and quantitative data, and (4) distributing findings at professional forums. The course readings included journal articles from *Anthrozoos, Early Childhood Education*

Journal, Society and Animals, and *Journal of Critical Animal Studies* and textbooks, e.g., *Why the Wild Things Are* (Melson, 2001) and the *KIDS: Kids Interacting with Dogs Safely* (Deming, Jones, Caldwell, & Phillips, 2009) package developed by the American Humane Association.

The semester consisted of on-campus classes and a service activity of a 7-week-long humane education program about dog safety in kindergarten classrooms. In particular, during the first few weeks of the semester, students gained an understanding about humane education, dog safety, and the developmental accomplishments for kindergartners, reviewed and modified lesson plans in the KIDS package, and collected teaching resources, e.g., children books. Simultaneously, they designed their own action-research including the completion of a literature review and the development of the assessment tools to measure the impact of the dog safety program. Before their first lesson, the students observed the kindergarten classroom and established rapport with the teacher and children. When they finished teaching the seven lessons, students returned to campus to analyze the data and report the findings.

A Course Component: Service in Humane Education for Kindergartners

The successful implementation of the humane education lessons in the kindergarten classrooms required comprehensive preparation. First, public, private, and charter schools were contacted with an invitation to participate. After expressing interest, the principals identified the participating kindergarten classrooms, and each student contacted the teacher with the request to gain the IRB form signed by children and parents. Throughout the weeks of preparation, based on their newly gained knowledge about humane education, students designed all lessons about dog safety using some ideas in the KIDS packet and worked on the action-research design. They identified two research questions: (1) Have the lessons increased kindergartners' knowledge and skills about the safe interaction with dogs? and (2) Have the character values such as kindness, respect, and responsibility changed positively during the program? After reviewing relevant literature and various research designs, students developed a pre- and posttest for measuring the change in children's knowledge and skills. In addition, to assess the change in character values, they created an observation chart based on the Florida State Education Standards and Character Counts (n.d.).

Multilateral collaboration was an important feature of the service component. Prior to the semester the professor established a working relationship with the authors of the KIDS program at the American Humane Association and gained a free access to their lesson plans, the DVD, and the coloring book. The authors, humane educators themselves, also paid a campus visit and served as consultants. With a local community foundation's grant, students were able to purchase children's

books and school supplies. Also, early in the semester the students and the professor partnered with kindergarten teachers to ensure an effective implementation of the dog safety lessons. Finally, throughout the semester, collaboration created the framework for the students' interactions: They worked in research teams of two, assisting each other with lesson planning and serving as an observer and data collector while the partner was teaching.

The weekly 30-min lessons addressed objectives related to dog safety such as recognizing dogs' needs, acquiring and demonstrating proper behavior around dogs, practicing how to meet dogs on a leash and unknown dogs, and demonstrating how to behave around working dogs. In addition, the lessons targeted objectives related to core values of character, such as empathy, respect, responsibility, and kindness with adults and peers. Among the various class activities, the kindergartners appreciated the following activities the most: using a toy dog named Choco, reading aloud with follow-up activities, role-playing, coloring and drawing, singing along, passing along Choco, collecting donations, and participating in the graduation ceremony in the KIDS program (see details in Szecsi, Barbero, DeCampo, & Toledo, 2010/2011).

Weekly critical reflections served as a major force during the service project. The university students critically reflected on the lessons with the following aspects in mind: their expectations, the effectiveness of the activities/teaching, and possible improvements. Since the professor was able to visit only a few students weekly, the responses to these reflections also served as a communication and scaffolding channel between the students and the professor.

Future Teachers as Humane Educators: Making a Difference in Kindergarten

A glimpse into the effectiveness of the implementation of *Kids Interacting with Dogs Safely* program in kindergartens showed a positive impact on both children's safe interaction with dogs and their demonstration of character values such as respect, responsibility, and kindness. First, the analysis of pre- and posttests on safe interaction suggested an overall significant increase: Children became knowledgeable about the appropriate behaviors such as greeting a dog, feeding a dog, playing with a dog, not bothering a dog, and behaving appropriately around a loose dog. On the pretest, girls showed significantly better understanding about dog safety behaviors than boys. On the other hand, the boys' growth in this area was statistically significant by the end of the program, probably because they had more room for improvement than the girls. Pet ownership as a variable was also considered; however, no significant difference between the increase for pet owners and non-pet owners was found suggesting that both groups can benefit from the program.

The second research question was to explore whether the seven humane education lessons had an impact on children's character values, such as respect,

responsibility, and kindness. The analysis of the extensive observation data indicated that, by the last 2 weeks of the program, the children demonstrated respect more often through appropriate verbal communications such as apologizing. However, the children still needed to be reminded of raising their hands and taking turns. There was also an increase in responsibility demonstrated through children remembering to bring coloring books to school and showing academic honesty during individual work. In terms of kindness, the increased collaboration and the decreased number of conflicts suggested growth; nevertheless, some students still forgot to say thank you to others when being handed something. These findings related to character education values appeared promising, though student-researchers treated them with care. They pointed out further factors that might have contributed to the change in the children's character values: natural social, and emotional maturation during the 7 weeks and the gradual internalization of the expected classroom rules and behaviors as the school year unfolded.

Future Teachers' Reflections on Humane Education Courses

Piloting the two humane education university courses offered opportunities to explore preservice teachers' perspectives on their role as humane educators in kindergarten classrooms and on their perception of the benefits or challenges of the courses. In particular, various measurements were employed: a pre- and post-teacher self-efficacy survey, students' weekly reflections, a final comprehensive reflection on the service and research components of the course, and informal follow-up interviews. The four emerging themes were (1) transforming feelings from being nervous to self-confident, (2) addressing challenges with a plan of action, (3) benefiting from the cooperative experience, and (4) distributing action-research results. They suggested that the university students' participation in the humane education courses was perceived as a transformative experience.

Transforming Feelings from Being Nervous to Self-Confident

Students in the *Research and Service in Humane Education* course, mainly sophomores, had limited prior teaching experience with young children. Therefore, most of them felt nervous and unsure about their competencies in effectively delivering the content and managing children's behavior, as well as generating interest about the topics. As the weeks progressed, they became familiar with the children and mastered teaching strategies, which ultimately resulted in feelings such as "thrilled, rewarded, and pleased with my teaching," as described by the students themselves. On the other hand, when experiencing challenges, e.g., running out of time, making decisions about which volunteering children to call, they felt "distressed and

uncomfortable." Ultimately, irrespective of their majors, most students stated that this teaching experience generated and reinforced their interest in teaching young children in the future, "The more I do these lessons, the more I realize that I would love to be a teacher" as one stated.

Addressing Challenges with a Plan of Action

In the weekly reflections, students identified the areas for improvement and a plan of action to address them. In particular, most students struggled with completing all steps in the lesson plans. In most cases, they ran out of time, because of the number of children who wanted to share stories about their own dog or the limited time allocated to a given activity, e.g., art activity that took longer than expected. To mitigate these challenges, students practiced the lesson at home to verify the necessary amount of time to each section of the lesson and/or modified school supplies, for example, using glue stick instead of regular glue. They also quickly recognized that worksheets – although recommended in the KIDS program – did not work for kindergartners, so the worksheets were replaced with role-playing, singing, and games to consolidate concepts such as how to approach an unfamiliar dog. They also acknowledged the careful consideration of the kindergartners' developmental accomplishments in order to create age-appropriate activities. Another challenge was to reach out to beginning English language learners. The preservice teachers tackled this challenge by using various visuals, realia, gestures, and simple language with slower speech to make the content comprehensible for all children. In addition, preservice teachers also needed to accommodate to each child's individual needs. For example, all visual materials had to be enlarged to enable a kindergartner with a visual impairment to participate.

Benefiting from the Cooperative Experience

Students expressed that they had enjoyed the collaboration with the teachers and other peers in planning lessons, gathering activities and materials, brainstorming, and collecting and analyzing the research data. They perceived the classroom teacher to be a great resource for ideas related to classroom management, behavior issues, best approaches to learning, or simply quickly finding materials in the classroom. Often in the team, a peer readily volunteered for tasks at which he/she was better; for example, one majoring in music taught a song about appropriate behavior around dogs. Every week the team members engaged in joint brainstorming about solutions for issues that emerged in the peer observation. They also expressed that the data collection and analysis process was fortified with the diverse strengths the two student-researchers brought to the table.

Distributing Action-Research Results

In line with their research plans, students rigorously collected and analyzed the data about the effectiveness of the 7-week service teaching, and all reported the research findings in class. In addition, they were encouraged to distribute their findings at the university's Service Learning Summit and the Research Conference. Students who developed the best studies were guided to submit a proposal at national level, which resulted in numerous research posters at conferences, including the Association of Humane Educators, the Association for Childhood Education International, and the National Collegiate Honors Council. In the follow-up interview, one student stated, "In this class, I developed a study which has taken me to many places [conferences] and has expanded my horizons."

Recommendations for Teacher Educators

The infusion of humane education courses in an early childhood teacher program seemed to be an effective way to generate positive changes in future teachers' knowledge, skills, and dispositions. In addition to this transformation, young children also appeared to benefit from the humane education programs delivered by these future early childhood teachers. This pilot endeavor of teaching preservice early childhood teachers about humane education has offered numerous recommendations for efficient implementation of this initiative.

Offering Humane Education Courses in a Multidisciplinary Fashion

When students from different disciplines take a course on humane education, they enhance the intellectual life of the class with their discipline-specific knowledge, interest, and diverse experiential backgrounds. In this environment, preservice early childhood teachers learn information about animals and environment from students majoring in biology and environmental sciences. In exchange, future teachers serve as experts on child development and effective teaching strategies for delivering a humane education program to young children. In addition, all students learn to focus on an issue relevant to the human-animal relationship from multiple perspectives. A student majoring in nursing brings an invaluable perspective to the table when future teachers brainstorm about animal-assisted therapy for children with autism. Thus, the humane education course can become a platform through which students in various disciplines are able to experience and master skills for multidisciplinary teaming, something that is highly recommended and required in the field.

Inviting College Professors from Other Disciplines

The early childhood professor teaching a humane education course should demonstrate the value of multidisciplinary collaboration through inviting professors and experts from other disciplines to contribute to the breadth and depth of exploration of humane education topics. Professionals teaching animal behavior, animal rights, and environmental sciences can uncover valuable knowledge base from a novel perspective in addition to serving as consultants during the development and implementation of school-based service programs.

Incorporating a Service Component in the University Course

When a humane education course aims to empower preservice teachers with competencies relevant to humane education, a service component in which future teachers can practice those skills becomes inevitable. Early childhood settings, after-school programs, summer schools, and community outreach settings can serve as service learning sites for future teachers to practice teaching humane education topics such as dog safety and animal welfare. When future teachers put their newly gained knowledge and skills into practice, their service in the community solidifies these competencies and ultimately complements their internship experience in the preparation for becoming an early childhood educator who is simultaneously a humane educator.

Allowing Future Teachers to Experience the Role of Action-Researcher

When preservice teachers implement a humane education program, it is essential for them to gain understanding about the program's impact on children development and learning in order to ensure program quality. To achieve this goal, future teachers should act as action-researchers who collect and analyze data to provide evidence for making data-driven program decisions. In their future field, early childhood teachers are expected to use various assessments, interpret the results, and ultimately apply this knowledge in planning and executing experiences for young children (National Association of Education for Young Children, 2010). Therefore, their role as action-researchers in a humane education course will contribute to their overall preparation.

Utilizing Community Resources

The humane education course can direct future early childhood educators' attention to the wealth of resources in humane education available in the community and to venues to utilize them. Various local and national humane education organizations offer free materials, such as brochures, and lesson plans on their websites. For example, Humane Education Advocates Reaching Teachers (HEART) offers children and teachers programs and consulting services (www.teachhumane.org). The American Humane Association provides downloadable lesson and unit plans on topics, e.g., *Do Animals Matter?* (www.americanhumane.org). In addition, local community agencies offer grants for educating children about issues related to humane education. Through the experiences of reaching out and utilizing community resources, early childhood teachers become aware of the needs for and the benefits of working with the community.

Conclusion

The interaction and interdependence between humans and animals throughout many centuries are well documented. For example, very young children show substantial and significant interest in animate stimuli, e.g., animals (DeLoache, Pickard, & Lobue, 2011). There is also a consensus among humane educators and early childhood educators about the educators' role in children's emerging awareness in and relationships with animals and environment (Daly & Suggs, 2010; Faver, 2010; Jalongo, 2006, 2008). Only children who develop and possess the knowledge, skills, and attitudes to act as responsible stewards of the Earth can ensure our future. The importance of this argument is validated by the increasing research in humane education worldwide. The ultimate purpose of this research paradigm is to explore evidence for best practices in educating children who think critically and act responsibly about their environment (Aguirre, & Orihuela, 2010; Hergovich et al., 2002). Since we live on the same planet, the task of nurturing the future generation to grow adults who will find the viable solutions for environmental issues across the globe must be completed with international collaboration. In addition, teacher preparation programs play an important role in bridging research and theory with practice. Clearly only teachers who are properly prepared for the profession can design and execute evidence-based early childhood programs. Therefore, early childhood teacher education programs should offer opportunities to preservice teachers to develop and master knowledge, skills, and dispositions for infusing humane education values in early childhood curricula. Ultimately, preservice teachers who participate in humane education courses are better equipped to become reflective practitioners who build their practices on research and community service.

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Chapter 5
Humane Education and Education for Sustainable Development: Initiatives with Common Goals

Nicole B. Stants

Keywords Education for sustainable development • Environmental education • Interdisciplinary approach • Childhood experiences

Introduction

The definition that has been repeatedly used to explain the meaning of education for sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development [WCED], 1987, p. 8). To achieve this, education for sustainable development is not limited to fostering concern for the environment and encouraging stewardship of natural resources. It also promotes balancing environmental issues with the economic, social, and cultural dimensions of our world to reach reasonable solutions (Sammalisto & Lindhqvist, 2007; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2006).

The overarching nature of education for sustainable development (ESD) can be realized when considering that the aspects included are often referred to as pillars. The environmental protection, social development, and economic development pillars support the overarching goal of sustainable development much like a building's pillars provide support for the roof. The environmental protection pillar addresses the use of natural resources and the environmental degradation that results from overuse (Marcinkowski, 2010). The social development pillar involves seeking social justice so that development is achieved in an ethically acceptable and

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morally fair manner (Filho, Manolas, & Pace, 2009). The third pillar, economic development, emphasizes sound decisions regarding poverty, employment, and commodities (Filho et al.).

As will be discussed shortly, education for sustainable development is indeed an educational initiative. Being such, it has many commonalities with humane education. This piece will explore the similarities between the two educational initiatives including their evolution from focusing on very specific topics to more holistic views, potential to transform education through interdisciplinary approaches, and reliance on early learning experiences for maximum impact. Also, suggestions will be provided for how education for sustainable development can be improved based on the principles of humane education.

Evolving into Holistic Initiatives

With the dawn of the twenty-first century, education for sustainable development has undergone a transformation (Los, 2008; Pigozzi, 2003; Santone, 2003). This transformation is similar to that of humane education in that the educational initiative began by focusing on a very specific topic and has evolved to incorporate several interrelated topics to create a more holistic learning experience. At its inception in 1870, humane education limited its focus to increasing concern for abandoned and neglected animals (Kahn & Humes, 2009). Since that time, humane education has expanded to include human rights, environmental preservation, and animal protection (Institute for Humane Education [IHE], n.d.).

Education for sustainable development has its roots in environmental education. However, it has also branched out to encompass many more topics and should not to be viewed as a simple renaming of environmental education. The limited content and scope of environmental education does not include the numerous social and economic considerations of ESD (Stevenson, 2007). UNESCO's *Framework for the UN DESD International Implementation Scheme* (2006) further demonstrates this difference:

> Environmental education is a well-established discipline, which focuses on humankind's relationship with the natural environment and on ways to conserve and preserve it and properly steward its resources. Sustainable development therefore encompasses environmental education, setting it in the broader context of socio-cultural factors and the socio-political issues of equity, poverty, democracy and quality of life. (p. 17)

The transition from environmental education to education for sustainable development began when the United Nations World Commission on Environment and Development published the Brundtland Report (WCED, 1987). The momentum for sustainable development continued when the 1992 United Nations Earth Summit called for reorienting education towards sustainable development (United Nations Division for Sustainable Development [UNDSD], 1993). The ultimate impetus came in 2002 when the United Nations Educational, Scientific and Cultural

Organization (UNESCO) called for 2005–2014 being the Decade of Education for Sustainable Development (UNESCO, 2006). The hope was that this proclamation would bring together nations in the quest to balance economic and social progress while maintaining a concern for the environment and the stewardship of natural resources (Pigozzi, 2003).

Transforming Education with Interdisciplinary Approaches

When faced with an educational initiative that involves a new concept or topic, teachers often use an additive approach to revise their curricula (Lewis, Mansfield, & Baudains, 2008). The teachers continue to teach as they always have but try to squeeze in the new concept or topic wherever they can. Such an approach is ineffective for educational initiatives such as humane education and education for sustainable development. Teachers find that using the additive approach limits the time they have to cover the material and prevents students from making connections between topics because the curricula are disjointed (Godemann, 2008; Moore, 2005). A solution to this is to use unifying concepts such as humane education and education for sustainable development to transform the curricula from compartmentalized topics to cross-disciplinary experiences that allow students to make connections among topics.

Zoe Weil (2012), an internationally known humane educator, shows her support for interdisciplinary approaches with the statement, “There are many opportunities to infuse humane education into the curricula in schools, and many current school components that could be modified to make them more relevant and vital for today’s world” (p. 34). Similarly, education for sustainable development can serve as an integrative concept which provides relevance and purpose for education that occurs within all subject areas (Santone, 2003). An interdisciplinary approach allows both humane education and education for sustainable development students to focus on their ability to resolve real-world problems, to think systematically in terms of connections, and to consider an issue from multiple perspectives.

The increased level of collaboration and communication among disciplines that results from an interdisciplinary approach allows for the in-depth review of topics (Godemann, 2008). With an interdisciplinary approach, there is an exchange of information, concepts, and methods across disciplines so that the existing knowledge from disciplines can be united (Madni, 2007). The information that various disciplines contribute to a particular topic does not remain divided along disciplinary lines. Instead, students work with information from different subject areas to assimilate and integrate knowledge with the purpose of synthesizing new ideas and solving problems. Whether it is humane education or education for sustainable development, the most important aspect of education is providing students with the ability to solve complex problems (Ertas, 2000). An emphasis on interdisciplinary approaches allows this to occur via these educational initiatives.

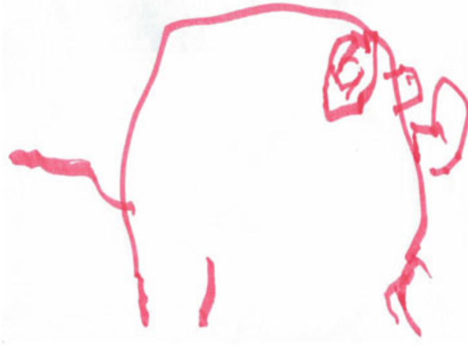
Relying on Early Experiences

The strong connection between early life experiences and sensitivity towards animals is a reoccurring theme in humane education literature. Research conducted by Arluke (2003) and Regan (2004) recognized that positive experiences with non-human animals in early childhood lead to humane attitudes in children. However, the positive effects of having a childhood relationship with an animal are not limited to the young. The empathy that adults have for animals has also been linked to early experiences. Lewis's (2007) survey of animal rescuers identified having a childhood relationship with an animal as the most common influence on the animal rescuers' work.

A similar trend regarding the significance of early life experiences in fostering concern is evident in sustainability education literature. The individuals who make it their mission to learn and care about the environment do so because of the solid bond they forged with nature early in life. For example, young environmental leaders who were interviewed identified early experiences in nature as formative (Arnold, Cohen and Warner 2009). Hsu (2009) gathered data from adult environmental activists who most frequently identified childhood experiences in nature as influential. Even if they do not become outspoken environmental activists, early life experiences still have the potential to shape environmentally aware adults (Palmer, Suggate, Robottom, & Hart, 1999).

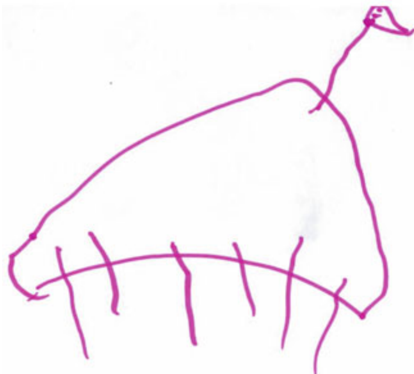
The impact of childhood interactions with the environment is demonstrated by a discussion session that was based on Northwest Earth Institute's (2005) *Healthy Children – Healthy Planet*. Each week, the participants would meet to discuss a portion of the book and take turns acting as the session facilitator and session opener. For one particular discussion session, the theme was exploring nature. The session opener provided each participant with a sheet of paper and a few markers. The participants were asked to think of a place that was special to them during childhood and to draw a map of that place. All of the maps and discussions that ensued had common features: the special places were all natural areas in the communities where the participants had grown up, the participants had spent a significant amount of time exploring their special places, and the participants acknowledged that the childhood experiences in those special places were pivotal in shaping them into environmentally conscious adults.

Although Stephen Jay Gould's (1991) statement, "We will not fight to save what we do not love" was intended to highlight the need for an emotional bond between humans and the environment, it is also applicable to humane education (p. 9). If children never have the opportunity to develop an appreciation for animals, they will have no qualms about treating them poorly. Because humane education and education for sustainable development both encourage responsible action, the key is to provide meaningful learning opportunities at a young age.



"Horse taking a drink of water; he is thirsty. He going to eat some grass and then take a drink again" by Noah, age 4

"It's a hamster—Ella. Ella lives at my house. Ella eats leaves" by Jayla, age 3



"Horse, standing in an orchard. He is eating apples" by Mikal, age 4

As children learn more about other living things, they begin to consider each animal's requirements

Improving Education for Sustainable Development

As the information above highlights, humane education and education for sustainable development are not two completely different initiatives. They share many of the same features: broadening what were once very narrow areas of study, incorporating interdisciplinary approaches to transcend traditional discipline boundaries, and capitalizing on childhood exposure to foster commitment to action. However, the comparison highlights one shortfall of education for sustainable development. The "animals agenda" is often avoided or quickly glossed over (Kahn & Humes, 2009). Those involved in education for sustainable development need to be cognizant of the fact that nonhuman animals are more than natural resources to be managed so as to produce maximum yields for human consumption (Caine, 2009). Education for sustainable development can be enhanced by placing a greater emphasis on the three R's that are part of humane education: reverence, respect, and responsibility. Such an emphasis will enable future generations to critically analyze issues such as population growth, consumption patterns, cultural instability, and technology in order to reach resolutions that protect the earth as well as its human and nonhuman inhabitants.

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Part II
Homes and Communities

Chapter 6
The Treatment of Animals Within Families of Young Children: Antecedents of Compassion and Cruelty

Marjorie L. Stanek

Keywords Animal abuse • Interpersonal violence

The school social worker was engaged in a session with Mara, a 7-year-old whose mother had referred her for services after her father was arrested for intimate partner violence committed against her stepmother. During the arrest, Mara's father had discharged a firearm at police. His record also indicated that he had been reported for several violent incidents and he had also engaged in several violent incidents when married to Mara's mother as well as during a subsequent marriage. Mara had often witnessed his violent behavior. Despite several sessions, Mara still did not want to discuss her father with the therapist. Although the therapist had tried a variety of approaches to broach the subject, she still had not succeeded in getting any kind of response from the child. Mara's therapist had sometimes utilized her own certified and insured therapy dog with clients in the past to good effect. She decided to try this technique with Mara since she knew that the young girl liked animals. The therapist approached Mara's mother to obtain permission and decided to use the dog in the next scheduled session. Within 5 min of meeting the dog, Mara began to discuss her father's behavior. Although she never mentioned any violence towards her mother, stepmother, or older brother, she described in vivid detail for the therapist how the father had hit, punched, kicked, and yelled at her dog on a variety of occasions. She concluded the account by describing how she and her stepmother had decided to say that they wanted to find the dog a new home because they had both "gotten allergic" and that she was glad that the dog had a home where "Daddy couldn't be mean to it anymore."

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Historical Understandings of Violence Towards Animals

Although there is a growing body of literature and scholarship documenting the association between cruelty to animals and interpersonal violence, the idea is far from new. Scholars and philosophers such as Thomas Aquinas have argued that cruel treatment of animals would serve as a precursor to human violence as far back as the thirteenth century (Ryder, 2000). Evidence indicates that the idea has, perhaps, finally begun to gain widespread acceptance. The latest iteration of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM IV TR)* (2000) suggests that abuse or violence against an animal in childhood or adulthood is a factor which is likely to indicate a future potential for violence that can include serious diagnoses such as Conduct Disorder and Antisocial Personality Disorder (Miller, 2001). Historical evidence demonstrates that a long-standing tradition exists in which many visionary and dedicated individuals took steps to bring about social change and greater acceptance of the need for kindness, compassion, and empathy towards other living things. In the seventeenth century, John Locke suggested that individuals who engaged in violent behavior were likely to do so as a result of exposure to a violent and abusive home environment (Currie, 2006). The first prosecution of a case of child abuse relied on existing animal protection statutes which had been enacted in New York and was successful largely due to the dedication of Henry Bergh, founder of the American Society for the Prevention of Cruelty to Animals (Jalongo, 2006). Bergh also instituted a host of social and systemic changes that benefited animals including a horse ambulance, clay pigeons for shooting enthusiasts, and the first animal shelter (Pace, 1995).

Despite this long-standing history of vocal and dedicated proponents of humane education, the correlates between animal and human violence are only now beginning to be incorporated into society's broader consciousness and investigated using traditional empirical paradigms. Existing evidence suggests that the roots of compassion and cruelty may indeed be evinced by examining human interactions with animals and that these connections are molded during childhood by a complex interplay of factors (Henry, 2006). Although much of the early empirical research linking violent behavior in children to animal cruelty was conducted in the United States, Canada, and Europe studies are now being conducted throughout the world (Yamazaki, 2010). A recent Malaysian study of 379 elementary school children identified perpetrators of animal violence among both male and female participants. Results suggested the presence of gender-linked predictive factors including hyperactivity among males and conduct problems among females (Mellor, Yeow, Mamat, & Hapidzal, 2008). Likewise, certain personality traits have been found to be related to future attitudes towards animal cruelty especially among males; these include a need for power and increased hostility (Oleson & Henry, 2009). Violence against animals is believed to occur in about 25 % of children diagnosed with conduct disorder and is often one of the earliest reported symptoms, with a median onset age of 6.5 years (Frick et al., 1993). Results suggest that violence against animals has a high specificity; in other words, it is highly predictive of a positive diagnosis

of conduct disorder among children using current diagnostic criteria (Ascione & Maruyama, 2011). The presence of this symptom has also been associated with a poorer prognosis, although with somewhat limited empirical study (Miller, 2001). The available evidence is growing, however, and it presents the disturbing, although not unexpected, realization that the perpetration of violence against an animal during childhood may be predictive of future interpersonal violence as the child matures into adulthood (Hensley & Tallichet, 2009). This is particularly true if the violent incidents involve direct, close contact violence such as beating, kicking, or burning an animal (Hensley & Tallichet).

From Anecdotal Impressions of Violence in Families to Data Gathering

An ongoing shift among mental health, law enforcement, family service workers, and human service professionals is taking place as the links between the perpetration of violent acts against animals and future violence against other humans have begun to be more widely documented. Many of the individuals working among this population tended to view this type of violence as a potential predictor or "red flag," but little systematic evidence had been collected. Without it, the prevalence of these acts was, and continues to be, unknown; thus, the professional is left to his or her own ideas on the subject instead of an established protocol. In situations where these actions have been discovered, they have often been viewed as youthful behavior which may be outgrown, and little serious attention has been provided (Hensley & Tallichet, 2009). This is beginning to change, however, as quantitative and qualitative data are gathered which demonstrate that the perpetration of violence against animals in childhood is significant and indicates the formation of an impulsive character disorder which tends to utilize violence to accomplish desired ends (Gullone & Robertson, 2008; Mead, 1964). For example, Gullone and Robertson reported concurrent bullying behaviors and violence towards animals among 241 adolescent participants. Approximately 20.6 % engaged in animal abuse "sometimes" and 17.8 % had bullied others on at least one occasion in the past year. Regression analyses suggested that witnessing abuse of an animal and family conflict were predictive factors for a child's commission of future acts of animal violence. Studies among individuals who have been convicted of violent crimes suggest that the commission of these types of violent acts against animals is a criterion which can be used "as a diagnostic sign and that such children, diagnosed early, could be helped instead of being allowed to embark on a long career of episodic violence" (Mead, p. 22). Retrospective analysis among incarcerated males and females demonstrates that the commission of cruelty against an animal has been linked to criminal violence and other criminal behaviors (Currie, 2006). Suggested motivations for animal abuse include: "control of an animal, retaliation against an animal, satisfying a prejudice against a species or breed, expressing aggression

through an animal, enhancing one's own aggressiveness, shocking people for amusement, retaliating against another person, displacing hostility from a person to an animal, and nonspecific sadism" (Felthous & Kellert, 1987, p. 1713). As we can see, many of these reasons provide significant support for the importance of early identification of perpetrators of these actions and the design of appropriate interventions particularly during youth.

Young Children's Exposure to Violence Against Animals

Empirical support exists for the assertion that animal cruelty is regularly experienced during childhood by a significant proportion of the population. Although existing studies are very limited in scope, they suggest that approximately half of the population reports exposure to animal violence in childhood as either witnesses or perpetrators (Flynn, 2000). Respondents described a range of violent behaviors, and many who had witnessed violence reported being significantly upset by the experience not only at the time of the incident but also to this day. Those who engaged in the violence themselves did not report the same type of psychological distress as was experienced while witnessing these events as a bystander (Flynn). If these studies are even remotely suggestive of the actual prevalence of animal violence, they beg the question, in what settings are individuals being exposed to these types of acts? The unfortunate answer appears to point to exposure within the home environment for a significant proportion of these events. In addition, it supports the need for an accurate, population-based evaluation of the prevalence of animal violence.

If the perpetration of animal violence is anywhere near as high as that suggested by Flynn (2000), its prevalence trumps the experience of even child abuse and domestic violence, although it is likely to co-occur with at least one of these phenomena in many homes (Currie, 2006; McPhedran, 2009). As such, violence against animals is a sentinel event as well as a separate incident which mandates effective intervention and systems for addressing and reducing the burden of violence within the home (Flynn). This has become increasingly true as the status of animals shifts in numerous societies from that of a possession to be used however one wishes to that of an essential member of the household and family. This elevated status serves to make the animal a bellwether for both compassion and cruelty in many situations, and he or she may be the first to experience violence as a result. Although many locations have mandatory reporting laws for suspected violence against either human or animal victims, there has been little impetus and even less funding to mandate cross species reporting which automatically involves both animal and human welfare workers in an investigation and attempts to document violence against all members of the household (Long, Long, & Kulkarni, 2007). This has begun to alter as service delivery models have shifted towards multidisciplinary teams, and ever increasing numbers of municipalities throughout the world enact mandatory cross reporting statutes (Long et al., 2007; Zilney &

Zilney, 2005). For example, service providers frequently administer animal violence assessments in situations where intimate partner violence is present, and the results of these evaluations can help to identify the level of risk for both human and animal members of the household. Additionally, many locations throughout the world now include pets in orders of protection, and the safety of humans and animals is regularly considered in legal proceedings and other interventions for victims of violence (National Link Coalition, 2012).

"This is my doggy and this my cat and this is the sun and this is me and my mommy" by Savannah, age 4

"Me, my kitty, and my family. We are all playing" by Emily, age 4

"My Dad and my dog name Zoey Grace—I put myself in pigtails 'cause I like pigtails" by Emma Faith, age 4

It is typical for young children to consider pets to be a part of the family

Violence Against Animals and Intimate Partner Abuse

Intimate partner violence is seldom as simple as one partner lashing out physically against another. Violent relationships include a whole constellation of behaviors that rely on physical, sexual, and emotional strategies to gain power and control. These behaviors often include the use of violence against a companion animal as a mechanism of controlling the victimized partner as well as isolation, economic control, intimidation and threatening, the use of privilege, and minimizing, denying, and blaming (Simmons & Lehmann, 2007). An increasing body of scholarship generated by those in helping professions who specialize in work with this population suggests that victims frequently report delaying seeking shelter from an abusive partner out of fear or concern for their companion animal's safety (Ascione, 1998). This is not surprising in cultures and families that regard their pets as members of the family, have emotional connections with their pets, and see them as sources of affection and support (Flynn, 2000). For many victims, the experience of isolation at the hands of a violent partner is profound; thus, the animal may be the only available outlet for compassion and support. In response, there is a growing trend for domestic violence shelters to provide resources and safe placements for companion animals at intake (Faver & Strand, 2003; National Link Coalition, 2012).

When violence occurs within the home, children are often the "unseen, unintended and unassisted victims" since they frequently experience and/or witness the violent event and its aftermath (Currie, 2006, p. 426). Living in this type of an environment can be particularly traumatic for a child. Often the batterer uses the children as a mechanism for maintaining power and control, and daily life can be disrupted by the violent outbursts that characterize typical interactions among members of the household (Currie). Exposure to violence within the home is associated with childhood maladjustment including cognitive, emotional, and behavioral issues which frequently include increased aggressiveness and higher rates of a diagnosis of conduct disorder (Currie). In a 2006 case-control study assessing exposure to intimate partner abuse and subsequent commission of animal cruelty, Currie found that children who were exposed to violence within the home were 2.95 times more likely to engage in animal cruelty. A 2010 study of 26 maltreated children in Japan supported these findings, with maltreated children being more likely to report engaging in or witnessing serious instances of animal abuse than their peers in the control group (Yamazaki, 2010). These findings support the assertion that children tend to emulate the adult models they see and hear as they attempt to take on social roles, the foundation for Bandura's Social Learning Theory (1977). Parents and other adults serve as particularly important role models. Those who engage in violence demonstrate that aggression is an appropriate and powerful mechanism for ensuring compliance among those who are less powerful than oneself (Currie). Likewise, children may believe that engaging in violence against an animal is more easily concealed and less likely to be punished than if the same kinds of acts were committed against a human victim (Currie). Those children

who had experienced violence within the home and demonstrated subsequent cruel treatment of animals were more likely to report feelings of jealousy, being unloved, and fearing animals and places than their exposed peers who did not demonstrate animal abuse (Currie). Perhaps these children, in the midst of apprehension and insecurity, lash out against what they fail to understand. If behavior is impacted by environment and exposures, it is important to attempt to understand the motivations for engaging in this conduct rather than simply focusing on the outcome of animal violence (McPhedran, 2009).

Felthous and Kellert (1987) identified five themes which may be related to the modeling and experience of violence within the home: (1) control, (2) retaliation, (3) the expression and enhancement of aggression, (4) displacing hostility, and (5) general sadism. Possible motivations may also include peer pressure, sexual motivation, and posttraumatic processing (Ascione, 1997; McPhedran, 2009). Ascione (2001) collapsed these categorizations into three main typologies of individuals who engage in violence against an animal: (1) exploratory or curious abusers, (2) pathological animal abusers, and (3) delinquent animal abusers. Exploratory or curious abusers tend to be children in preschool or early primary grades who have experienced inadequate training or oversight in the care of pets, while those designated as pathological abusers tended to be older children in whom violence towards animals was more indicative of psychological disturbances resulting from exposure to violence and/or abuse within the home setting (McPhedran). Delinquent abusers tended to be adolescents who abused animals while engaging in antisocial activities and substance use/abuse. The latter two groups tend to require judicial and/or clinical interventions (McPhedran). Research by Henry (2004) supports this finding; individuals who observed or participated in acts of animal cruelty were much more likely to report having engaged in delinquent acts during childhood and adolescence. When children experience violence and abuse and feel powerless over their ability to change their situations, they may attempt to regain their sense of self-efficacy by exerting control over another. Exercising power and control over an animal may provide the child with a way to manage feelings of powerlessness that stem from their own experience of victimization; thus, animal abuse functions as a coping strategy (Ascione, 1993). Research supports this characterization, finding rates of violence towards animals to be significantly higher among children who have been victims of physical and sexual abuse than their non-abused peer group (McPhedran). Available research does not give a complete picture of those who engage in abuse towards companion animals, however. For example, research evidence does not provide precise assessments of different types of stressors and their relationship to subsequent violence against animals, nor does it delineate differences between directly experiencing violence and abuse or witnessing violence between adults within the household (McPhedran). Future studies will need to address these issues in addition to developing a reliable measure of the prevalence of violence towards animals among the population.

"Just two keekees (kitty cats)" by Joshua, age 4

"My dog—a big, big dog Roxie" by Trisha, age 3

Children often spend more time in the company of animals than with some family members

Young Children Who Reject Socialization into Violence

Despite these important linkages, evidence suggests that the majority of children residing within violent homes do not engage in abuse or cruelty towards a companion animal. Some may choose to ignore the animal and still others may instead become careful and attentive to an animal's well-being. Evidence suggests that these variations can be partly explained by the differential experience of emotions and subsequent formation of empathy among individuals (Ascione, 1992; Oleson & Henry, 2009). Although the experience of violence may act to shape these behaviors, it is not a situation in which the outcome is inevitable. Existing evidence suggests that a complex interplay of factors within the individual and broader social environment work to shape future behavior and outcomes. These can include cultural factors which give a relative advantage to one group over another (i.e., males over females), as well as the policy implications to which these give rise and the human relationship strategies that result. Ethnic differences have not been widely included in the research at this time, although evidence suggests that they are likely to elucidate important distinctions since patterns of companion animal ownership and attachment are influenced by these distinctions. For example, a study of 877 urban adolescents in the United States (Siegel, 1995) suggested that patterns of animal ownership and interactions were found to be different among diverse racial and ethnic groups. Evidence suggests that these distinctions are likely to be found among younger children as well and may impact bonding and attachment, the relative importance of the animal, and the likelihood of a child's participation

in the animal's daily care and feeding. The majority of children participating in a 2006 research study conducted by Riley-Curtiss, Holley, and Wolf identified their companion animals as a vital member of their family and an important part of their day-to-day experience. Likewise, the 139 Japanese elementary school students in Yamazaki's (2010) study reported engaging in activities with their animals and using animals as a source of support, and this was especially likely to be true among the cohort of maltreated children. Bonds of affection between companion animals and humans have been demonstrated to have significant health-enhancing effects and to increase quality of life (Riley-Curtiss, Holley, & Wolf, 2006). These understandings should be part of professionals' repertoire during day-to-day interactions with young children and families and should be a consideration in the practice of all the helping professions. Bonds with companion animals are frequently a vital part of a person's social experience; thus, they must also be significant to the educators, social workers, and human service professionals with whom they work (Riley-Curtiss et al.).

Early Childhood Educators' Role in the Prevention of Abuse and Cruelty

Many early childhood educators will encounter children whose home lives involve intimate partner violence and/or child abuse and thus are at risk for the negative outcomes discussed above. One primary responsibility, then, is to be aware of and ready to identify students and families who may need additional referrals to available services. These may include shelters for victims of intimate partner violence, counseling for those who have experienced violence, programs for youth who engage in violence against companion animals, and referrals to protective services for animals and humans in situations where violence has been identified. To prepare for this eventuality, it is a good idea to investigate the resources that are available within the surrounding community. Consider compiling a resource list for other members of your school's faculty and staff, or do a brief continuing education session for others on the link between violence within the home and animal violence. As mandatory reporters, those in the educational environment can identify whether or not an animal is in the home and can cross report voluntarily even if the law does not mandate it in a particular jurisdiction. Likewise, educators can be attuned to the potential for other kinds of violence within the home when and if children draw, dramatize, or describe abuse, threats, or other maltreatment of animals or family members in their daily interactions. Anecdotal evidence suggests that children often provide clues to their home situations by discussing abuse or maltreatment of their companion animals (Riley-Curtiss et al., 2006).

Educators also can work to build relationships among other professionals including social workers, human service professionals, law enforcement personnel, medical staff, and others. Often teachers may have a sense that children are

exhibiting behavioral or emotional problems but do not necessarily link these symptoms to the experience of violence within the home. The same may be true of professionals who work with the family in other capacities. If each of these experts is aware of the link between family violence and violence against animals, then a more holistic approach can be initiated and systemic change may result. Educators serve as important role models to children and often are one of the only safe contacts a child may have to reveal the presence of violence or abuse. By promoting humane education concepts within the curriculum and bringing companion animals into the classroom, early childhood educators can provide powerful, positive models of ways to interact with animals in a manner that respects each creature's requirements. This may serve as a protective factor which helps to offset the potential for violence against animals in the future. Educators often pick up on clues about the child's home environment and experiences. Therefore, it is important to strive to learn more about what the American Humane Association refers to as "the link" between violence towards animals and violence towards human beings and to make appropriate responses and referrals. It is not an understatement to say that doing so can truly save a life. Although we do not know specifically what types of experiences lead children to engage in violence against companion animals, it is clear that the majority of children do not merely imitate the cruelty that they witness; most of them resist violence, despite many instances of experiencing it. Educators can work to foster resilience in children, build self-efficacy, and develop empathy and compassion for humans and nonhuman animals. The classroom can also become a setting to provide children with appropriate animal interactions. Educators can choose to include animals within the curriculum by inviting certified and insured therapy dog teams to demonstrate safe and kind ways of interacting with dogs, teaching children to learn about appropriate care for various animals, keeping a classroom pet, encouraging children as they write and draw about their own animals, and promoting exploration of the importance of animals to people throughout the world. Early childhood educators' daily interactions with children provide many opportunities to foster empathy, encourage compassion, and facilitate humane treatment of animals and humans. This places educators in a unique position as agents of social change. Awareness and acknowledgement of this important role and collaboration with others committed to the care and education of the very young are a major tool for promoting social change and systemic responses to these issues that exert a profound and enduring effect on the lives of very young children and their families throughout the world.

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Chapter 7
Including Animals in Play Therapy with Young Children and Families

Risë VanFleet and Tracie Faa-Thompson

Keywords Animal Assisted Play Therapy • Animal Assisted Therapy • Play therapy

When Manny Met Kirrie

Manny was 5 years old when he was referred to therapy. His life had been filled with turmoil, neglect, and abuse, culminating in his placement with a foster family at the age of four. His behavior had grown increasingly challenging, with unpredictable temper tantrums, destruction of household items, and general oppositional behavior with his foster parents. He had difficulty regulating his emotions or calming himself when he was upset. He had enjoyed playing with the family dog until he was caught pulling her ears and tail, and his foster parents restricted his contact with the dog, fearing that Manny might hurt the dog or the dog would defend herself by nipping or biting the boy. While play therapy coupled with behavior management and family play therapy sessions had eased the tension at home, Manny still seemed unsettled and unable to form a trusting relationship with his foster parents, Marie and Jim. His therapist, recognizing that Manny had difficulty trusting any human adult, suggested adding Animal Assisted Play Therapy (AAPT) to his treatment plan, and his foster parents and the agency that served as his guardian agreed.

After I (coauthor VanFleet) held a brief session with a stuffed toy dog to show Manny the safe and respectful way to meet a dog, he was ready to meet my

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play therapy dog, Kirrie, a very playful Border Collie/Hound cross adopted from rescue. Following the method we had just practiced with the toy dog, Manny stood still and let Kirrie approach him, and with my prompting, he gave Kirrie some small dog treats from his open palm. He was grinning and immediately began talking more than anyone had heard him before: "Kirrie really likes me! Her tail is wagging like crazy! She really likes those stinky treats! Whoaaaa! She is cool! Can we go outside?" Thus started a relationship unparalleled in Manny's short and troubled life.

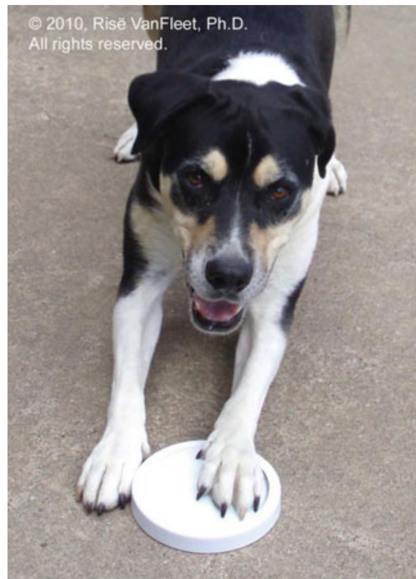
In the sessions that followed, Manny learned some of Kirrie's cues, both verbal and nonverbal, to ask her to perform basic obedience (sit, down, stay, come) and some tricks (play dead, spin around, speak, sit up, get in your bed, and "kiss me" where Kirrie gently touched Manny's palm with her nose). He smiled throughout the sessions, talked constantly about Kirrie and what they were doing together, and happily offered to give Kirrie treats. Manny was eager to be with Kirrie, albeit a little too eager at times. He had a tendency to forget that he should not squeeze her neck, but he readily responded to my prompts to rub her chest rather than hug her (a child behavior that dogs frequently dislike and that is responsible for many facial bites in children). Marie and Jim reported that as they drove home after the sessions, Manny excitedly told them what he had done with Kirrie.

As Manny became more comfortable with the AAPT process, he began imaginary play incorporating the dog. I responded to his plans and emotions: "You want Kirrie to be a police dog. There are some bad guys out there who need to be put in jail, and Kirrie is going to help you get them! . . . Wow! Kirrie, did you see him putting the cuffs on that bad guy? He's going to make sure that everyone is safe and those bad guys can't hurt anyone ever again!" I also helped Kirrie play the role that he wanted her to play, helping my canine therapy partner to pick up the "bad guys" (a pair of large soft dolls) in her mouth and carry them to the jail (a box across the room). Manny was delighted that his police dog could help remove the bad guys by dropping them in the box that served as the prison.

This play continued in subsequent sessions, and eventually the bad guys broke out of jail, representing a threat once again. Manny took one of the dolls and swung its arm as if to hit Kirrie with it. At that point, I set a limit, "Manny, one of the things you may not do is hit Kirrie, but you can do just about anything else." Manny looked at me in surprise and said, "But I wasn't hitting Kirrie – it was the bad guy!" To this, I responded, "You want the bad guy to hit Kirrie, but it doesn't matter who is doing it, Kirrie cannot be hit by either you or the bad guy. You can do just about anything else." Manny backed off a bit uncertainly, but he never tried to hit Kirrie again.

Using imaginary play, Manny continued to play out themes related to his maltreatment history. Kirrie was his police dog who helped him as he took care of various threats. Interestingly, Manny eventually played scenarios where the bad guys threatened Kirrie with taunts and showing their weapons (but never attempting to strike her), and Manny cast himself in the role of Kirrie's protector. At the end of one such segment of imaginary play, Manny kissed Kirrie on the head and said, "You're the best dog ever. I'll never let those bad guys hurt you. Here, have some treats...."

At times, Manny's AAPT sessions involved more therapist-directed interventions with the dog. I worked with Manny as we taught Kirrie several new tricks, such as turning on a light and jumping in a box and lying down to "hide." Manny was very pleased with nurturance activities, such as pouring water for Kirrie to drink and brushing her with a soft brush. Manny asked if we could teach Kirrie to step up on a little platform, and we worked on that until she had mastered it. Manny was very proud of these accomplishments. After every few sessions, we invited his foster parents and regular therapist to come into the room to see what he had learned to do with Kirrie. His parents told me that he was much more appropriate with their dog at home and that his oppositional behaviors had diminished considerably.



Manny taught Kirrie to turn a light on and off, useful for working with children who are afraid of the dark

Play Therapy

For children with psychosocial difficulties, play therapy is often the treatment of choice, partly because it does not require language, verbal communication, or cognitive processing of their problems or situations through "talk therapy." Play therapy capitalizes on children's natural inclination to play out their perceptions of their world, often expressing their feelings, motivations, struggles, wishes, and possible problem solutions through the symbolism and metaphors of play. Play offers greater emotional safety within which children can express and experiment with life situations and dilemmas without risk of failure or repercussions. Because of this, play therapy is often the developmentally most appropriate treatment for

young children experiencing social, emotional, or behavioral problems (VanFleet, Sywulak, & Sniscak, 2010). Play therapy can take many forms which fall into three major categories: (a) nondirective or child-centered play therapy (CCPT), (b) directive or cognitive-behavioral play therapy, and (c) family play therapy.

CCPT is based on Rogerian psychology, as defined initially by Virginia Axline (Axline, 1947, 1969; VanFleet et al., 2010), and permits the child to determine the toys, activities, and themes of the play (within safe boundaries). The therapist follows the child's lead, working to provide safety and acceptance so the child feels free to express his or her true self. In CCPT, the therapist provides children with the opportunity to resolve many of their own problems. Directive play therapy takes many different forms, with the essential feature being that the therapist suggests either the toys or the activities of the session, based upon their assessment of the child's needs and goals. Family play therapy also takes many forms, including Filial Therapy in which therapists teach and supervise parents as they conduct special CCPT play sessions with their own children, as well as more directive interventions in which the therapist suggests specific activities for the family to engage in together. In play therapy, the essential feature is that play is used as the primary "language" or method of interacting during the sessions (Drewes, Bratton, & Schaefer, 2011; Kaduson & Schaefer, 2006; Schaefer, 2011; VanFleet, 2005).

The efficacy of play therapy has been clearly established (Bratton, Ray, Rhine, & Jones, 2005; Reddy, Files-Hall, & Schaefer, 2005). In any form of play therapy, it is critical for the therapist to establish a child-focused relationship "in which the therapist enters the child's world, considers thoughts, feelings, perceptions and ideas of importance to the child, and through the relationship that ensues, provides an emotionally secure environment in which children can overcome problems, master fearful or anxious feelings, and move forward in a psychologically healthy direction" (VanFleet & Faa-Thompson, 2010, pp. 4–5).

Animal Assisted Therapy

The field of Animal Assisted Therapy (AAT) has been growing rapidly in recent years. AAT refers to the work of appropriately trained human-animal teams in which the human is a credentialed therapist and the nonhuman animal has met specified criteria for this type of work. Typically, the human-animal teams work together conducting actual therapy, such as occupational therapy, physical therapy, or psychotherapy (AAT), or they engage in visitation or educational programs at schools, hospitals, and nursing homes (called animal-assisted activities, AAA; Delta Society, 2004). AAA does not require that the human is a credentialed therapist, and activities are very beneficial to the recipients but not considered actual therapy. In popular usage, the terms AAT and AAA have been used interchangeably, a situation that has led to considerable confusion surrounding these distinctions.

Many different animal species have been involved in AAT/AAA work, including dogs, cats, rabbits, horses, and birds, but the most common are dogs and

horses. Mental health practitioners have used AAT to help with developmental, behavioral, social, and emotional problems in children and adults, including attention deficit disorder, learning disabilities, conduct problems, social isolation, maltreatment, bereavement, trauma, bullying, anxiety, selective mutism, and many other challenges (Chandler, 2012; Fine, 2010; Levinson & Mallon, 1997; Loar & Colman, 2004; Parish-Plass, 2008; Rivera, 2001, 2004; VanFleet, 2008; VanFleet & Colţea, 2012). Dogs have also been involved in Reading to Rover, R.E.A.D., and similar programs to help build children's reading skills and motivation (Jalongo, 2004; Rivera, 2004). In recent years, AAT has been used to help soldiers and others with post-traumatic stress disorder overcome the legacy of trauma (e.g., www.warriorcanineconnection.org).

A growing number of controlled studies have demonstrated the effectiveness of AAT (Bowers & MacDonald, 2001; Trotter, Chandler, Goodwin-Bond, & Casey, 2008), and a meta-analysis of 49 controlled studies showed beneficial outcomes attributable to AAT interventions, especially with dogs and for children with autism spectrum disorders (Nimer & Lundahl, 2007). Although there are numerous articles, chapters, and books of case studies that detail the benefits of AAT, much more controlled and program evaluation research is needed.

Animal Assisted Play Therapy

Animal Assisted Play Therapy (AAPT) is a relative newcomer in the field of AAT. While at least one practitioner began systematically incorporating dogs into her play therapy and expressive therapy work 25 years ago (Marie-José Dhaese, 2012, personal communication), AAPT has gained wider acceptance and recognition as an intervention that sometimes succeeds where other interventions have failed.

AAPT represents a full integration of play therapy with Animal Assisted Therapy. It is defined as "the involvement of animals in the context of play therapy, in which appropriately trained therapists and animals engage with children and families primarily through systematic play interventions, with the goal of improving children's developmental and psychosocial health as well as the animal's well-being. Play and playfulness are essential ingredients of the interactions and the relationship" (VanFleet, 2008, p. 19). To date, dogs and horses have served as the animal therapy partners for most AAPT in the United States and Europe, although some therapists have involved cats, rabbits, and donkeys according to the AAPT principles as well. In short, the therapist brings a dog into the play therapy room and incorporates it systematically into a variety of play therapy modalities. For equine involvement, children are taken to the stables or farm with the horses, and playful therapeutic activities are conducted at that location. AAPT can be conducted with individual children, families, and groups. Several play therapists have published their work in AAPT (Parish-Plass, 2008; Thompson, 2009; VanFleet, 2008; VanFleet & Colţea, 2012; VanFleet & Faa-Thompson, 2010; Weiss, 2009), and over 250 participants had taken specialized training in AAPT worldwide by the

middle of 2013. As more advanced levels of training have been added and an AAPT-specific certification program is rolled out in 2013, more and more therapists using AAPT with children will be available to contribute to more rigorous research.

AAPT is often used in conjunction with other forms of therapy: individual play therapy, cognitive-behavioral therapy, Filial Therapy, family therapy, and group therapy. Practitioners typically are play therapists or family therapists who have learned to work with an animal therapy partner in playful ways to facilitate client progress toward a wide range of possible therapeutic goals.

Early research is promising. In a preliminary study, VanFleet (2007) surveyed 83 play therapists to determine involvement of animals in play therapy sessions and perceived benefits. There was uniform excitement about the approach. Using a pretest-posttest experimental-comparison group design with 164 at-risk children and adolescents, Trotter et al. (2008) showed that 12 weeks of equine-assisted counseling were superior to an empirically supported classroom counseling intervention, with significant improvements in 17 behavioral areas, whereas the comparison program showed statistically significant improvements in five behavioral areas. Thompson (2009) used a repeated measures design with subjects as their own controls to demonstrate that the presence of a therapy dog in nondirective play therapy sessions with anxious children facilitated rapport between child and therapist, improved mood, increased the amount of thematic play, and decreased disruptive behaviors during play therapy sessions.

Principles of AAPT

VanFleet and Faa-Thompson (2010) have articulated the guiding principles for the practice of AAPT. AAPT must be conducted in a manner that ensures both high-quality play therapy practice and full recognition of the animals' needs and welfare. Whenever nonhuman animals are asked to perform tasks under human direction, their welfare needs to be considered. This is critical for the well-being of the animals as well as for the children with whom they work. Therapists working with tired, uninterested, or frightened therapy animals are providing a very poor model of empathy and relationship for children. Principles established to ensure the well-being of all participants in the therapy process follow:

- *Respect*. To the greatest degree possible, AAPT ensures the equal and reciprocal respect of children and animals. The needs of humans and nonhuman animals are considered equally important.
- *Safety*. AAPT activities must be physically and emotionally safe for all involved. The therapist places a limit upon, or stops immediately, any activity that is not safe. The therapist is responsible for maintaining the safety of all participants in the session.

- *Enjoyment.* AAPT sessions must be enjoyable and pleasant for the animal therapy partner as well as the child client. Children or therapy animals have the option of nonparticipation; i.e., they may opt out of any activities they wish. Tired or bored dogs can lie down. Horses can walk away. Children can choose to play without the dog. Child and animal decisions are respected within the boundaries of safety. The therapist facilitates the session to insure its therapeutic value regardless of these choices.
- *Acceptance.* In AAPT, the therapist accepts the child and the animal for who they are. The therapist accepts and works with the child's needs, feelings, and process without pushing them in a different direction or at a faster pace. Similarly, the therapist does not expect the animal to become something he or she is not. For example, AAPT dogs are not expected to become so docile or controlled that their individual personalities and interests are denied. While therapists need to train their dogs for good behavior and socialize them to work with children in a playroom, they do not overtrain them to relinquish their essential canine and individual natures. Individual animals are often more suited to certain forms of play therapy than to other forms, and therapists consider this and act accordingly.
- *Training.* Therapists train their therapy animals without the use of unpleasant corrections, instead using positive reinforcement, play training, and relationship-based methods. Aversive equipment or procedures, such as the use of whips; choke, prong, and shock collars; or physical corrections of the animal, have no place in the training, the therapy sessions, or the lives of these animals. This principle serves the welfare of both child and animal.
- *Relationship.* The AAPT process focuses on relationship, not control. Just as the animals are taught to behave politely and respectfully with children, children learn to treat the animals with tolerance and respect. The therapist helps the children to recognize and respond to the animal's feelings while developing a healthy, mutually trusting relationship with the animal. All interactions with the animal therapy partner follow the same principles for the development of humane, empathic, healthy human relationships. The essential playful nature of interactions during AAPT permits this to happen readily.
- *Process.* AAPT is a process-oriented form of therapy. While sessions might focus on specific tasks or goals, such as teaching something new to the dog or horse or child, the process of getting there is considered of much greater importance than achieving any single outcome. The therapist knows how to facilitate and use the process to help children overcome their difficulties or develop new skills. Unexpected events are woven into the texture of the session so that both child and animal needs are met.
- *Foundations.* AAPT is grounded in well-established theories and practices in terms of child development, child clinical intervention, play therapy, and humane animal treatment. Adherence to these foundations and the other AAPT principles is designed to ensure a positive, relationship-oriented, best-practices approach to each child and each animal involved in the therapeutic process.

AAPT with Young Children

Jalongo (2004) has commented, "Companion animals should matter to educators, if for no other reason than that they matter so much to children" (p. 17). This sentiment applies equally well to child psychotherapists. Developmental studies have clearly demonstrated how children are drawn to animals, watch them, approach them, think about them, enjoy stories about them, and even dream about them (Melson, 2001; Melson & Fine, 2010). Because play and an interest in animals both seem to come so naturally to children and because increasing numbers of studies support the efficacy of both play therapy and AAT, it seems a logical extension to combine both in the treatment of psychosocial difficulties.

Young children and nonhuman animals have much in common: their lives depend, at least in part, on human adults; their communication is primarily nonverbal and concrete; their focus is on the present much more than the past or future; their responses are honest and undisguised; and they play naturally (Zimmerman & Russell-Martin, 2008). Studies of the benefits of family pets have consistently found increased self-regulation, lowered blood pressure, development of empathy, increased responsibility, improved caregiving, greater initiation of positive behaviors, and social lubricant effects, in which children's social behaviors are facilitated by the presence of a pet (Beck & Katcher, 1996; Chandler, 2012; Esteves & Stokes, 2008; Fine, 2010; Podberscek, Paul, & Serpell, 2000).

Playing with animals, which also includes the ability to use child-animal touch during therapy sessions, seems to engage children almost instantaneously in the process. It is possible that the production of oxytocin (Olmert, 2009) that occurs when humans touch or stroke animals helps children feel more relaxed and comfortable in the therapeutic setting, and the social lubricant effects of the therapy animals seem to strengthen rapport with the human therapist who is sharing the animal therapy partner with them.

Three-year-old Camille had lost both of her parents in a car accident and was referred for play therapy several months afterward because her night terrors and disruptive behaviors had not abated. After practicing safe meet-and-greet behaviors on a stuffed toy dog the previous session, Camille smiled broadly when she was introduced to the AAPT dog, Kirrie. Camille clearly wanted to touch the dog and wrap her arms around the dog's neck. Following the AAPT principles to respect the dog's point of view (dogs typically do not like their necks encircled), the therapist helped meet Camille's need for touch by showing her how to scratch Kirrie's chest and to play the "kiss me" game. Kirrie had previously been taught to touch her nose to a child's open palm when cued, "kiss me." Camille was delighted to feel the dog gently touching her hand, and Kirrie demonstrated her appreciation for the treats occasionally given by the child by giving lots of these "kisses" and swinging her tail in low loose wags indicative of relaxation. In a single session, Camille's timid reluctance to be with the human therapist in her prior two sessions was transformed, and her play therapy sessions both with and without the dog's presence proceeded smoothly. She worked with the therapist to create a special memory book of her

parents that included photographs of her parents, a special drawing by Camille, a photograph of miniature figures arranged in a sandtray to create family scenes, and some pictures of Camille. When it was finished, Camille “read” and showed the memory book to Kirrie. AAPT helped her trust the therapeutic process so that she could benefit more fully from it.

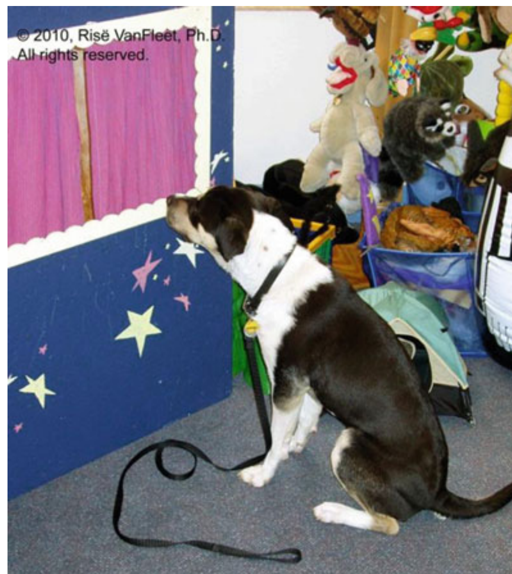
Goals of AAPT with Young Children

AAPT can help meet the needs of children with a wide range of presenting problems, including children with anxiety, attention deficit disorders, depression, histories of abuse and other forms of trauma, grief and loss, attachment disruptions, behavior/conduct problems, autism spectrum disorders, learning difficulties, poor self-regulation, and many others. There are five broad goal areas that AAPT can be used to address: (1) self-efficacy, (2) attachment/relationship, (3) empathy, (4) self-regulation, and (5) problem resolution. Specific methods for attaining goals in these areas are detailed elsewhere (VanFleet, 2008; VanFleet & Colţea, 2012; VanFleet & Faa-Thompson, 2010), and it is a feature of AAPT that interactions often address several of these goal areas at once.

For example, 5-year-old Frankie participated in AAPT after his placement in a foster home subsequent to parental maltreatment. Both child-centered and more cognitive-behavioral AAPT sessions were incorporated into his treatment. During his child-centered (VanFleet et al., 2010) play therapy sessions, Frankie initially played the role of a trauma victim and hid, instructing me (VanFleet) to tell Kirrie “GO SEARCH!! FIND HIM!” in a loud voice. Using child-centered play therapy skills adapted for AAPT, I reflected the action, “Kirrie, you’re looking all over for Frankie. You really want to find him. You just checked the corner – nope, he’s not there. Now you’re looking behind the puppet theater – nope, not there either. You’re still searching; you really, really want to find him. Frankie is missing but you are going to search until you can find him and bring him to safety!” Later, Frankie chose the role of a “search and rescue guy” and Kirrie became his search and rescue (SAR) dog. They searched piles of blocks and throughout the playroom for victims of a variety of traumas. This play seemed to represent a metaphor of Frankie’s own victim status as he played through the trauma and gained mastery, both by being “found” by the dog and by becoming the “search and rescue guy” himself who could help others in need. During the more directive play therapy portions of AAPT, Frankie learned how to use a clicker and treats to teach Kirrie some new tricks. His mouth often dropped open in amazement when Kirrie did as he instructed her. Only positive training methods were used, and when Kirrie did not quite understand what to do, we simply waited or gave her a hint. Frankie, who had low frustration tolerance at the start, stretched his patience as we used shaping to help Kirrie learn. He was proud of his accomplishments and asked to show his foster mother what he had learned at the end of each session. At times, Frankie was intrusive with Kirrie,

placing toys too close to her face, for example. At those times, I drew his attention to Kirrie's reactions: "Frankie, look at Kirrie right now. When you just put your face right next to hers, I noticed that she took a few steps back and now is turning her head the other way. How do you think she is feeling?" Usually, that was enough for Frankie to make the decision to pull his face away. If I thought that danger or stress for the dog was imminent or significant, I simply set a limit, "Frankie, one of the things you may not do is to grab Kirrie's tail, but you can do just about anything else."

Through these various interactions, Frankie was building a relationship with Kirrie based on mutual respect; he was learning new skills that made him feel proud and confident; he was able to exhibit empathic responses to the dog and select appropriate actions; he was learning patience and better emotional and behavioral regulation; and he was gaining mastery over feelings of helplessness imposed by his maltreatment history.



Kirrie waits expectantly for a child's puppet show to begin

Humane Education for Young Children Using AAPT

There are a number of fine programs and policies designed to help children develop humane attitudes and behaviors with nonhuman animals (Ascione, 1992; Ascione & Weber, 1996; Jalongo, 2004; Randour & Davidson, 2008), such as AniCare Child (see www.animalsandsociety.org/pages/anicare-child), and many are included in the current volume. There's also evidence that children who develop humane attitudes

toward animals can transfer them to humans (Ascione & Weber, 1996). While AAPT is designed to address a wide range of child problems, it is particularly suitable for humane education for children who are at risk of animal cruelty as well as for children in general.

Consider the quote below from James Garbarino's (2000) book *Lost Boys* based on decades of study of youth violence:

> Because we know that empathy is the enemy of aggression and that depersonalization is its ally, all efforts at moral rehabilitation of violent and troubled boys hinge upon cultivating empathy and fighting against their tendency to depersonalize others. (p. 231)

AAPT provides a unique opportunity to reduce depersonalization while strengthening empathy. This is done directly through relationship-building with the live animal. For children who have not had the benefit of parental empathy and care, AAPT offers a safe, accepting environment in which both the human therapist and nonhuman therapy partner provide empathy to the child. Nonhuman animals involved in AAPT enjoy children and often appear to be sensitive to their feelings. One AAPT dog responds to children who are expressing strong emotions (e.g., crying or pouting) by placing her head on the child's knee. She was never trained to do this. Children typically respond by petting her. This is coupled with the therapist's empathic listening, "You feel really frustrated now. You don't like it that your dad didn't show up for his visit with you. That made you feel sad and angry." Meanwhile, the child is petting the dog and feeling cared for. It seems unreasonable to expect hurt children to feel empathy for others if they've never experienced it themselves. AAPT makes that more possible in very tangible ways.

During AAPT sessions, children are also encouraged to notice the animal's feelings as expressed through body language. The therapist can instruct or prompt them to look at the dog's or horse's ears and stance and tail (It is important for therapists to learn about body language themselves, such as with Byrnes (2008)). By providing opportunities for interaction coupled with limits and safety for all involved, the therapist gently helps the child see the animal as a unique living, feeling being. Through the many playful interactions included in the AAPT experience, the child begins to feel what a healthy relationship is like, including mutual trust and respect, caring, and enjoyment of each other. These are emphasized throughout the process in a lighthearted manner that makes it easy for children to absorb what they are learning. The *experience* of the relationship helps personalize the animal for the child and opens the doors for empathy to emerge.

There is no doubt that therapeutic riding programs have helped countless children through the years. Ground-based programs (e.g., www.eagala.org) provide unique opportunities for relationship-building. Only while standing on the ground next to a horse can children feel his breath on their skin, see the horse look down at them with her soft eye, experience the gentle muzzle of his nose on their body, or lead the horse and feel her walk beside them like a friend. AAPT programs that involve horses as therapy partners also use the horse's size to therapeutic advantage. Children typically do not try to force the horse to do their bidding, and they must

learn alternative ways of relating to the horse to accomplish therapeutic tasks that are presented. To lead a horse through an obstacle course with just a ribbon rather than a rope means that the child must build a relationship, learn about what the horse wants and likes, and to work as a team. One group of children initially tried tugging and pulling the horse through the course, at which the horse balked and simply stood still. After several moments of frustration with the horse, the group began trying different enticements, eventually realizing that if they didn't pull and just let the horse walk behind them, it worked beautifully. At the end during a simple debriefing process, one 8-year-old commented, "They liked us better if we were nice and didn't pull them. Then they wanted to follow us and be with us."

Case Examples of AAPT for Humane Education

To illustrate the use of AAPT for humane education and learning, each of the authors' programs is described briefly below, followed by case examples.

Turn About Pegasus (TAP) Program

Coauthor Faa-Thompson's Turn About Pegasus program (TAP) is an equine-assisted learning/therapy program for at-risk children, teens, couples, and families. Located in the Northumberland region of England near the Scottish Borders, it began as a pilot project for at-risk youth. When children, teachers, and families reported significant changes in behavior and attitude, the program was expanded to meet demand. TAP now provides services for a wider range of vulnerable client groups. Play therapy concepts and skills are incorporated into TAP, where children are introduced to a safe, accepting environment within which they can explore their relationships with the horses and each other. Groups usually include a range of ages, and children carry out various tasks and activities involving the horses. There are three and a half equine therapy partners (one is a Shetland pony, which is jokingly referred to as "half a horse"). Two Arabs and a Gypsy Vanner round out the team. The TAP sessions include (a) observations of the horses, (b) playful interactions, activities, and tasks, and (c) caregiving activities such as grooming the horses. Despite some exuberant play and activity in the rest of the session, all sessions end more quietly, often with grooming. This provides a way for the children to connect with the horses, to calm the horses and themselves, and for children to learn to care for someone other than themselves. When you have a half-ton horse in front of you, it's hard to ignore!

A child dresses Charlie up during a therapeutic activity, The World's Most Powerful Horse, designed to strengthen self-esteem

TAP Case Example

Last summer we had a group of young carers between the ages of 7 and 14. Each of these children had been left with adult-like responsibility due to their parents' serious medical illness, drug addiction, death, or neglect. In this particular group, the youngest girl, Nikki, had a father terminally ill with cancer. During the first TAP session, Nikki was overheard describing one of the white horses Buster as "evil" and "horrible." She shooed him away every time he tried to come near her. Eventually, he came up to her from behind when she was distracted by another horse's antics, and he nudged her gently on the face with his nose. Her facial expression was a mixture of surprise, shock, fear, and delight. She turned and hugged him around the neck. I wondered aloud about him sneaking up on her and taking her by surprise like that. She replied, "He just needed a cuddle." At the end of the session, the girl who had been shooing the "evil" Buster away chose to groom him for the last 15 min of the session.

Two weeks later in the next session, Nikki was eager to tell me that she had been unable to stop thinking about Buster and that he had been keeping her safe in her

dreams. Her mother reported that after her first session when she overcame her fear of Buster, Nikki had returned home and climbed on her father's knee and hugged him round the neck. Nikki had been afraid to touch her father as others had told her he was ill and in pain. As a result, there had been no physical contact between them. The young girl continued to develop further self-awareness and empathy throughout her sessions that were then reflected in her relationships with her parents.

TAP-Related Reflections on Humane Education

Often on the referral forms, children are described as "bullies, lacking in empathy, or without self-awareness." Being around horses in a therapeutically facilitated environment helps alleviate these problems. As horses are prey animals and their whole survival depends on being self-aware and looking out for one another, they help children learn. When children can observe the horses' reactions to them and the impact of their behavior on the horses, they begin to see their human relationships differently. They begin to experience life in the here and now, and they see that if they change their behavior, the horses' behavior changes, too. All the sessions end with grooming and then hugging or kissing the horses goodbye. Children who are self-conscious around people often lose their inhibitions. During grooming, they notice, inquire about, and care for "hurts" on the horses in concerned ways they have heretofore not shown with others. They lead the horses out very carefully, making sure they are "safe" until next time. When asked what taking care of the horses felt like, one child responded, "I feel funny inside when I look after Sailor and make him feel better," a clear expression of empathy for another living creature. Once they have that "funny feeling inside," it's a small step to transfer it to other animals and humans. "Catching" empathy from a horse is no small sign of progress!

Playful Pooch Program (PPP)

Coauthor VanFleet's Playful Pooch Program (PPP) was developed specifically as a canine-assisted play therapy program, integrating play therapy and AAT within an independent practice serving a wide range of child/family psychosocial problems with a specialty in trauma and attachment problems. Kirrie has served as the primary play therapy dog for the past 8 years, with occasional assistance by others in our five-dog family. The dogs are trained for play therapy work using positive training methods that are based upon each dog's unique temperament and personality. Children from 3 to 17 years old have participated in the program, with the majority between 3 and 12. While Kirrie has assisted with child-centered play therapy at times, her high energy and strong sociability make her better suited to cognitive-behavioral play therapy or other more active play interventions.

PPP Case Example

Elise was 6 years old and had been in her current foster home for a year. She was usually well-behaved, but she had raging temper tantrums at unexpected times at home. She was usually quiet around adults, but she began talking openly during her first session with Kirrie. During the next four sessions, she learned some basic training skills with the dog, and she enjoyed a carefully structured game of tug using a long rope toy as a means of developing her ability to manage her own arousal. She also worked on impulse control – her own and Kirrie's – by playing ball, first asking Kirrie to sit and stay while she threw the ball, then releasing Kirrie to go get it. Because Kirrie was always eager to get the ball, I was able to facilitate by saying, "Wow, it sure is hard for Kirrie to wait sometimes. She loves to chase that ball, and it's hard for her to sit still and wait for the right time." Elise nodded and smiled. Of course, she had to have patience each time before throwing the ball.

One intervention in AAPT is to share stories about the animal that are based on real happenings, although perhaps exaggerated a bit to create a suitable metaphor for the child. After an actual situation at home, I sat down with Elise with Kirrie at my feet. I told the story of how another dog had accidentally jumped on Kirrie and Kirrie had become angry because she was hurt, growling at the other dog and then nearly causing a fight. I asked Elise, "How can we help Kirrie deal with it when she gets so mad she might cause a fight? It's normal for her to get mad, but I want to help her stay out of trouble, too." Elise mentioned walking away and counting to 10, undoubtedly things that adults had told her to do. I commented to Kirrie, "I hope you're paying attention, Kirrie. Elise is giving you some very good suggestions." I then asked Elise, "Can you think of some things to help Kirrie relax after she gets out of the situation?" Elise thought for a moment and replied, "Tell Kirrie that it will take four days before she feels good again. For me, it's just three." This example shows how readily children can relate to animal problems that are similar to their own. Elise continued to use the play sessions with Kirrie to accomplish better self-regulation, and her outbursts diminished as she gained new awareness of her feelings, triggers, and coping strategies that she initially tried out with Kirrie.

Family Involvement and Generalization

Families are involved regularly in the AAPT sessions. The entire family can participate in equine interventions. Children typically want to show their parents what they have learned with the dog, so parents are regularly invited for demonstration sessions. Entire families can participate with the dog as well, often in an effort to get them to work together in new ways. For example, one family with a mother, grandmother, and two young boys wanted to participate together with the dog in order to begin having fun together after a contentious period. I selected two Beagles,

Jagen and Corky, for one session. I gave the family the task of getting the Beagles to howl. After trying a number of things unsuccessfully, the family members began making many different vocalizations. They were laughing and enjoying each other's funny noises. They watched which noises got the dogs' attention, and eventually the family began howling together. As I knew they would, Jagen and Corky chimed in for a group howl. The family was able to build on this collective experience to create more playful, fun times in their lives as a counterbalance to some of the stress they were experiencing.

What children learn in AAPT with a play therapy dog can sometimes be transferred to their relationships with the companion dogs in their homes. Families are invited to bring in their dogs, and the therapist creates therapeutically meaningful activities and interactions with that dog in mind. For example, 4-year-old Joanie had a history of playing too roughly with the family dog. This had led to the dog nipping her and her hitting the dog in retaliation. She learned good self-control and more appropriate behaviors with Kirrie, but when the family brought Barlie in, Joanie began her rough play. We discovered new ways to play with Barlie that were kind, fun, and focused. I discussed supervision of this play with her parents and then provided home tasks. This type of generalization from one dog to another should only be done when the therapist has significant amount of canine expertise.

Finally, it appears that much of the empathy and caring that is released for children during AAPT transfers to human relationships. Parents have reported examples of spontaneous kindness of children with siblings or with the parents themselves. Teachers have consistently commented that children have cooperated more, sullenness at school has disappeared, and the children seem happier in general. These anecdotal reports are common, and the next step is to research them more systematically.

Summary

Animal Assisted Play Therapy fully integrates play therapy with Animal Assisted Therapy to help young children learn humane attitudes, behaviors, and skills as well as to overcome a variety of developmental and mental health difficulties. The presence of the live animal in a playful, safe, and accepting environment helps children form healthy relationships in which they can feel wanted and cared for, build competencies, express caring and empathy, and discover solutions to many problems they are facing while experiencing mutually enjoyable interactions with the animal therapy partner. More information about AAPT is available in VanFleet (2008) and VanFleet and Faa-Thompson (2010). Article reprints are available at www.playfulpooch.org, under "resources."

Competent and ethical practice of AAPT requires substantial training as well as knowledge of animal body language, socialization, behavior, and positive training methods. Partnerships between therapists and animal professionals play a key role in the development of professional practice of AAPT. Deriving from the

AAPT principles discussed here, standards of practice and a specialized AAPT certification program were unveiled in 2013. More information is available at www.playfulpooch.org and www.turnaboutpegasus.co.uk.

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Chapter 8
Foundational Humane Education: Promoting Love of Nature and Affinity for Animals in Schools and Communities

Nancy Bires and Dana Schultz

Keywords Biophilia • Environmental education • Humane education • Nature-deficit disorder (NDD) • Nature education

A group of first graders were exploring along the school nature trail looking for spring woodland wildflowers and other signs of spring. They were both artists and scientists as they closely observed the flowers, counting petals and leaves and then sketched and painted with watercolors. Each child created their own "field guide" of the wildflowers along the trail. As the children were leaving the woods, 6-year-old Casey announced, "I think God and Mother Nature must be best friends."

Love of Nature and Affinity for Animals

Humane education "encompasses human rights issues, animal protection, and environmental ethics" (Humane Education Advocates Reaching Teachers, 2011, unpaged). As educators aspire to develop citizens with environmental ethics, in the early childhood years, they must first develop children's love of nature. Likewise, as

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educators aspire to develop citizens who protect animals, teaching children to have an affinity for animals, both wildlife and companion animals, is the foundation. This chapter will focus on the importance of developing a love of nature and affinity for animals. The problem of denaturing children, referred to by Louv (2005) as nature-deficit disorder, and the environmental consequences will be addressed.

Then the benefits of nature exploration to young children and the planet will be discussed. Next early childhood experiences as prerequisites to nature and humane education will be presented. Suggested activities for nature education and also companion animals will follow. Finally, guidelines for early childhood practitioners structuring nature and humane education with young children will be offered.

(Human rights issues, a key aspect of humane education, are beyond the scope of this chapter. Suggested reading is *Rethinking Early Childhood Education* (Pelo, 2008).)

The Importance of Connecting Children with the Natural World

This section will detail children's alienation from nature, the environmental consequences of such alienation, and how children benefit from a connection to nature.

Denaturing of Childhood: Nature-Deficit Disorder

Children are disconnected from the natural world outside their doors. Louv (2005) coined the phrase nature-deficit disorder (NDD), referring to the lack of nature in the lives of today's wired generation. Nature-deficit disorder is not a medical condition; it is a description of the human costs of alienation from nature. Children living in the United States today reportedly spend, on average, 30 min of unstructured time outdoors each week. Increasingly, children spend time indoors, watching television, playing video games, and using computers. In fact, while children age 3–12 spend 1 % of their time outdoors, they spend 27 % of their time watching television (White & Stoecklin, 2008). Children's access to the natural world is becoming increasingly limited as their daily dose of media increases. Many working families cannot supervise children after school, giving rise to latchkey children who stay indoors. Parents are afraid to allow their children the freedom to roam in their neighborhoods or even in their own yards unless accompanied by an adult due to "stranger danger" (Louv, 2005; White, 2006). Furthermore, children's lives have become structured and scheduled by adults with lessons and practices (White, 2006; Wilson, 2008).

Today, with children's lives disconnected from the natural world, their experiences are predominately mediated in media, written language, and visual images

(Chawla, 1994). The virtual is replacing the real (Pyle, 1993). Children are losing the understanding that nature exists in their own backyards and neighborhoods, which further disconnects them from knowledge and appreciation of the natural world (White, 2006).

Environmental Consequences of Nature-Deficit Disorder

Considering the many environmental issues facing our planet today, we need children to feel connected to the natural world so they will become better stewards of the Earth. Children's alienation from nature is a growing trend worldwide and could be the most serious threat to conservation for future generations. Research by McDonough (2009) at the Nielsen (2009) Company indicates that children aged 2–5 now spend more than 32 h a week on average in front of a television screen. With children's access to the outdoors becoming increasingly limited, child care centers and schools where young children spend 30–40 h per week may be the best opportunity to reconnect children with the natural world and create a future generation that values and preserves nature. Sir David Attenborough (2008) stated, "The wild world is becoming so remote to children that they miss out and an interest in the natural world doesn't grow as it should. Nobody is going to protect the natural world unless they understand it" (Para. 1).

Direct experience in nature before age 11 promotes a long-term connection to nature. A cross-cultural research study by Palmer (1993) found that the single most important factor in developing personal concern for the environment was positive experiences in the outdoors during childhood. Parents, grandparents, and teachers must now provide outdoor experiences that give children the opportunity to learn to better understand and appreciate the natural world.

Children's care and concern for family pets can be extended to a respect for all living things

How Children Benefit from a Connection to Nature

Biophilia refers to the theory that humans possess a biological need to affiliate with natural systems and processes, and this relationship is important in children's health, development, and physical and mental well-being (Kellert, 2005; Kellert & Wilson, 1993). According to the International Union of Conservation of Nature (2008), children who connect with nature benefit from increased self-esteem, self-discipline, cooperativeness, creativity, problem solving, and physical conditioning. IUCN also suggests that spending time in the natural world reduces stress and obesity. Chawla (1999) states that engagement of all five senses through nature exploration affects childhood maturation. Rathunde (2009) explains the restorative effect of nature on attention.

Why is the nature connection so important for children? Research by Kahn (1999) documents that direct experiences with wild places are not a luxury but a basic human need. The nature connection builds children's cognitive skills, stretches their imaginations and creativity, and exercises their empathy along with their muscles and bones (Kals, Schumacher, & Montado, 1999). Kellert (2005) and Wilson (2008) suggest that play in nature, particularly during the critical period of early childhood, appears to be an especially important time for developing creativity and problem solving as well as furthering emotional and intellectual developments.

Rachel Carson (1907–1964), a writer and scientist, is often credited with starting the modern environmental movement through her 1962 book *Silent Spring*. *The Sense of Wonder* by Carson (1956) encourages children and adults alike to experience the beauty of the natural world. Rachel Carson observed how often a child's capacity for wonder, exploration, and discovery begins with and is encouraged by an emotional experience in and identification with nature. She suggested that feelings of interest, enthusiasm, and joy typically originate in the natural world and become motivating forces in childhood learning and cognitive development. Carson also noted how often these feelings precede and motivate intellectual maturation. Short-term exposure to natural areas through brief walks and even looking at images of nature has been found to have positive effects on mood, reducing feelings of anger and anxiety and reducing stress. Children who do not have frequent, positive experiences with the natural world are more likely to develop unhealthy stress-related behaviors (Wilson, 2008). Nature draws us in, grounds us, and gives us a sense of place.

Early Childhood Experiences as Prerequisites

Extensive research in children's development and experience in early childhood education has shown that young children form their values in their earliest years

(Piaget, 1952; Wilson, 1994). Children have an innate, genetically predisposed tendency to explore and bond with the natural world and to love nature (Wilson, 1993, 1996). Fortunately for the humane educator and early childhood practitioner, the human organism, by virtue of our evolutionary past and its formative influence, has a strong attraction to nature, defined by Wilson (1984) as biophilia. Evidence of biophilia has been observed in children even younger than two (Moore & Marcus, 2008). For children's natural inclination of biophilia to develop, they must be given developmentally appropriate opportunities to learn about the natural world based on sound principles of child development and learning (Chawla, 2006; Kellert, 1997; Sobel, 2002).

The next section will describe how such developmentally appropriate opportunities are the crucial foundation for preK-12 humane education goals as they relate to developing biophilia and an affinity for animals.

Eight Benchmarks for Students

Professor David Selby defines four goals of humane education: (1) develop biophilia (our innate affinity for the natural world); (2) recognize the interconnectedness of people, animals, and the environment; (3) clarify values and perspectives; and (4) develop skills to learn from others via democratic dialogue (Canadian Federation of Humane Societies, n.d.). Likewise, Zoe Weil, president of the Institute for Humane Education, recommends that humane education lessons be built upon the following four goals: (1) provide accurate information; (2) foster the three C's – curiosity, creativity, and critical thinking; (3) instill the three R's – reverence, respect, and responsibility; and (4) offer positive choices and tools for problem solving (Institute for Humane Education, n.d.).

Together, Selby's and Weil's recommendations these goals provide eight benchmarks for students to reach throughout their preK-12 schooling. The early childhood practitioner has the important role of providing the prerequisite experiences that students will later build upon. Accordingly, the environmental educator Sobel (2008) proposes a "ladder of environmental responsibility." Those who work with young children will have started students on the lower rungs so that they can climb the ladder to become, with the guidance of adults, citizens who have clarified their values and perspectives, discuss them in civil discourse, and use these values and perspectives to problem solve to create a better planet. The chart that follows (see Fig. 8.1) illustrates a framework that enables educators to develop citizens with environmental ethics and a desire to protect animals. It is the early childhood educator who lays the foundation for humane education, facilitating children's development of biophilia and affinity for both wildlife and companion animals.

Sharing a discovery about living things builds motivation and interest in the natural world

Suggested Activities: Nature and Wildlife

Using Kellert's (2005) and Soares' (1985) stages, early childhood practitioners therefore should focus on lessons and experiences that develop a sense of wonder, explore local settings, and build children's affective relationship with wildlife (see Fig. 8.2).

Developing a Sense of Wonder

Early experiences with the natural world have been positively linked with the development of imagination and the sense of wonder (Cobb, 1997; Louv, 1991). Wonder is an important motivator for lifelong learning (Wilson, 2008). During early childhood, the main objective of environmental education should be the development of empathy between the child and the natural world that is based on a sense of wonder and the joy of discovery (Wilson, 1996). Discovering and exploring local natural areas should be the primary objective for early and middle grade school children (Kellert, 2002; Sobel, 1996, 2008).

Wilson (1996) suggests that early childhood practitioners should begin with simple experiences in an environment young children are familiar with such as a single tree in the backyard or playground. Sensory awareness should be the primary focus. Guiding children to explore the textures of a tree with closed eyes, comparing rough and smooth bark, and then feeling the fuzzy moss near the roots encourage further discovery. A simple hand lens or "third eye" will help the child to discover the creatures living in the bark or munching on a leaf. Children can collect a "fist full

Age of student	Humane education instructional goals (Selby, Weil)	Maturation of children's values of nature (Kellert 2005)	Developmental stages of how children relate to animals (Soares 1985)
Toddler	Develop biophilia Foster curiosity Instill respect	Child develops a sense of wonder, focus on local settings	Increase in child's affective relationship to animals
Preschool (ages 3-5)	Build upon goals above Provide accurate information Foster creativity Instill reverence	(see above) Child develops a concrete and direct relationship with nature	Increase in child's affective relationship to animals
Primary (grades 1–3)	Build upon goals above Recognize the interconnectedness of people, animals, environment Foster critical thinking Instill responsibility	(see above) Child forms basic ideas about nature, child gains basic understanding of natural world, child focuses on immediate needs and interests	Increase in cognitive understanding and knowledge of animals
Middle (grades 4–8)	Build upon goals above Clarify values, perspectives Offer positive choices, tools for problem solving	(see above) Child develops broader focus on social interactions, regional emphasis, increasing cognitive concerns	(see above)
Secondary (grades 9–12)	Build upon goals above Develop skills to learn from others via democratic dialogue	Teen develops increasingly abstract ecological, moralistic, naturalistic perspectives; tackles global issues; moral obligations and reasoning	Increase in ethical concerns and ecological appreciation of animals

Fig. 8.1 Framework for environmental and humane education

of sounds" by sitting next to a tree with eyes closed and putting up one finger each time they hear a different natural sound such as a bird, the wind rustling the leaves, or a twig breaking. Children can "adopt a tree," visit it throughout the seasons, and record the changes through pictures in a nature journal. Leaf and bark rubbings make wonderful additions to the journal.

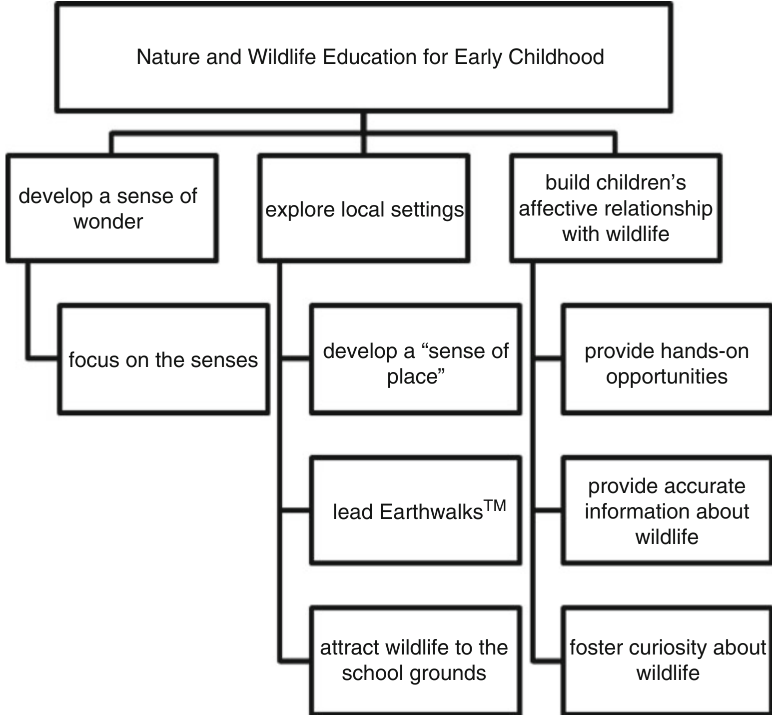

Fig. 8.2 Nature and wildlife education for early childhood

Young children learn respect for the environment by exploring their environment

Exploring Local Settings

Positive experiences outdoors should be provided frequently. Since children learn best through direct, concrete experiences, they need to be immersed in the outdoor environment to learn about it. According to Wilson (1996) children learn best through active involvement that includes hands-on manipulation, sensory engagement, and self-initiated explorations. In the early years, Sobel (2008) advocates adults should focus on fostering children's comfort and pleasure in nature via exploring natural areas, gathering treasures like rocks and flowers, and celebrating seasonal changes. Daily outdoor experiences are far more valuable than a one-time trip to a park or nature center. Exploring a small patch of grass or a rotting log for insects is a more valuable "field trip."

The early childhood practitioner's ability to encourage children's affective relationship with nature and wildlife will differ according to the habitats within the community. Local nature sites may provide opportunities to observe regional birds, insects, reptiles, amphibians, and small mammals. Visiting the same site repeatedly helps the children develop what early childhood teacher Ann Pelo (2008) calls a "sense of place." Pelo regularly walks her students to the same park to sketch, photograph, and explore. It is this "sense of place" which serves as the foundation of biophilia. (Some climates may enable the children to observe animals' seasonal adaptations.) Zoe Weil (2004) recommends investigating places with a closer eye. Primary students can record their observations of both the place's effect on their senses and the relationship between the location and wildlife, such as the number of life forms or animals' homes they observe and the interactions between plants and animals.

The Institute for Earth Education, founded by Steve Van Matre, developed Earthwalks™ that focus on using the senses while exploring natural areas. Van Matre (1990) describes Earthwalks as "Light, refreshing touches of nature that sharpen the senses while highlighting the richness of the natural world" (p. 264). Earthwalks use a series of special activities, usually four to six, that focus on different senses, and are put together in a flowing way. Each activity encourages the participants to use a particular sense as they move along the trail. Looking at the natural world from different viewpoints helps one to truly see its many wonders:

- By using an "eye in the sky," the forest canopy can be explored while slowly walking along the trail. The children hold a small metal mirror at chest height and look into it to view the treetops as they move slowly down the trail. It is fun to play "I spy with my eye in sky" by looking in the mirror to locate singing birds.
- Children can explore the "underworld" using dental mirrors to view the underside of plants and leaves as they crawl on the ground. This is a wonderful way to discover new life and observe tiny green plants emerging from the dead fallen leaves on the forest floor and tiny insects crawling in the cracks of rotting logs.
- Children are encouraged to find a "dozen touches" by collecting opposite textures such as prickly and tickly, or spongy and solid. Tiny bits of the "touches" are placed in specially decorated "touch boxes" (egg cartons). Participants share their collections by encouraging others to feel the objects they gathered.

- It is easy to walk through the forest and miss the many colors along the way. “Rainbow chips” (cut-up paint samples) help participants search for subtle hues of the colors of the rainbow. Children reach into a brightly colored cloth bag to select a “rainbow chip.” As they journey along the trail, they try to match the color of the rainbow chip with something they see in the natural world. It is amazing the colors that can be found even in the gray of winter when one takes the time to look.

Earthwalks allow children to experience the joy of discovery and wonderment.

In addition to exploring the local community, butterfly gardens and birdfeeders, as detailed in the Resources section, bring the animals to the children. A grant and a team of volunteers brought an outdoor classroom to the grounds of Head Start teacher Melanie Brewer’s Missouri center. Brewer, the recipient of the Humane Society of the United States’ 2010 National KIND Teacher Award, commented on the effect on her students: “They are kinder to bugs and more interested in being outside and observing what is around them. My hope is to encourage kindness in all living creatures” (The Humane Society of the United States, 2010a). The Center for Place-Based Education (2012) offers a rubric to gauge, among other features, schools’ proficiency in “school grounds enhancement.” The goal is that “the school grounds are seen as a microcosm of the larger community and function as an outdoor learning laboratory.” The highest, level four, benchmark includes, “School grounds support rich and abundant native, non-human life.” Such sites are a valuable resource for children with nature-deficit disorder.

A child learns to interpret sensory information with activities such as “I spy with my eye in the sky”

Building Children's Affective Relationship with Wildlife

In addition to inviting wildlife on the school property, hands-on opportunities with samples such as antlers, shed snake skins, feathers, and even furry hides and taxidermy can provide on-site learning opportunities (Kidd, Kidd, & Zalsoff, 1995). Local state parks and nature preserves may provide lending trunks that teachers can reserve.

Kidd et al. (1995) conducted a study (with children ages 3–12) of the "emotional and cognitive effects of distance, visibility, and tactile stimulation on the current attitudes of children and their parents towards wildlife" (p. 4). While the children aged 8–12 disliked the taxidermy (understanding that the specimens had once been alive or fearing that the animals had been killed for the exhibit), the children ages 3–7 cited enjoyment at what the authors detailed as important factors: "the proximity, visibility, and hands-on availability" (p. 4). The authors clarify that it is the hands-on aspect that appears to be important in the development of the children's affective relationship with wildlife.

Later in the elementary years, adults can help children develop their affective relationship with wildlife through hands-on activities such as creating organic, bee-friendly gardens, and wildlife habitats.

Identifying wildlife and key features of habitats rank low within the Cognitive Domain on the Revised Bloom's Taxonomy (at the Remembering and Understanding levels (Overbaugh & Schultz, n.d.)). However, such objectives provide a cognitive foundation for children as they build an affective relationship with wildlife. Such knowledge also relates to Weil's goal of providing accurate information and is appropriate for early childhood students (Fig. 8.1). To tie such learning into the students' sense of place, Pelo (2008) recommends carrying region-specific field guides on excursions to places as close as the school playground. Laminated field guide images or computer printouts can be used for matching games or bingo cards.

Suggested Activities Regarding Companion Animals

In addition to a focus on wildlife, adults may wish to build children's affective relationship with and knowledge of companion animals – the nonhuman animals that children may most often encounter in their home or community. This section suggests lessons centered on read-alouds, pets' feelings, responsible pet care, and informal vocabulary development.

Read-Alouds

Children's affective relationship with companion animals can be built by drawing similarities between pets' feelings and the children's feelings. Picture books that depict realistic, rather than anthropomorphized, companion animals lend themselves to discussions of how the actions of the characters positively or negatively impact the feelings of the pets in the story. (Suggested titles are included in the Resources section.)

Early childhood practitioners can likewise connect read-alouds to character education topics such as respect. Rivera (2004) lists character education traits that relate to pets:

Trustworthiness: You can trust me to feed you and meet your needs.
Respect: I respect you as a dog/cat/snake/hamster . . .
Responsibility: I will keep you safe.
Fairness: I will make sure I understand you.
Caring: I will make sure you are healthy and comfortable.
Citizenship: I will do what the laws say I should do to keep you well and safe and insure you are not offending others. (p. 196)

Pets Have Feelings Too

While some of pets' feelings are vocalized (barking, meowing, growling, hissing), pets' feelings are also articulated via body language. Body language includes tail posture, ear posture, mouth posture, eye position and eye appearance, and body posture. (Body language lesson sources are included in the Resources section.) Both vocalizations and body language can be taught and practiced via analyzing illustrations and participating in dramatic play. Understanding pets' emotions helps children see companion animals as beings who, like them, have various feelings and preferences.

Children's understanding of the emotions of companion animals can also help keep children safe. Children can learn to stay away from dogs who are displaying negative vocalizations or body language, whether the dog be loose, leashed by an owner, behind a neighbor's fence, or tethered. Fifty percent of dog attacks have involved children under 12 years old (American Humane Association, 2011) with reported dog bite-related injuries highest for ages 5–9 (Centers for Disease Control and Prevention, 2009). (While the majority of bites come from dogs who are not spayed or neutered (The Humane Society of the United States, 2010b), a discussion of altering is not developmentally appropriate for children younger than third grade and therefore will not be included in this chapter.)

Many animal shelters provide free or low-cost dog safety programs that include how to safely greet a dog, avoid tethered/chained dogs, and react in the presence of a jumping or loose dog. Such a program lends itself well to annual visits from a humane educator. Studies investigating the effectiveness of humane education lessons have found varying amounts of instructional time required for the lessons to increase children's empathy for or affective relationship with animals. Ascione and Weber (1996) found that 40 h of instruction increased students' attitudes towards animals, depending on grade level. In comparison, safety skills that a child can immediately apply in his/her home or community are an appropriate focus for fewer hours of animal-related instruction per year.

There are fewer than 100 professional, paid humane educators working in America, many of whom maintain waiting lists of schools/organizations to visit (Rivera, 2004). As a result, early childhood practitioners may find that a humane educator is not available for their geographic location. Accordingly, sources of dog safety lesson plans are included in the Resources section. If the educator wishes for a dog to visit the classroom and a professional humane educator and his/her dog are not available, a visiting dog from the local community should be previously evaluated by an outside entity, with the owner providing proof of such via a copy of the dog's Canine Good Citizen certificate (provided by the American Kennel Club) or therapy dog certification. When dogs visit schools, libraries, and health-care facilities, it is expected that the handler and the dog have liability insurance, the handler has child abuse/criminal record check clearances, and the dog has an annual veterinary checkup and health certificate. In contrast, a student's family may be offering to bring their noncertified resident dog. While the dog may indeed be wonderful with the children in the home, it may not be properly trained or experienced to meet an entire classroom of students. For this reason, a dog that has experience as a visiting or therapy dog is recommended.

Responsible Pet Care

A comparison of pets' needs with children's needs enables students to understand that pets are dependent upon humans for their basic survival: food, water, shelter, and veterinary care. This comparison builds empathy as the children see that pets' needs and children's needs are similar. (Observations of classroom pets provide further opportunities to discuss appropriate habitats.) This concrete lesson is a foundation for future moral reasoning regarding treatment of companion animals, wildlife, and animals raised for food. As stated by Weil (2004), "Humane Education, unlike other forms of social justice or environmental education, includes the plight of individual animals and invites students to explore our obligations and responsibilities towards them" (p. 49).

The preschooler demonstrates that when meeting someone's dog, one should ask first and then let the dog smell one's hand and pet under the chin or on the shoulder

A hands-on lesson using pet care items stored in a suitcase ("the Pet Suitcase") or tote bag ("the Magic Bag of Care") has the objective of the child being able to name at least three items that pets need to be safe and healthy. Directions for the students, given in a friendly "I'll bet I can stump you" tone, are: "Today I brought some items with me that I need to care for pets (or the animals that live at the shelter). But I also brought some items with me that are for people and not for pets. I want to see if you can figure out which ones are which and why we need them." Items can include a brush, nail trimmers, leash, collar with identification tag, license tag, rabies tag, toothbrush, pet toothpaste, ball, rope toy, unembellished stuffed dog toy, empty box of flea preventative, water bowl, food bowl, empty syringe (to demonstrate vaccinations), bag of treats, and baggie of kibble (or sample-sized bag). Non-examples (people items) include a child's teddy bear, ball of yarn, plastic grapes, and bag of candy. Smaller class sizes permit each child to take a turn closing his/her eyes, reaching into the bag, and choosing an item. When there are more students than items, pairs can approach the bag; one child chooses, and the second displays the item to the class. The teacher-led discussion questions for each item are: (1) Is this item for people or pets? (2) Why do pets need this item? Particular items may help students compare pets' needs to their own. For example, when the student retrieves the pet toothbrush, the teacher can ask playfully, "What would your mouth smell like if you didn't brush your teeth for a year?" Additionally, young children relate to the idea of getting lost and being expected to learn their address

and telephone numbers, so a discussion about ID tags and microchips can get them thinking. The teacher can ask, “If you got lost, what would you do? Can a dog or cat tell someone where they live? How do you think they feel when they are lost?”

As Humane Educator Michelle Rivera (2004) points out, “For those children who live with animals, [the Pet Suitcase] brings a new awareness of what is involved in caring for a companion animal. For those who don’t, it helps them appreciate why their parents might say no to a cat or dog” (p. 85). A concluding question is, “What are some items that pets need that will not fit in the bag?” Possible answers include a dog bed, litter box, etc., and if no student contributes “love” or “respect,” the instructor can lead students to discuss pets’ emotional needs.

Building Vocabulary

Preschool teachers’ use of sophisticated language during informal conversations and play can impact (a) children’s knowledge of companion animals and (b) their future language skills. (The Resources section provides a source for suggested terms.) Children can bring in pet photos for discussion, and a veterinary play kit and plush toy pets can prompt dramatic play. A 2011 study by Dickson and Porche demonstrated that teachers’ sophisticated language used during informal conversations and play predicted preschoolers’ vocabulary when in kindergarten, which affected fourth grade word reading (Wetzel, 2011).

Suggested Phrasing for Adults: Modeling and Questioning

Some adults feel inadequate when taking children out in nature because they do not know the names of all the trees and flowers or cannot identify birds by their song. John Burroughs (1919) cautioned that “Knowledge without love will not stick. But if love comes first, knowledge is sure to follow.” In the early years it is important to focus on “experiencing” versus “teaching.” According to Wilson (1996), “It is the teacher’s own sense of wonder, more than his or her scientific knowledge, which will ignite and sustain a child’s love of nature” (Para.14).

Environmental education in the early years should focus more on experiencing and facilitating and less on direct instruction since young children learn through discovery and self-initiated activities (Van Matre, 1990; Wilson, 1996). Teachers should model caring and respect for the natural world by gently handling plants and animals. When children observe the adult expressing interest in and enjoyment of the natural world, it encourages them to develop positive feelings for the environment as well.

Modeling: "We Taught Them to Save Bugs"

Teachers and parents can further develop children's affective relationship with wildlife via modeling. Rather than killing insects found indoors, they can be captured in a "bug catcher" – a cup with a cardboard cover, attached with a string, containing the insect until it is safely outside.

A powerful example of the results of such modeling is demonstrated by parents Bob and Gail Bergquist of Massachusetts and their young teens, Brittany and Robbie. Outraged by a news report that profiled a soldier stationed in Iraq who had inadvertently accumulated a cell phone bill over $7,000 while calling home, the Bergquist kids emptied their piggy banks, which totaled $14, to help pay his bill. Their further efforts at bake sales and car washes eventually grew into a partnership with AT&T and the siblings' nonprofit organization, Cell Phones for Soldiers.

Bob and Gail Bergquist often are asked by other parents how they brought up such conscientious children.

> "We taught them to save bugs," Bob says.
>
> When the teens were younger, the family put any bug they found inside the house on an index card, carried it outside, and set it free.
>
> "We tried to get them to be aware of their effect on other living things, to instill in them that there are other people in the world, and some are not doing so well," Bob says. (Hampson, 2007)

Likewise, Dr. Randall Lockwood, current Senior Vice President for Anti-Cruelty Initiatives and Legislative Services at the ASPCA, relates,

> . . . I was fortunate to have a mother who nurtured and shared my interest in animals. One of my earliest memories is sitting with her watching a spider building its web in a corner of our living room. "That's her house," she said. "We'll leave it be." (Rivera, 2004, xiv)

Admittedly, not all children who are enriched with adults who model humane ethics will grow up to work in animal welfare, like Lockwood, or start their own nonprofit organization, like the Bergquist teens. Nevertheless, such modeling exemplifies character education and instills Weil's goals of reverence, respect, and responsibility. It requires no materials, no lesson plan, nothing more than a willingness to demonstrate kindness towards creatures that may not be adorable, fuzzy, or huggable. It is imaginable that such a lesson will inspire some to treat our fellow humans with kindness at times when they are not so adorable or huggable.

Looking for living things in the stream is a wonderful way to spend the afternoon

Using Questioning to Build Affinity for Animals and Nature

Pelo (2008) describes an interaction with one preschooler who was collecting ants in a bucket as they crawled out of a crack in the pavement. "They're bugs and we hafta kill them," the child explained.

Pelo thoughtfully responded with a question, "I'm curious about these ants; where do you suppose they came from?" This prompted the child to imagine that the crack contained entire families of ants:

> ...The ants come not fast because they're talking, saying their plan to come out to see what's outside. They want to find their family that's in the bucket. The ants in the bucket want to get out of the bucket and go to their family.

She then turned over the bucket, saying, "Go home, ants! Go to your home. Go to your family" (p. 128). This anecdote illustrates that discussion and questioning, rather than lecturing, prompted the student to make a choice based upon her own imagining of the animals' feelings and, in doing so, develop an affective relationship with the wildlife on her urban school property.

Harrington (2009) observed a skilled guide at a wildflower reserve who made the children feel comfortable participating and conjecturing. The guide followed the general pattern of asking a question, listening to the children's answers, offering encouragement for participation, adding facts to supplement their responses, demonstrating the illustrated concept with sensory experiences, and offering a follow-up question centered on why or how. The guide's program follows what Harrington describes as

> guide-facilitated but child-initiated inquiry. The guide is flexible and adapts to various finds along the way. These events can be anything, and do not have to be in the original curriculum. The educational experience is highly personalized, open, and customized to the learner's existing knowledge, desire to learn and the environment. (p. 79)

This illustrates how an adult easily facilitates students' knowledge, sense of wonder, and affective relationship to wildlife through questioning, a focus on the senses, and hands-on exploration – all hallmarks of a foundational environmental experience.

Conclusion

What will become of the wild places if children know little of the mystery, the grace, and the interconnectedness of all living things? How will we address climate change and other environmental threats if we do not engage and prepare the next generation for these monumental challenges? We need to allow children to develop their biophilia, their love for the Earth, before we ask them to save it. Young children tend to develop emotional attachments to what is familiar and comfortable for them (Wilson, 1996). The more personal the children's experiences with nature, the more environmentally concerned and active children are likely to become.

Earth scholar Thomas Berry (1988) states in *The Dream of the Earth* that teaching children about the natural world should be considered one of the most important events in their lives. Children need frequent experiences exploring the natural world in order to develop a sense of connectedness. Most adults have memories of special places in nature from their childhoods. Will today's children have these same kinds of memories? The purpose of environmental education for early childhood is to provide for such experiences and to share them with young children. In the words of Rachel Carson (1956), "If a child is to keep alive his inborn sense of wonder . . . he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement, and mystery of the world we live in" (p. 45). Early childhood educators are or can become that "one adult" who sustains a child's sense of wonder; that is the essence of environmental and humane education.

Recommended Resources

Organization	Programs/goals
American Humane Association www.americanhumane.org	The websites "For Professionals" and "Human-Animal Interaction" lead to "Humane Education Resources": downloadable lesson plans and *American Humane KIDS: Kids Interacting with Dogs Safely* for teachers of children ages 4–7
Association of Professional Humane Educators (APHE) www.aphe.org	APHE provides professional development opportunities and networking for educators who promote humane attitudes towards people, animals, and the environment. The members-only email LISTSERV is a way to share ideas with and ask questions of humane educators from across the United States and elsewhere

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Organization	Programs/goals
Children & Nature Network www.childrenandnature.org	The Children & Nature Network is leading a movement to connect all children, their families, and communities to nature through innovative ideas, evidence-based resources and tools, broad-based collaboration, and support of grassroots leadership. Let's G.O.! (Get Outside) suggests activities for children and their families to do outside
Compassionate Kids www.compassionatekids.com	An international organization dedicated to helping teach children compassion towards the Earth, people, and animals
Doggone Safe www.doggonesafe.com www.be-a-tree.com	Doggone Safe promotes education initiatives for dog bite prevention and increased child safety around dogs and provides support for dog bite victims. Their "Be a Tree" lesson teaches children dog body language and dog safety; the website includes a "Speak Dog" video slide show
Earth's Birthday Project www.earthsbirthday.org	The Earth's Birthday Project is dedicated to inspiring wonder, learning, and care for our Earth. They offer lessons and materials including the Butterfly Project
Green Teacher www.greenteacher.com/webinars.html	The magazine's website includes access to webinars for teachers
Institute for Earth Education (IEE) www.eartheducation.org	Earth Education programs emphasize understanding basic ecological processes, developing positive feelings for the natural world, and making personal lifestyle changes. Programs and activities include Earthwalks™, Sunship Earth™, Earthkeepers™, Earth Rangers™, Sunship III™, and Muir Trek™
Institute for Humane Education www.humaneducation.org	"Resource Center" webpage: suggested activities for younger elementary students in area of environmental preservation; 5–30-min humane education lessons. "Programs" webpage: online graduate programs, online courses, summer institutes, in-person workshops
Kids Gardening www.KidsGardening.org	Website resources: funding opportunities for school or community gardens; professional development opportunities; classroom projects ("Feeding the Birds: Enticing and Observing Feathered Guests," "Hooked on Hummingbirds," "Inviting Butterflies to the Schoolyard Garden")
Monarch Watch www.monarchwatch.org	Monarch Watch is an educational outreach program based at the University of Kansas that engages citizen scientists in large-scale research projects. This program collects real data that relate to a serious conservation issue. Monarch Watch gets children of all ages involved in science
www.MyVocabulary.com	"Word Lists" for "Animals, Birds, Insects" – over 100 words relating to hummingbirds, over 200 cat words, over 300 dog words (for informal conversations)

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Organization	Programs/goals
National Wildlife Federation: www.nwf.org/kids.aspx and www.nwf.org/Be-Out-There.aspx	*Ranger Rick Jr.* magazine for ages 4–7. Be Out There Campaign's lesson plans – habitats, watersheds, birds and butterflies, insects and spiders, mammals, pollinators. Garden for Wildlife – turn your yard into a haven for wildlife. Schoolyard Habitat – creating and certifying outdoor classrooms. Educator's Section: Resources – webinars, funding opportunities, National Wildlife Week
Outdoors Alliance for Kids (OAK) www.outdoorsallianceforkids/	OAK is a national strategic partnership of organizations from diverse sectors with the common interest in expanding the number and quality of opportunities for children, youth, and families to connect with the outdoors
Sierra Club www.sierraclub.org	Building Bridges to Outdoors (BBTO) is committed to giving every child in America an opportunity to have an outdoor experience
World Forum Foundation http://worldforumfoundation.org/wf/wp/initiatives/nature-action-collaborative-for-children	Nature Action Collaborative for Children (NACC). The mission of NACC is to reconnect children with the natural world by making developmentally appropriate nature education a sustaining and enriching part of the daily lives of the world's children

Recommended Read-Alouds

Bix, D. (2006). *Buddy unchained*. Edina, MN: The Gryphon Press. Buddy the dog, having been adopted by a loving family, uses a flashback to narrate his life as a chained dog before being rescued by a humane officer and taken to a shelter. A discussion-prompting and surprising illustration depicts children cruelly throwing rocks at Buddy. Additional discussion points: responsible pet care, Buddy's feelings, and character education topics (trustworthiness, caring). (Primary (7–8 years))

Chamberlain, M. (2008). *Please don't tease Tootsie*. New York: Penguin Group. Alliteration and bright illustrations make this an interesting read. It provides examples and non-examples of behaviorally healthy interactions with pets. Discussion points: safety and character education topics (kindness, respect). (Toddlers, Nursery School (3–5 years), Kindergarten (5–6 years))

Fiorini, B. (2010). *Rescue pup*. Rock Falls, IL: Joyful Journey Books. Narrated in rhyming verse, a dog, abandoned in a home, escapes to find only more dangers outside before being rescued and then adopted. Discussion points: connect to the dog's emotions and character education topics (responsibility). www.joyfuljourneybooks.com includes free downloadable classroom activities. (Primary (7–8 years))

Hamanaka, S. (2010). *Kamie Cat's terrible night*. Washington, DC: Animal Welfare Institute. A house cat regrets slipping outside when she encounters a dog, car, and grouchy people. But before being rescued, she witnesses her multicultural neighbors lovingly taking care of their own house cats. Her owner locates her,

promising to never again leave the window without a screen and Kamie without a collar and tags. Discussion points: connect to the cat's emotions and character education topics (kindness, responsibility). While supplies last, this book is free for educators via www.awionline.org. (Primary (7–8 years))

Ketteman, H. (1996). ***Grandma's cat.*** **New York: Houghton Mifflin Harcourt.** A little girl annoys grandma's cat until learning that being gentle will earn the cat's trust. Discussion points: the cat's feelings and character education topics (kindness). (Kindergarten (5–6 years), Primary (7–8 years))

Rosenthal, C. (2012). ***The lucky tale of two dogs*****. Austin, TX: Pet Pundit Publishing.** The lives of two dogs who live on the same street are contrasted to demonstrate care versus neglect. A happy ending for the neglected dog awaits after he escapes from his yard and is found by a shelter staff member. www.petpunditpublishing.com includes a grades K-2 lesson plan and details about the author's *The Happy Tale of Two Cats* and forthcoming Spanish editions. Discussion points: responsible pet care and character education topics (responsibility, kindness). (Kindergarten (5–6 years), Primary (7–8 years))

Siegel, B. (2004). ***Smudge Bunny*****. Tiburon, CA: H.J. Kramer.** Baby pet bunnies who find themselves up for sale in a pet store learn that not all children and adults have the necessary patience and kindness to be pet owners. A compassionate couple, and some new cat siblings, provide a happy ending in this book based on a true story. Discussion points: character education topics (kindness, responsibility, trustworthiness) and the author's choices. (Primary (7–8 years))

Simont, M. (2001). ***The stray dog*****. New York: Scholastic.** This simple Caldecott Honor Book depicts a picnicking family who befriends a stray dog. Discussion points: evaluating the children's and adults' choices; connect to the dog's and characters' emotions, the need for leashes, collars, and tags; and character education topics (responsibility, citizenship). (Kindergarten (5–6 years), Primary (7–8 years))

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Chapter 9
Children and the Human-Animal Bond: Minimizing Pet Loss During Disasters

Holly J. Travis

Keywords Disaster preparedness • Human-animal bond • Responsible pet ownership • Companion animals • Pet loss

Introduction

Animals have been companions to humans for thousands of years, since Neolithic populations first started to domesticate plants and animals. Today, it is estimated that there are 70 million households with pets in North America (Yorke, 2010). Dogs were, in fact, one of the first animals to be domesticated, in order to meet both practical and emotional needs of our early ancestors. Other common companion animals include cats, birds, horses, various rodent species, and livestock. Initial domestication efforts for various species may have come about for practical purposes such as providing food or protection, but aesthetic satisfaction quickly followed (Anderson, 1997). Since that time, pets have come to be regarded as members of the family, providing numerous physiological and psychological benefits to the humans sharing their living spaces.

The Human-Animal Bond

One study noted that the presence of a pet may be more effective than that of friends or family in reducing common cardiovascular effects of anxiety such as increased blood pressure and heart rate (Knight & Herzog, 2009). In addition, pets have been

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credited with reducing stress, decreasing feelings of loneliness and depression, and improving self-esteem (Crawford, Worsham, & Swinehart, 2006). Pet owners also demonstrate significantly less deterioration in general health measures and exhibit more healthy behaviors such as exercising and eating a healthy diet (Dembecki & Anderson, 1996; Raina, Waltner-Toews, Bonnett, Woodward, & Abernathy, 1999). Increased activity levels were especially noted in adolescents who owned dogs, because they spent time playing with their pet. Pet owners were also noted to be more extroverted, more conscientious, and less preoccupied than nonowners (Crawford et al., 2006; Wagner, 2011). It is important to note that pets did not replace interaction with other people, as pet ownership was not correlated to levels of social support from friends and family. For people of all ages, pets provide unconditional love and nonthreatening physical contact, but this can be especially important among high-needs groups such as the elderly, children, and the disabled (Walsh, 2009; Yorke, 2010).

Benefits of Child-Pet Relationships

The benefits derived from child-pet relationships have been documented through many research studies. Almost everyone has a special story or memory associated with a pet, whether it was playing and spending time together or offering support when facing some form of adversity. Having pets in the home has been credited with improved socialization behaviors in children, emphasizing and developing characteristics such as empathy, communication, consideration, confidence, kindness, affection, resilience to change, and responsibility (Leiber, 1999; Melson, 2003). Pets of all kinds help children learn to be kind, to think of other's needs, and to share affection. In addition, they can provide an introduction to major life events, including pregnancy, birth, illness, and death. They offer children the opportunity to learn coping mechanisms for these major life events that everyone must deal with at some time. In fact, research has shown that the presence of dogs in a home can reduce stress, increase self-esteem, and improve social interactions between children in school and social settings (Daly & Morton, 2006). Childhood interactions with pets often create lasting memories and contribute to the development of empathy and environmental awareness (Jalongo, 2004). According to Walsh (2009), one parent noted that "Our pets bring out the best in the kids in responsibility, kindness, affection, first aid, and concern for other living things (p. 248)." The benefits of spending time with an animal have even been noted when children don't have a pet at home. Children who had elevated blood pressure due to stress associated with reading were found to have blood pressure readings in the normal range when they read aloud in the presence of a dog, even when that dog was an unfamiliar animal (Crawford et al., 2006).

This human-pet relationship becomes particularly important in times of stress when children feel less in control of their circumstances, whether the situation is

based in health-related problems, family disruption, or a disaster such as a hurricane, flood, or fire. In families where children are raised by a single parent or without siblings, pets provide a "surrogate" relationship, offering stability, companionship, and security. Countless children have shared their pain and their joy with pets when nobody else would understand or was available to see them through the trials of growing up. In a survey of 20 adoptive families, researchers found that all of them had pets. The pet was frequently adopted as a parallel experience for the child. Pets have also been identified as providing positive support for children when families must move to a new home or town, when their parents are undergoing a divorce or separation, or when a death occurs. For example, one family going through a divorce allowed their young daughter to keep Sparky, the family dog, with her as she moved between her mother's home during the week and her father's apartment on weekends; this was a way to promote a sense of stability in the child. Confiding in pets, by family members of all ages, has been found to contribute to greater life satisfaction (Walsh, 2009). Interestingly, research on neural development has found that the positive effects of human-pet interactions have a physiological basis (Yorke, 2010).

Developmental Effects of Animal-Human Interactions

Past research on the effects of stress on brain development utilized animal models, looking at changes in brain structure of rats, mice, monkeys, and other mammals exposed to different treatments such as maternal care, social interaction, environmental enrichment, and exposure to various stressors in a laboratory setting. Results from these animal studies have noted significant differences in nervous system development and endocrine responses under varying conditions of developmental support, including parental care, social interactions, and nurturing. Responsive care, gentle handling, and an enriched environment can contribute to the development of receptors in portions of the brain that lessen the effects of stress in both the short term and later in life (Caldji, Diorio, & Meaney, 2000). Recent advances in technology and live imaging techniques have made it possible for scientists to expand these animal research conclusions to human subjects, even with the recognition that more complex patterns will be occurring in the human brain. Use of technologies such as functional magnetic resonance imaging (fMRI) and positron emission tomography (PET) scans allow researchers to observe changes happening in real time inside human and animal brains without the need for surgery or other invasive procedures. This research has demonstrated parallel response patterns in human brain development and reaction to stress (Yorke, 2010). Neurobiological research provides physiological support for the positive changes observed as a result of human-animal interactions. These changes in brain structure and hormonal response, especially in the rapidly developing brains of young children, can account for many of the positive effects observed in people who have formed bonds with companion animals.

Impact of Pet Loss on Children and Families

Because pets play such an important role in a household and in individual lives, especially with small children, their loss can generate feelings of bereavement and grief. This can be amplified in times of extreme stress, when homes, possessions, and even family members may be lost or separated (Morley & Fook, 2005; Swift, 1994; Walsh, 2009). Natural disasters such as hurricanes, earthquakes, fires, or floods are examples of situations where loss of a pet may lead to exaggerated levels of grief. Pet loss in disaster situations can be characterized in three different categories, each with unique feelings and grieving patterns.

Accidental Death

Accidental death as a result of the disaster may occur, though this might be the easiest for pet owners of all ages to understand and accept. In this case, animals perish directly as a result of some external event such as a fire, flood, hurricane, or tornado. Whether through smoke inhalation, drowning, or trauma caused by debris, even children, depending on their developmental stage, can often recognize that there was nothing that could be done to change the outcome (Swift, 1994). Consequently, it is easier to go through the normal grieving process in this type of situation. Depending on the circumstances, family members may feel some guilt ("If I had closed the barn door . . . ") or try to blame someone else ("If you had let the dog in . . . ") for an accidental death, despite knowing that the event was truly unintentional or unavoidable. Different types of grief response can cause tension in human relationships when the reaction is manifested differently where, for example, one individual may be openly demonstrative, while another might internalize their response and appear to be callous or unfeeling (Sharkin & Knox, 2003; Walsh, 2009). This can be especially difficult for children who may be experiencing death or loss for the first time and who look to the adults in their life for guidance about appropriate responses.

Ambiguous Loss

Grief can be more complicated when the loss is ambiguous, which often happens when accidents or disasters lead to a pet running off or being taken to a shelter without proper identification. Not knowing the pet's fate can lead to unresolved guilt, blame, and anger. This is especially common in large-scale disasters such as floods or hurricanes, where widespread property damage and human health threats occur. The magnitude of the destruction and the large number of people displaced can make it difficult to keep track of family members, much less pets and

livestock. In the aftermath of Hurricane Katrina, clinical symptoms of depression were observed to be significantly higher in individuals who lost pets than in those who did not (Hunt, Al-Awadi, & Johnson, 2008). This study also noted that severity of the depressive symptoms observed were not related to income level, indicating that financial security, or lack of it, did not alter the psychological reaction to losing a pet. Another facet of ambiguous loss is the hope that the animal may be found or returned. This can extend the grief process and make it particularly difficult to resolve (Chur-Hansen, 2010).

Forced Separation

Most difficult to accept, as shown repeatedly on television during rescue efforts for Hurricane Katrina victims, are forced separations when people are required to leave their homes and animals must be left behind, or pets are taken from the owner during evacuation efforts because of human safety concerns or because no adequate shelter is available (Chur-Hansen, 2010; Walsh, 2009). The news clip of a young boy sobbing as he was forced to give up his small white dog, Snowball, to a police officer in order to board an evacuation bus brought emotional responses from pet owners across the country. In all cases, the enforced loss of the pet can still signify the end of a relationship and can elicit the same grief response as the loss of a human companion or family member (Chur-Hansen). The persistent hope that the pet will be returned after the disaster can make adjusting to the loss more difficult, especially because the pet was known to be alive at the time of loss.

For children, loss of a pet may be their first experience with death or separation, making this a particularly traumatic event (Sharkin & Knox, 2003). Pets can fill many roles in the life of a child: best friend, confidante, and playmate, to name a few. It can be difficult for adults to address the grief of their children effectively, a response that is magnified when other crises, such as natural disasters, loss of a home, or destruction of property, are occurring at the same time. As a result of recent disaster situations, Hurricane Katrina in particular, several observations and recommendations have been made to address increased risks associated with pet owners, pet safety, and evacuation efforts.

Disaster Response: Human Safety and Animal Rescue

In the event of a disaster, pet owners have special concerns and pose unique difficulties for first responders and emergency personnel trying to ensure human safety. Disaster situations and animal emergencies create danger for animals and their owners on many levels. Failure to evacuate or family members returning to homes and neighborhoods before it has been deemed safe by emergency personnel can cause human injury or death. Free-roaming animals resulting from

disasters pose additional human and animal health risks, including food and water contamination, transmission of diseases and parasites, destruction of property, and aggression from frightened animals (Leonard & Scammon, 2007). Appropriate preparedness measures taken by pet owners can help prevent or alleviate many of these concerns.

Evacuation Concerns

Pets are the primary reason people refuse to leave their homes or that they return to their homes before local authorities have declared it safe to do so, risking their own lives and those of rescue personnel in the effort to save beloved pets (Hall et al., 2004; Heath, 2007; Heath, Vocks, & Glickman, 2000). They are also a significant contributor to family units splitting up during evacuation, when part of the family leaves as directed, while one or more family members remain behind to care for pets (Heath, Kass, Beck, & Glickman, 2001). Many people who failed to evacuate New Orleans before flooding occurred because they did not want to abandon their pets were later forced to leave, often under threat of arrest (Zottarelli, 2010). Additional problems occur when family members return to an evacuated area before it is safe in order to care for or attempt to rescue pets. This is particularly common in families with children, who are more likely to evacuate, but frequently leave pets behind because they are not properly prepared to take them along (Heath, Beck, Kass, & Glickman, 2001). This can lead to injuries, death, and unnecessary risk to pets, pet owners, and first responders who must then initiate rescue efforts. During evacuations in Yuba County, California, due to flooding and Weyauwega, Wisconsin, caused by a train derailment, up to 50 % of households failed to take their pets when they evacuated, and 80 % of the individuals who prematurely reentered the evacuation zone did so in order to rescue their animals. Much of the pressure to return to the hazardous area was the result of media coverage about abandoned pets, leading to increased demands on emergency management personnel to respond to public sentiment rather than abiding by established safety procedures and protocols. This, in turn, led to increased hostility between emergency management personnel and the public because of the inaccurate perceptions of insensitivity and callousness when safety was really the reason for emergency management decisions.

Households with children were most likely to be involved in pet rescue efforts. This may be due to the benefits pets offer in terms of stress reduction, nurturing, and provision of stability in the face of uncertainty generated by the disaster situation. This has been observed in numerous disaster situations both in the United States and around the world (Heath, Kass, et al., 2001; International Fund for Animal Welfare, 2011). In other instances, pet owners who were unable to take their pets when they left a disaster area made arrangements for pet care with people who refused

to evacuate. Unfortunately, this exposes both the pets and the people remaining in the disaster area to potential illness, injury, or death. It also increases risk for emergency personnel tasked with clearing out the area or who are called on to rescue the holdouts when the situation becomes more dangerous. In the case of Hurricane Katrina, for example, those who initially refused to evacuate were able to survive the storm, but they underestimated the extensive flooding, damage, and loss of services that occurred after the actual hurricane had passed. As noted in Irvine (2006), "The public may think the question surrounding companion animals in disasters is 'will you risk *your life* for your companion animals?' However, the question really is 'will you risk *someone else's life* for your companion animals?" (p. 8). In emergencies where more advance notice was given, fewer pets were left behind when evacuation occurred. It is clear that education and training can help reduce human health risks associated with evacuation of pets from disaster areas. In addition to the safety risks associated with pets that are not taken when people leave, there are other concerns with these animals, whether the abandonment was intentional or not.

According to Irvine (2007), as many as 60,000 companion animals were abandoned after Hurricane Andrew struck in South Florida in 1992. Thousands of animals died when Hurricane Floyd hit North Carolina in 1999, and it is estimated that over 700,000 animals were affected by Hurricane Katrina. Natural disasters such as Hurricane Katrina have made it clear that local, state, and federal plans must include preparation for animals as well as people (UDAW).

Developing a Disaster Plan for Animals

As a result of large-scale disasters such as Hurricanes Andrew, Floyd, Katrina, Rita, and Wilma, wildfires in California, and tsunamis in Japan and Southeast Asia, along with the ensuing media coverage of companion animals' plight during evacuations for these and other situations, the federal government recognized the need to include animals in their emergency planning. In 2006, the Pet Evacuation and Transportation Standards Act (PETS) was passed and signed into law. The PETS Act requires that federal, state, and local Emergency Management Agencies (EMA) include companion and service animals in their disaster response plans. Many states, especially those with large rural and agricultural populations, have extended this planning to include livestock and other large animals. Although it is described as aiding in the rescue of animals, PETS is primarily designed to keep humans safe, since it has been demonstrated repeatedly that people are less likely to take necessary protective measures if they are unable to ensure the safety of their animals (Leonard & Scammon, 2007; Zottarelli, 2010). Since it was passed, state and federal emergency management personnel have worked to establish plans and guidelines for enacting the PETS legislation effectively throughout the country.

Federal and State Emergency Response Plans

As a result of the PETS Act, the Federal Emergency Management Agency (FEMA) is working to establish State Animal Response Teams (SARTs) in each state. With federal funding and access to FEMA training programs, these teams are equipped to help establish local shelters, develop partnerships with locations that can house large and small animals in emergency situations, and train volunteers to work within the incident command system established by human emergency response personnel. SART members and collaborators may include local EMA personnel, animal control officers, individuals from animal shelters, state and local veterinarians, state agriculture representatives, public health officials, animal breeders, kennel owners, farmers, equestrian groups, and concerned pet owners. All members of the SART teams are required to complete several FEMA training courses in order to be familiar with the organization and management systems already in place to ensure human health and safety, which remains the top priority. In addition, several courses specializing in topics such as the handling of companion animals and livestock in disasters, sheltering animals, and pet first aid are available for SART team members through FEMA, the Red Cross, the Humane Society of the United States, and other humane organizations.

Within each state that currently has in place or is implementing an animal response program, individual counties are responsible for developing their own community response group and plan. These county animal response teams (CARTs) are able to recruit and train local residents with special skills and equipment who can respond quickly to emergency situations. They also identify locations that can be used for sheltering both large and small animals. These sites may include veterinary offices, kennels, fairgrounds, and farms. CARTs can only be mobilized by the state or county EMA office in order to avoid activating personnel for nonemergency situations and those that might result in liability claims because they are outside the scope of the local organization (Irvine, 2007). Requiring EMA activation also limits the involvement of volunteers with good intentions but no training in handling animals in stressful or dangerous situations.

Local groups are able to identify specific needs and facilities for both companion animals and livestock found in the area, making them able to assist with a variety of emergency situations beyond storms, including barn fires, vehicle accidents, and disease outbreaks. Local CART teams from two western Pennsylvania counties, for example, were called to assist with a vehicle accident on an interstate highway that crosses the state. A large tractor-trailer carrying pigs bound for processing overturned on the highway. The CART teams provided fence panels for moving the hogs, trailers for transporting surviving animals, a local fairground with pens for holding the pigs until a new truck could be sent out, hoses to keep the pigs cool and reduce their stress in the July heat, veterinarians to treat injured animals and humanely euthanize those that were severely injured, equipment to remove animals killed in the accident, and, most importantly, volunteers familiar with the area and trained in handling the animals and equipment. What could have been a

Fig. 9.1 Pigs were rescued from this overturned trailer July 2010 (Photo courtesy of PASART www.pasart.us)

real disaster with the potential to cause vehicle accidents on the highway and end with a much higher death toll, not to mention increased stress on the animals, was handled quickly and efficiently for all concerned (Fig. 9.1).

Another CART team in central Pennsylvania was activated to shelter a small dog traveling with a truck driver. When the driver suffered a heart attack at a truck stop along an interstate highway, he was taken to the hospital. He was very concerned with the safety of his traveling companion and did not want to leave to get the medical treatment he needed without knowing the dog would be cared for. Different members of the team housed the dog until his owner was released from the hospital and was able to reclaim him. CART teams in Pennsylvania have also been activated to assist with rescuing a horse stuck in a semi-frozen ditch, to establish temporary shelters for animals stranded by flooding in several eastern Pennsylvania counties, to shelter and care for nearly 100 cats rescued from a home by humane officers until they could be relocated to various animal rescue centers, and to locate a place to house dairy cattle that survived a barn fire. These are just a few examples of the benefits of disaster planning and preparedness. In all cases, the lives of animals were saved, potential stress or injury to people was minimized or averted completely, and emergency personnel and trained volunteers were able to be on hand quickly.

Family Preparedness for Pets

While local CART teams and humane organizations do as much as they can to meet the varied needs of pets and pet owners living in the metropolitan areas, small

communities, and rural areas where they are located, they cannot assist every pet owner in every situation. Individuals and families with pets need to take steps to help prevent loss and reduce stress to all concerned in the event of a disaster or emergency. Educating individuals and families who own pets about the measures they should take to be prepared in case an unforeseen disaster or emergency does happen is a key step, since the final responsibility for animals ultimately rests with the pet owner (Beaver, Gros, Bailey, & Lovern 2006). This is particularly important in families with both children and pets, because these families are more likely to evacuate in an emergency but are less likely to take their pets at the same time. Leaving without pets can cause undue stress to all family members, especially the children, and can put family members and emergency personnel in danger when efforts are made to rescue pets later (Heath, 2007). As noted by Captain Richard F. Collins (2006), president of the National Environmental Health Association (NEHA), "Abandoning the pets is a profoundly traumatic experience, and traumatized survivors are more likely to experience themselves as victims, which can prolong and compound mental-health issues. Likewise, those who feel empowered to protect their pets and keep them safe are more likely to regain normal life sooner and to experience a sense of competence" (p. 4). Planning ahead, assembling evacuation or emergency kits for pets, and locating pet-friendly places to stay are all steps that should be taken before a disaster strikes.

The most important step pet owners can take to protect everyone is planning for emergency situations in advance, rather than waiting until an emergency occurs. By having key items assembled and placed in an identified location, animals can be evacuated more quickly in the event of an emergency or disaster. Some emergency managers recommend that evacuees leave with the "3 P's – pets, pills, and purses" (Heath et al., 2000). According to the Pennsylvania State Animal Response Team (PASART) Emergency Preparedness Guidelines for Pets, things that should be done before an emergency situation arises include preparing a list of emergency numbers, ensuring that any medications and special diet items are available, and locating the home of an acquaintance or a motel or kennel out of the immediate vicinity where pets will be welcome (PASART, 2007; Pennsylvania Emergency Management Agency [PEMA]; Stone & Tucker, 2006). In addition, individuals with service animals should be sure to have copies of proper licenses or other documentation to ensure that they are allowed in shelters, as emergency personnel may need that documentation in order to avoid delays and separation of owner and animal (Bethea & Bryant, 2006). Placing pet emergency items in a large duffel bag or plastic storage container will save time and make it easier to evacuate quickly. For additional suggestions and a checklist of pet emergency items, see the checklist below. Other steps in disaster preparedness include having enough pet carriers or crates on hand for each animal and knowing where pets are likely to hide. Time will be of the essence in an emergency, and pet owners may not have time to search for their animals (Millman, Widowski, & Stone, 2008). In the case of outside animals, bring them inside at the first sign of an emergency so they can be located quickly and cannot run away (FEMA). Familiarizing animals with staying in crates, riding

in vehicles, and following basic obedience commands will also make evacuation easier for everyone involved. Preparing for emergency evacuations and making sure all family members, as well as trusted neighbors, are aware of the steps that need to be taken to safely move people and animals quickly can save lives and make recovery from a disaster easier for all involved.

An Ounce of Prevention: Be Prepared

Preparing a disaster travel kit keeps everything easily accessible at a moment's notice. By remembering to include pets as part of any family emergency evacuation plan, last minute decisions that could endanger the safety of humans and animals can often be avoided and lives of pets may be saved.

Prepare a disaster travel kit for your pet
In case you need leave the house with your pet during an emergency, this kit should include:
Identification information, including photos of your pet with you or with other family members, and a plastic bag with a record of their shots, tattoos, or microchip numbers
A carrier or crate (metal or plastic) for each pet
Leashes and collars or harnesses
Water and food bowls that won't break or spill
Your pet's regular food, especially any special foods they need
Water in clean containers that won't break easily
Medicines your pet needs to take, with instructions
Special items for unusual pets like lizards or birds, such as a heat source or special lights
Newspapers, paper towels, disinfectant, can openers, a flashlight, and blankets

Adapted from PASART Pet Preparedness Guidelines (2007)

The Role of Educators in Disaster Preparedness

Animals have been a part of human lives as pets and companions for much of our history. Educators can play an important role in protecting them from harm when disaster strikes by including information such as the checklist above as part of the curriculum, providing basic planning information, and making parents and other family members aware of the risks and benefits of disaster preparedness. For very young children, copies of the checklist can be included with classroom newsletters or incorporated into art projects so they can be posted in the family home. For older children, disaster planning can be a part of health and safety lessons and activities. In addition, guest speakers from local EMA offices and animal response organizations can be invited to share tips and recommendations with children and their families. Disaster preparedness should be as important in formal and informal education programs as teaching children and families about environmental awareness and

healthy eating habits. Knowing what should be done and having an emergency plan in place for family pets when unexpected catastrophe strikes may make the difference between a devastating childhood experience and a happy ending.

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Part III
Humane Education in the Early Childhood Curriculum and Beyond

Chapter 10
Establishing a Climate of Care and Safety: Considerations for Volunteers' Entry and Sustained Involvement in Animal-Assisted Literacy Programs in Elementary Classrooms

Lori Friesen

Keywords Animal-assisted literacy • Humane education • Mentorship • Children • Animals

Introduction

> I think the program is very well organized and it doesn't interfere with anything I'm doing in the classroom. We're working together and the purpose is reading and writing – and I think that this program has just [she makes an exploding sound for emphasis], accelerated it (Teacher Interview 19-11-09).

Animal-assisted literacy mentoring programs are gaining popularity in countries around the world, including Australia, the UK, Italy, Canada, and the United States (Land of Pure Gold Foundation, 2011). Bringing an animal into the classroom setting often inspires a sense of excitement and anticipation for both students and teachers, but entering the unique culture of a school and classroom also carries a responsibility towards remaining sensitive to how animal-assisted literacy mentor teams can either enhance or detract from classroom learning. Many such programs have established thoughtful guidelines around their implementation in schools and libraries (see, e.g., Intermountain Therapy Animals [ITA], 2007), and scholars examining animal-assisted programs in the school setting,[1] contemporary

[1] See, for example, Anderson and Olson (2006), Esteves and Stokes (2008), Friesen (2009, 2011), Jalongo (2005, 2006, 2008), and Limond, Bradshaw, and Cormack (1997).

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school-based mentorship research,[2] and literacy theory[3] can offer additional and valuable, practical and theoretical guidance and support for animal-assisted volunteers' entry and sustained involvement in elementary classrooms. In particular, as is emphasized by the ITA, defining an animal handler volunteer and his or her participating animal as a "literacy mentor team" (ITA, 2010) implies an underlying commitment to the development of a genuine, caring relationship among participants while also offering academic support (Brodkin & Coleman, 1996). My experiences as an animal-assisted literacy mentor and researcher (Friesen, 2010, 2012a, 2012b) and 10 years' experience teaching elementary school have been informed by sociocultural learning theorists such as Vygotsky (1978), Dewey (1963), and Cambourne (1988), who suggest that careful attention to establishing and nurturing an atmosphere of care and trust in the classroom setting can greatly contribute to student learning. Drawing on my teaching, research, and volunteering experiences working in animal-assisted literacy programs, this chapter offers animal-assisted literacy volunteers/mentors and the organizations they are involved with concrete suggestions that may be helpful in preparing for thoughtful entry and meaningful, sustained involvement in elementary language arts classrooms.

This chapter is organized in four sections and is contextualized and informed by current research and literacy theory. The first section offers detailed suggestions for consideration with regard to the initial, general organization of a school-based animal-assisted literacy program. Section "Considerations for general program organization," offers discussion focused on establishing a safe and caring learning climate from the beginning of such a program. Sections "The first two days: establishing a climate of care and mutual trust" and "Initial relationship and literacy development" highlight ongoing and end-of-program literacy activities that have the potential to nurture the development of meaningful relationships among all group members and facilitate purposeful engagement in literacy. Such considerations are essential not only for explicit attention towards the development of a safe, caring, and well-conceptualized program but also can serve to highlight the unique and valuable ways that children can be supported socially, emotionally, and academically during animal-assisted literacy programs.

The examples offered in this chapter are not intended to serve as a model for other animal-assisted literacy programs. Instead, it is my hope that these examples will serve as a springboard for conversation when animal-assisted program organizers and volunteers consult with participating school(s) and teacher(s) to determine if similar or different considerations might be appropriate in each individual context.

[2] See, for example, Dappen and Isernhagen (2006), Ellis, Small-McGinley, and De Fabrizio (2001), and Randolph and Johnson (2008).

[3] See in particular Cambourne (1988), Collins (2004), Dewey (1963), and Vygotsky (1978, 1986).

Considerations for General Program Organization

> You know, I thought the challenges would be the kids being distracted, but even today when I was doing guided reading with some of the groups, my kids are totally on task, so I honestly don't see any problems with it interfering with the routine or distracting the kids or on them not focusing on what they need to get done . . . I mean it's almost like you fit right in, right? Like this is what's happening in our class and they're getting on with their work and when they're called back to do their time they know what they need to do, and it hasn't interfered with anything. It's like they're even working a little bit better and harder (Interview 10-13-09).

As is illustrated by this teacher's comment, the success of an animal-assisted literacy program is strongly tied to the care taken to preestablish the organization of its physical setup (Intermountain Therapy Animals, 2007). Such careful planning can serve to minimize potential disruption to everyday classroom and school life. Researchers examining school-based mentorship programs with children suggest that establishing routines which clearly outline which days and times the mentors will come to the school, along with a "clear emphasis on literacy-based activities . . . contributed to students' security and trust around what to expect each week," which in turn positively affected children's classroom associations with literacy (Ellis, Small-McGinley, & De Fabrizio, p. 104). The following description offers one example of how I worked to develop a predictable, reliable, and minimally disruptive program in one classroom:

> I pre-arranged with the teacher that I would come to her classroom every Tuesday and Thursday morning during regular language arts classes, for two hours each morning. However, as I discuss below, because I had two dogs with me, each dog only worked for one hour each day. Both dogs were Maltipoos; (Maltese/Poodle mixes) a grey and white male named Sparky and a white female named Tango. With 20–30 minute time slots, this allowed for pairs of children to participate in a maximum of four sessions each morning, or two per dog. To sign up, every Friday, the teacher would draw children's names out of a basket. When a child's name was called, each student would place his or her name by the session of their choice on a large chart which was placed in a highly visible space on the whiteboard. The sessions took place in a semi-private space at the back of the classroom, achieved through a folding privacy screen. I brought a blanket, pillows for the children and me to sit on, lap-top pillows for use during writing activities, and a dog bed, which I took home to wash every two weeks. I also brought a small timer, which I set for 20 minutes at the beginning of each session. When one group's time was up, it was their responsibility to get the next pair of children. This allowed me to remain with the dogs and also served to minimize potential distraction from regular classroom learning. At no time was a child left unsupervised around the dogs.
>
> I came into the classroom before the children arrived in the morning and set up our space, and the last pair of children often helped me to put the materials away during recess. I walked the dogs before and following our sessions each morning and I disposed of dog excrement in a receptacle outside of the school property. Finally, the dogs entered and left the classroom, school, and school property in a specially designed and enclosed dog stroller, which served many purposes: the stroller allowed me to maintain distance between the dogs and any children who were not participants in the program, it ensured that the dogs did not become overwhelmed or get injured with many children around, it made transporting materials manageable, and it allowed me to keep the dogs with me and separate from too many small hands reaching in and touching them unexpectedly whenever I needed to leave the classroom (Friesen, 2012a, 2012b).

Such organizational decisions assisted in ensuring that our presence would be minimally disruptive to the school and to the classroom. In addition to such logistical choices, my decisions around how and why children would be selected for participation in the program were informed by contemporary mentorship and literacy research. School-based mentorship research indicates that all children can benefit from caring attention from an adult (Ellis et al., 2001). Literacy scholars suggest that teachers are able to gather vast amounts of knowledge about a child's reading abilities when he or she reads aloud based on the kinds of errors made, and this information provides valuable information to guide future reading instruction (Harwayne, 2000). However, recent school budget cuts have resulted in higher class sizes and therefore less individualized attention for children in many classrooms (Randolph & Johnson, 2008). In many homes, contemporary family pattern shifts have resulted in a decrease in the number of caring adults in children's lives, especially in urban settings (Rhodes, Reddy, Roffman, & Grossman, 2005). Further, the current focus on scientific, skills-based learning in many North American schools due to current reforms such as No Child Left Behind has resulted in a dramatic decrease in classroom reading of high-quality children's literature (Hoffman, 2010; Lehr, 2010). As a result, community programs which bring caring adults into classrooms to provide support for young learners as they engage with high-quality children's literature may be more valuable than ever (Pressley, 2001). Taken together, these insights suggest that all children can benefit from involvement in animal-assisted literacy programs. Therefore, all of the children in this classroom were invited to participate in animal-assisted sessions.[4]

In addition, careful attention regarding the selection of and care for animal(s) who are involved in this kind of work is paramount to minimize potential stress on the animals themselves (Jalongo, Astorino, & Bomboy, 2004). The nonverbal and unconditional warmth that animals, and dogs in particular, can bring to therapeutic and educational environments is becoming increasingly documented in current research (see, e.g., Anderson & Olson, 2006; Esteves & Stokes, 2008; Prothmann, Bienert, & Ettrich, 2006). However, the chronic stress and subsequent illness that animals can experience during animal-assisted programs can be observed in Heimlich's (2001) study, in which she sought to explore how animal-assisted therapy may benefit severely disabled children. In Heimlich's research, the participating animal (a black Labrador retriever named Cody) worked with seven children for two 30-min sessions per week, or 14 sessions in all. By the end of the first 8-week session, Heimlich was unable to continue her study because Cody was suffering from Cushing's syndrome as "a direct result of the impact of the therapy sessions on the animal" (p. 51). Cushing's syndrome is a hormonal disorder which "is often

[4] And every child did choose to sign up every week over the course of 10 weeks, without exception. This indicates not that every child was gaining the same literacy support each week, but that each child benefitted in his or her own way: socially (i.e., some children learned to take risks), emotionally (i.e., some children indicated that they felt less lonely at school), and academically (i.e., many parents and the teacher spoke of the students' increased positive associations with literacy both at home and at school) (Friesen, 2012b).

the result of chronic stress. Cody was placed on oral medication . . . and because of the chronic nature of this syndrome, will receive this medication for life" (Heimlich, p. 52). Practical considerations such as limiting each dog's contact with children in the classroom to 1 h per day, not allowing the children to pick up the dogs, and carefully monitoring the dogs for signs of stress (i.e., excessive licking, yawning, and panting), providing the dogs with regular exercise breaks, water, their own dog bed, and a private space for rest when needed (the dog stroller), all contributed to a positive experience for both the children and the participating animals in my study. Further, incorporating two dogs into the program (both of whom were trained therapy dogs with the Pet Therapy Society of Northern Alberta and had previous classroom experience working with children) allowed me to give each dog a break whenever it was needed.

Other logistical concerns to consider prior to the beginning of a program include predetermining who will be responsible for providing reading and/or writing material during the sessions and discussing whether the students will require any additional materials such as pencils, paper, and/or markers. Having extra resources on hand can save time and can limit disruption both during sessions and during regular classroom learning.

The First Two Days: Establishing a Climate of Care and Mutual Trust

Sociocultural theorists (Dewey, 1963; Vygotsky, 1978, 1986) and scholars working in the area of curriculum and instruction (Jalongo, 2006, 2008) and in literacy education (Cambourne, 1988; Collins, 2004) emphasize the necessity of developing a safe and caring school learning environment for children. Through sharing a vignette illustrating how I worked to develop an atmosphere of care and mutual trust while teaching lessons in safety around animals with one group of grade 2 children, I hope to highlight both the theoretical underpinnings and the pedagogical implications of my choices. During the first 2 days prior to the beginning of the program, I arranged to come into the classroom for two consecutive afternoons to work with the students to teach them how to interact safely with dogs. These lessons were adapted from American Humane (2009) and from Jalongo's work focused on addressing safety issues when working with children and dogs:

> During the first two days, my primary objectives were: (1) To teach the children how they might develop mutual care and trust with the dogs, (2) To encourage students to take ownership in the process of involving the dogs and I in their classroom, and (3) To provide an opportunity for the students to skillfully meet the dogs one-on-one in a calm setting and to feel confident while doing so. Through the children's active, purposeful participation in role-playing activities, in developmentally appropriate games and in meaningful conversations, the children benefitted from increased awareness and repeated practice in meeting a new dog (using a stuffed animal), understanding how a dog's needs are similar to and different than their own, learning things we should and shouldn't

> do around dogs and how to read a dog's body language. Towards the end of the first day, the students applied what they had learned when they got to meet the live dogs; first one child at a time and then in small groups.
>
> Following a discussion focused on what we (as humans) need in order to be happy and healthy and what dogs need to be happy and healthy, we generated a list of ways we could ensure that the dogs were happy and healthy while they were in their classroom. I took the students over to the area of the classroom where we would be working together, and showed them the materials that I had brought (pillows, a blanket, a dog bed, and a water dish for the dogs). I asked the students what they thought of these supplies, and if they thought there was anything else that we might need.
>
> Upon a child's suggestion that the dogs should have food and toys, we talked about the pros and cons of these items in the classroom and decided that it probably wouldn't be a good idea until the dogs knew them a little bit better because dogs can be protective of these kinds of things. In line with Intermountain Therapy Animals R.E.A.D. (2007) and the Pet Therapy Society of Northern Alberta guidelines, participants were allowed to give the dogs treats when under direct adult supervision and once they had been taught how to do so appropriately. The children did not begin to give the dogs treats until Week 5 of the program. We talked about how the dogs would be fed before they came and again when they were finished their work in the classroom (just like them – they could eat on their breaks and at home, but not during class).
>
> On both days, I brought the dogs into the classroom before the students arrived to give them an opportunity to explore the classroom and to become comfortable with this new environment. Because the students wanted to come and visit the dogs as soon as they came into the classroom, both dogs were often enclosed in the stroller so that we would minimally interfere with the classroom routine or with the teacher's expectations for the students. The previous day, following a lively conversation about the children's own needs for breaks (such as recess), the students and I had established agreement that no one was to bother the dogs when they were in the stroller.
>
> It struck me that how the dogs feel about being in the classroom strongly influences the kinds of interactions that the children can have with them; the more relaxed the dogs are, the more playful and engaging they will be with the students. At three times during their second day in the classroom, Sparky engaged Tango in play, right in front of the students. This resulted in lots of giggles from the students, pointing, and laughter. I absolutely love those sounds in a classroom (Fieldnotes, p. 5).

Coming into the classroom to work with the children prior to the beginning of this animal-assisted literacy program served both practical and pedagogical purposes. First, although dog bites are particularly prevalent among boys between the ages of 5 and 9 years (Jalongo, 2006), such injuries are often avoidable when children are provided opportunities to actively participate in age-appropriate lessons focused on interacting safely with dogs (Jalongo, 2008). Further, offering these lessons prior to the beginning of the program allowed the children to feel that they were making important organizational decisions while learning valuable and meaningful new safety skills and allowed us opportunities to clearly establish purposeful boundaries. I observed the students' internalization of these skills in varied ways throughout the course of the program, such as one morning when several children were petting and lying beside Tango just before recess. Observing this, Victoria[5] came by and said, "Don't you think that's a little overcrowding?" Based on a discussion we had had

[5] All names are pseudonyms.

about how excessive licking can be a sign of stress in dogs, Amanda responded, “Yeah, or else she’ll start to lick!” (Fieldnotes, p. 77).

These interactions with the students during the first 2 days, while serving practical safety purposes, also contributed to the initial development of both human and nonhuman relationships. The children were not only learning to trust, feel confident around, and bond with the dogs, but they were also making informed decisions about me. While contemporary research examining child-animal interactions in classrooms suggests that child-teacher communication can improve when children are provided with regular opportunities to interact with a dog (Esteves & Stokes, 2008), as will be discussed in the next section, the role of the adult is an integral part of the team in developing a safe and caring learning environment.

Initial Relationship and Literacy Development

During these first 2 days, I worked to honor the students’ ideas and questions and to facilitate small successes for each child as an individual (i.e., when each child practiced meeting a new dog using a stuffed animal). As Collins (2004) emphasizes, “Children in the primary grades are still so new at school, and we need to provide the kind of safe environment where they’ll be willing to face challenges and take on risks” (p. 5). She notes that “besides physical safety, teachers must also provide a safe emotional environment” (Collins, p. 5). Cambourne (1988) argues that young learners will more likely choose to engage in learning if they have bonded with a caring adult, an observation which is strongly supported by school-based mentorship research (Ellis et al., 2001). A child’s bond with an adult mentor may be particularly important in animal-assisted literacy programs because “when children like and admire their mentors, they wish to imitate them” (Ellis et al., p. 18), an observation which can have direct and important consequences for how children perceive and relate to animals. Within the context of animal-assisted literacy programs, it is perhaps the unique combination of a skilled adult mentor who demonstrates genuine respect and care for the child and dog and the dog’s consistent exchange of affection and nonverbal warmth which can transform the network of relationships and shift the learning environment to one of tranquility and calm.

Although the word “mentorship” usually implies a one-to-one child/adult relationship (Brodkin & Coleman, 1996), inviting the students to participate in pairs during literacy mentoring sessions is supported by social learning theory. Vygotsky (1978) articulates that “every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first, *between* people (*interpsychological*) and then *inside* the child (*intrapsychological*)” (p. 57). In other words, children are able to internalize concepts through conversation and interaction with each other and with their environment. With “literacy” broadly conceptualized as, at minimum, the six language arts, reading, writing, speaking, listening, viewing, and representing (The Language and Literacy Researchers of

Canada, 2008), animal-assisted literacy learning sessions can provide children with valuable opportunities to practice oral speaking and listening skills while engaging in meaningful reading and writing activities (Friesen, 2010).

Therefore, initial animal-assisted literacy learning sessions might be focused on age-appropriate and interactive getting-to-know-you activities to ensure that group members are provided with meaningful opportunities to learn about and feel safe with all group members. For example, a volunteer mentor might invite the children to bring something that they love, such as a favorite book, to share with the mentor and the dog during the first session. Or if it is possible and appropriate, prearrange with the teacher for the students to design posters during language arts class (using drawings, words, and/or magazine photos) to illustrate significant people in the child's life (friends, family, etc.), the child's interests and passions, and their likes and dislikes. Then ask the children to bring these to the first session to share. Mentors might also consider making a poster about themselves and one for the dog to share during the initial sessions with the children.

Sustained Relationship and Literacy Development

While initial animal-assisted literacy learning sessions provide valuable opportunities for group members to begin to get to know each other, subsequent sessions have the potential to deepen relationships through acknowledging and encouraging meaningful forms of reciprocity among group members. Drawing on Fromm's (1956) and Yamamoto's (1988) work, Ellis et al. (2001) observe that during their study of school-based mentoring programs with young children, "expressions of giving were enacted in numerous ways" (p. 175), including but not limited to (1) the giving of concrete gifts such as age-appropriate treats, gifts, and crafts; (2) demonstrations of care such as listening; (3) the giving of genuine praise and offering of emotional support; and (4) the sharing of stories and decisions around literacy activities within the sessions themselves. In response, Ellis et al. observed that children gave their mentors affection, for example, in giving hugs and smiles, expressed interest in their mentors' lives, sacrificed participation in other activities in order to spend time with their mentors, and expressed trust through sharing fears and doubts (pp. 175–176). Within the context of animal-assisted literacy sessions, adult mentors may consider incorporating some of the following novel ways to foster reciprocity during literacy sessions, which have encouraged meaningful engagement in literacy and supported the development of relationships in my own work with children.

Consider what you have already learned about each child through participation in getting-to-know-you activities, and draw from this information when engaging in further activities, such as:

1. Give each child a bookmark with the dog's photo and an individual message from you and the dog to the child. This can be particularly fun to do for special

occasions; for example, I gave each child a Halloween bookmark with a photo of Tango and Sparky in costume, with a unique note handwritten on each. This way, the children can "read with" your dog even when you're not there!
2. Make cards from the dog to the students by pasting a photo of the child with the dog onto a piece of folded cardstock and a meaningful message to the child from the dog on the inside.
3. Place a mailbox in the classroom (in our case, we designed a "Tango and Sparky Mailbox") along with a paper and other writing materials for children to "mail" letters to the dogs. I even made small stamps for the students to use with the dogs' pictures on them! Then, consider having "the dogs" write back to the children (perhaps using the cards described above).
4. Consider designing "animal riddle" cards to give to the students, each with a unique riddle printed on the card for students to read and then share with their classmates.

Finally, you may want to consider designing a "dog blog" for the students to read when they are at home or if they have access to a computer during spaces of free time at school. The blog might include, but is not limited to, short videos and stories featuring the dogs at home and can include a continually updated list of books read with the students for both children's and parents' information. If you are considering designing a blog, ensure that you consult with the teacher and school administration to ensure that you do not violate the FOIP (Freedom of Information and Privacy Act) regulations. As a general rule, do not post any photos or stories which might identify the school, the teacher, or individual children.

Concluding the Program

> You know, I wouldn't change anything, except the fact that it's over. That's the only thing, right? (Interview 16(2)-12-09).

Taken together, the considerations articulated in this chapter strongly contributed to the success of the program and to positive social, emotional, and academic experiences for the participating children and their teacher. When interviewed, parents of the students involved in this study indicated that they would highly recommend this program for other classrooms, with only one reservation: the children's disappointment when the program had to end. On the last day of the program when the dogs and I walked up and down quiet rows of students to say our good-byes, the teacher's eyes welled with tears as she observed: "You know when you asked me about negatives? Okay, there's one." The close bond that many of the children in this classroom had developed with the dogs made it quite difficult for some of these students to accept that the dogs had to leave. Establishing and maintaining meaningful relationships with children carries with it an ethical responsibility to provide a tangible connection with them following the conclusion of the program:

> On our last day together, I gave the students our address and invited them to write to us whenever they liked (and we would write back). Following the program, I kept our dog blog up to date with new stories and information about what we were up to. Also, because we left the classroom just before the Christmas holiday break, I purchased two large, soft, stuffed dogs resembling Tango and Sparky and wrote a letter to the students from us, and wrapped the package up in a large box with a big red bow for the students to open when they came back to school in January. I left the cushions and blanket that we had used during our sessions for the class, and in the letter I invited the students to read to these two stuffed animals. Periodically, I also sent the class letters from the dogs and I for the remainder of the school year.

As Abigail, one of the children involved in this study explained, "It's going to be really hard on me when Tango leaves" (Fieldnotes, p. 86). Her comment is a reminder of the deep emotional ties that children can develop through their participation in animal-assisted literacy programs. However, considerations such as those outlined above can soften what may otherwise seem like an abrupt departure for children who are emotionally invested in these programs.

Concluding Remarks

Animal-assisted literacy learning programs are an exciting and still largely unexplored source of potential academic and social/emotional support for young learners in elementary classrooms. Contemporary literacy and school-based mentorship research can help define the role of the adult volunteer mentor within animal-assisted literacy programs and can assist in outlining the potential for unique support for children offered through these relationships. Attentive consideration of the general organization of classroom-based animal-assisted literacy mentoring programs prior to their commencement can help ensure a positive classroom learning experience for everyone involved, and taking steps to establish a climate of mutual trust and safety can help contribute to initial and sustained literacy and relationship development among all participants. Finally, remaining sensitive to the bonds that children can develop through their participation in animal-assisted literacy mentorship programs is essential in ensuring that the experience is one that will be remembered fondly by these children in the years to come.

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Chapter 11
Beyond Words: Using Language and Literature to Teach Compassion for Others

Patricia A. Crawford

Keywords Compassion • Caring • Kindness • Socio-emotional • Moral education • Character education • Early childhood • Children's literature • Literacy • Language arts • Reading • Writing • Kindergarten • Primary grades

In Kate DiCamillo's (2000) *Because of Winn-Dixie,* the young protagonist, India Opal Buloni, takes a liking to a unique candy:

> "I ate my Littmus Lozenge alone. It tasted like root beer and strawberry and something else I didn't have a name for, something that made me feel kind of sad. . . "
> "There's a secret ingredient in there," Miss Franny said.
> "I know it," I told her. "I can taste it. What is it?"
> "Sorrow," Miss Franny said. . .
> "That's the secret," she said. "That's why Littmus made a fortune. He manufactured a piece of candy that tasted sweet and sad at the same time." (DiCamillo, 2000, pp. 113–114)

India Opal tastes something special, almost intangible in these treats. As she shares them with a ragtag and unlikely cast of characters, conversations are forged, life experiences are discussed, differences are reconciled, and friendships are formed. It was the young protagonist's on-the-spot adoption of a stray dog–named Winn-Dixie after the grocery store in which it wreaked havoc–that seemed to set these changes in motion. Her newfound friends are all reminded of the metaphor of the lozenges, that daily life can bring misunderstandings and elements of sadness to all, but that even the most sorrowful times can be redeemed and made sweeter through acts of kindness, compassion, and friendship.

In this Newbery Honor text, India Opal's life and insights provide good fodder for considering potential life and literacy lessons related to compassion. Notably, India Opal's life does not have a storybook, happily ever-after ending. However, it

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is a life transformed as her growing understanding and compassion towards others help her to also better understand and be more compassionate towards herself.

This chapter will expand upon these concepts. Its purposes are to consider the significance of supporting young children as they learn compassion, to highlight the potential of language and literature in teaching about compassion, and to identify key resources and pedagogical strategies for teaching and learning in this area.

Young Children and the Power of Compassion

In this era of unprecedented accountability, early childhood educators are charged with a myriad of responsibilities. They are expected to familiarize children with formalized instruction at younger and younger ages, preparing them to meet the demands of escalating standards and an ever-burgeoning academic curriculum. In such an environment, it is not surprising that the need to devote time and resources to supporting children's moral and socio-emotional development is often overlooked. Teaching children to care for others is frequently viewed as an "untestable" goal and thus a mere intangible commodity, one not worthy of a significant investment of curricular time.

Yet, nurturing children's ability to show concern and care for others is one of the most profound responsibilities that teachers have (Copple & Bredekamp, 2009; Kemple, 2004; Zakin, 2012). Early childhood educators, in particular, have long recognized that nurturing compassion is at the heart of quality teaching and should be of key significance when developing curricula (Goodman & Balamore, 2003; McNamee & Mercurio, 2007; Teaching Tolerance Project, 1997; Weissbourd, 2003). From this perspective, classrooms are seen as sites of possibility in which children can learn to express compassion and curriculum can be viewed as a springboard for developing the habits of the heart and mind, demonstrated by empathetic, caring individuals.

Compassion has been defined as "a feeling of deep sympathy and sorrow for another who is stricken by misfortune, accompanied by a strong desire to alleviate the suffering" ("Compassion," Collins English Dictionary, n.d.). Compassion requires the ability to look beyond the self, so as to more clearly see the needs and desires of others. Encompassing elements of kindness, caring, and social action, compassion requires that one has both the empathy to feel for others and the practical commitment to do something about it.

Those who work with the young often note and are impressed by their seemingly intuitive sense to act kindly and exhibit prosocial skills in their interactions with others (Goodman & Balamore, 2003; Zeece, 2009). However, it is also clear that children need resources, strategies, and the guidance of caring adults in order to develop these skills fully (Crawford, 2005; Han & Kemple, 2006). Goodman and Balamore (2003) posit that this type of moral guidance and learning happens most effectively in settings that are at once aspirational (which provide a vision for what goodness might look like), integrated (which weave elements that support moral development throughout the curriculum), and collaborative (which allow for both teacher leadership and student voices).

Compassion in the Early Literacy Classroom

The early literacy classroom provides an ideal setting in which a curriculum infused with an emphasis on compassion can take place. Because of their expressive nature, language and literature experiences offer opportunities for students to engage with socio-emotional issues, to better understand the perspectives of others, and to read and generate texts with personal significance (Risko, 2011). Guided language, writing, and literary experiences can provide a springboard for developing the habits of mind and related communicative skills that are vital for expressing care and concern for others.

Learning Compassion Through Guided Language Experiences

"Use your words." "Use words, not hands." Early educators routinely encourage young learners to use language to make their needs known and to respond to other children and situations they find challenging. Because of its social nature, language provides not only a mode for expressing feelings but also an avenue to think through complex situations and "talk one's way" to a better understanding (Vygotsky, 1986). It is both a form of communication and a way of knowing. Thus, guided oral language activities can be used strategically to develop a compassionate understanding of others.

It is easier to be empathetic when one feels connected with others. Therefore, language activities that help children make themselves known and become better acquainted with their classmates are great springboards for understanding and for setting the foundation for the development of a compassionate perspective. Time-honored guided oral language experiences, such as holding a regular sharing time, ensure that all children have a chance to convey their thoughts and to talk about the important people, concerns, and events in their lives (Yazigi & Seedhouse, 2005).

Many teachers have found that morning meetings provide an excellent structure for helping children to develop both language skills and empathy towards other students. Although the structure may vary, morning meetings are designed to provide a routine that will launch the day in a positive manner. A typical morning meeting contains components such as a greeting, sharing time, a group activity, and reading a morning message written by the teacher (Kriete, 2002). These experiences provide a language-rich forum in which children can learn to interact, express their thoughts and concerns, learn to listen to others, and engage in collaborative activities. An important goal of morning meetings is to help children develop a sense of community, expressed through empathy and compassion for one another.

Teachers can bookend the school day by using closing circles as an after-noon alternative to the morning meeting sessions (Januszka & Vincent, 2012).

Closing circles provide an opportunity for the class to come together and bring closure to the day's activities. These brief (5–10 min) sessions usually consist of an opportunity for children to engage in a language-rich activity such as a shared chant, poem, or song and as a forum for the teacher and children to share feelings, to celebrate positive events from the day, and to try to resolve any problems prior to dismissal. The overall goal is to provide a peaceful ending to the day. The by-product is the development of increased communication, understanding, and compassion among class members.

Ideally, both morning meetings and closing circles will provide much more than a "feel good" experience. Beyond setting a positive tone, these gatherings also afford an opportunity to model compassionate responses to children's concerns and dilemmas. They provide an ideal time for role playing caring modes of response. The time can also serve as a springboard for some type of concrete action. For example, some faith-based settings include a spiritual element and children are invited to pray for the needs of their classmates. In other settings, the teacher may elicit an oral response ("Becca's had a very sad thing happen to her. What might we say to her?"), an action ("Jose hurt his foot and can't run today. I wonder what we could do to help him at recess . . . "), or encourage children to follow up with kind words or a note later in the day ("Maybe today you'll have a time to make a get well card for Mrs. Jones, our librarian.").

Learning Compassion Through Writing Experiences

As children grow in their literacy skills, writing becomes another important avenue for learning about compassion. Writing affords the opportunity to both record and express kindness in an intentional manner. Teachers of young children can foster this experience by providing deliberate opportunities for students to consider what it means to be kind to others.

Teachers might shape writing activities so that students have an opportunity to reflect on times in their own life in which they showed compassion. The content and focus of the children's writing can provide great insights into the values that children associate with caring thoughts, words, and behaviors. An example of this can be seen in the writing of Breah, a second grader, who reported on her experience of choosing to donate some of her toys to benefit other children (Fig. 11.1).

Breah's writing reveals the initiative and intentionality of her desire to give to others. She notes that she made the choice to donate the toys herself and was then supported by her mom in the process of carrying out this generous action. Her writing points poignantly to the fact that she was not just giving away random, stuffed animals but that her giving also included "the one that had the most memoreis[sic]." She shows that acting compassionately requires generosity and that one sometimes needs to battle mixed feelings in the process of carrying out these acts ("I was really sad but I knew it would help. . . "). In this instance, Breah acts kindly to a somewhat anonymous group of people to whom she refers simply as "the

Helping the Poor
Last year, I was helping my mom clean the dishes. I thought about all my stuffed animals, And I asked my mom if I could donate some of my stuffed animals and she said yes. So I went to my mom and picked out some of my stuffed animals and one of them was the one that had the most memoreis. It was pink and it was a dog that was the first stuffed animal I ever had. I was sad but it helped the poor. And I put my stuffed animals in the red bin. I was really sad but I knew it would help the poor. And we went to a poor shelter and dropped the bin off there. We went back home and my mom made a special dinner because she knew I gave away a very special stuffed animal. When I went to sleep I dreamed about every person that got one of my stuffed animals.

Fig. 11.1 Helping the poor. Second grade Breah reflects on a time she showed compassion for others by donating her toys

poor." However, she also seems to believe that by giving, she has established some type of a personal connection with this group, as she dreams about each person who might have benefited from her gift. Second grade Meghan responded to the same assignment, by recording a very different type of experience (Fig. 11.2).

In this piece, Meghan describes an act of compassion that is personal and close to home. Her little brother wants to play with his light sabers but is too afraid to go downstairs to get them. Meghan's prose reveals a number of elements. First, she knows her little brother well and understands his concerns. She empathizes with his feeling of fear and considers a very practical way to help him. Interestingly, like Breah, Meghan clearly shows that acting compassionately is a choice ("I thought about saying "no!" but then I thought that he was my brother and that I should

Helping the Jedi!

One day, my brother Jack
was playing starwars. He needed
a lightsaber. His lightsabers
were all the way down stairs.
But there was one problem,
Jack was afraid of down-
stairs! He asked my dad,
and He said "no!"
Then He asked my mom.
But she said "no!" And
then He asked me.
"Well!" I said at first.
I didn't know what to
say. I thoaght abaut saying
"no!" but then I thought
anout that he was my
brother and that I should
help him so I said
"Yes!" I went downstairs
with him. After I felt good
and I knew I helped
someone.

Fig. 11.2 Helping the Jedi. Second grade Meghan reflects on a time she showed compassion by assisting her brother

help him so I said "Yes!" [sic]"). Finally, she indicates that helping someone can sometimes produce a sense of satisfaction, that we often feel good when we help someone in a time of distress.

In addition to recording thoughts about compassion, children may also be encouraged to express kind thoughts to others through interactive activities. For example, children might be encouraged to write cards and letters to their classmates to let them know their feelings. Teachers can support this type of correspondence by establishing class mailboxes and providing a variety of writing utensils and supplies, such as different forms of paper, stationery, and note cards. Guidelines indicating that notes must be signed and positive in tone can help to ensure that students are expressing their thoughts in a kind manner.

Learning Compassion Through Literature

Children's literature is another component of the early literacy classroom that can serve as an excellent tool to help children learn about compassion. Explorations of literature and accompanying discussions offer significant scaffolding to inform and enrich children's socio-emotional selves (Jalongo, 2004; Roberts & Crawford, 2008; Williams, Hedrick, & Tuschinski, 2008). As children read stories, they encounter a whole range of engaging and challenging situations. Their forays into fiction provide an opportunity for readers to understand the dilemmas that characters face and to consider how they might handle similar situations. This allows children to live vicariously through the pages of a book and to see the world through the multiplicity of lenses represented by a diverse cast of characters. Thus, children have the opportunity to consider the moral and socio-emotional choices of characters from a safe distance and to begin to formulate their own responses to similar situations. With guidance, they can begin to ask important questions about characters and the ways in which they did or did not act compassionately within the stories.

Picture books provide a particularly effective medium for learning life lessons. Their formats allow for the sharing of the book with individuals or a whole group within a short and focused time period. Because the plot unfolds and resolves quickly, they can serve as the equivalent of "case studies" for young children who are learning to tease out important lessons about thinking and acting in a compassionate manner. For example, an overview of recently published picture books shows the multifaceted nature of the topic, revealing that compassion is expressed through both words and actions, compassion requires thoughtfulness and intentionality, compassion is expressed through presence, and compassion is generative. A descriptor and sample texts for each of these themes are presented below. Please see Appendix 1 for additional picture book suggestions related to these themes.

Compassion Is Expressed Through Words and Actions

Children show demonstrated socio-emotional growth when they learn not only to feel for others but also to act appropriately and proactively in response to these feelings. Young children show a growing maturity when they understand that their words impact the feelings of others and that related concrete actions can be modes of expressing compassion.

Ivy Loves to Give (Blackwood, 2009) provides a great example of a little girl who is growing on this intentions-to-actions continuum. Ivy is a good-hearted preschooler who continually wants to give to others. In turn, she tries to help her grandmother, parents, sibling, and the family pets. Although her gifts are not always exactly right, she keeps exuding a generous spirit through concrete actions that become more and more appropriate as the story unfolds. The concluding pages show the challenge of giving, when one would rather not do so, and gracious ways of responding, when others give to you.

Those Shoes (Boelts, 2007) offers another example of compassion demonstrated through actions. In this story, the protagonist is school-aged Jeremy, a child who is struggling with his own wants and needs. Family economics prohibit him from having the most popular type of tennis shoe, leaving him to feel alone and marginalized among the kids at school. When he miraculously finds a pair of the coveted shoes at a thrift store, he is saddened to discover that they are too small but buys them anyway. After an inward struggle, he decides to give the much desired shoes to a classmate who needs them and who also longs to share this favorite style of footwear. Jeremy is a very human character who carefully considers the impact of his giving. In the end, he demonstrates compassion for his friend in a most tangible way.

Compassion Requires Thoughtfulness and Intentionality

Many children want to act in a kind, compassionate manner. However, they may find it difficult to know how to do this in practical ways. Although they feel a sense of empathy, they do not know how to translate this into action. A lack of experience, coupled with the very real parameters of agency in childhood, can make tangible compassionate actions seem almost impossible. Quality literature can provide excellent examples of young characters who share the same dilemma, struggling to understand the best ways in which they can act compassionately. These models can serve as examples for children as they work towards determining thoughtful and evolving plans of action in this regard.

An example of this can be seen in *Nico & Lola: Kindness Shared Between a Boy and a Dog* (Hill, 2009). Preschooler Nico is thrilled at the prospect of caring for his aunt's dog, Lola. However, he also wonders about the best ways to show kindness to his new canine friend. He asks himself, "How will I be *so kind*?" (np). The story unfolds to show Nico's intentional planning of caring acts as well as the way he learns compassionate responses through careful observations of Lola's needs. The print text and photo illustrations provide a "think aloud" model, accompanied by the articulation of short lessons in kindness (e.g., "Being kind is helping others in need." "Being kind is sharing even your favorite blanket.").

Older children will find inspiration in *Pitching in for Eubie* (Nolen, 2007), which provides a more complex plot, exemplifying the intentionality required in acting compassionately. The whole family is proud when Eubie receives a full tuition scholarship to college. Yet, they are overwhelmed at the thought of how to pay for her other expenses. Young Lily wants to help her sister, but does not know how. After several failed attempts, she finally finds a way to assist her family and raise money. In this poignant tale, Lilly exemplifies the thoughtfulness, initiative, and hard work that are often required of those who want to show kindness in tangible ways. She also demonstrates that compassion often flows from tapping into the personal skills, strengths, and inclinations that each individual brings to the table and that in many situations, one must be persistent to find a workable, compassionate response.

Compassion Expresses Itself by Being Present

Challenges to compassionate behavior can occur when there does not seem to be a tangible action that will help others. Children and adults alike can feel overwhelmed when they are unable to find the appropriate word to say or action to do. In this case, the gift of being present can speak volumes and provide a true sense of comfort for those who are in need or feeling vulnerable. Many books provide examples of characters who learn to show compassion not only by doing but also by simply being present.

Very young readers will resonate with the feelings of a tiny penguin in *I Am Small* (Dodd, 2010). As the baby penguin begins to experience life, the world seems to be a fast, large, and frightening place. While he could be overwhelmed by his smallness, he finds comfort in the proximity and caring presence of his mother: "... I am small./ But you are big and you are kind./ When I'm with you, I do not mind" (np). A sparse but lyrical text reinforces the importance of staying close to others. Warm pictures of the mother and baby penguin snuggling are juxtaposed with icy scenes, showing that a nurturing presence can make all the difference in challenging situations.

Slightly older readers will garner a sense of agency from *Where is Catkin?* (Lord, 2010). When Catkin jumps off of Amy's lap, he finds a whole world to explore. One step leads to another, until Catkin is over the wall, into the garden, up a tree ... and lost. Even a brave cat can be frightened in such difficult circumstances. Amy knows Catkin needs her and searches until she is right by his side. As they share the warmth of each other's company, Amy is rewarded with a loving purr from Catkin.

Compassion Is Generative

Like adults, many children are inspired by the generative nature of compassion. Well-presented storylines can demonstrate the ways in which an act of kindness can flow in many different directions. In some cases it comes back to the person who originally extended the kindness. In other cases it enables the recipient to show kindness to a whole new set of people. Books that depict the ripple effect of kind acts can help children to better understand the linkages between compassion and social action.

Albert the Fix-It Man (Lord, 2008) provides a great example of this ripple effect. Albert can fix anything and takes great joy in helping anyone who needs assistance. When he becomes ill, the whole town comes out to help: preparing meals, making tea, and bringing cheer. As Albert recovers, he cannot wait to get back to fixing things. This charming story clearly depicts the reciprocal and cyclical nature of compassion.

The Kindness Quilt (Wallace, 2006) explores the concept of kindness by presenting a story within a story. As a group of bunnies gather to hear Aesop's tale of the Lion and the Mouse, they note the power of compassion and decide to do a

"kindness project" so that they can "do-and-draw-and-share" kind acts with others. The project takes on a life of its own as the quilt grows and one compassionate act inspires another.

Stories do many things. Perhaps most significantly, they help readers to know their lives and worlds better (Short, 2012). As children come to understand their worlds, they are better positioned to understand the significance of having positive, caring interactions with others. Teachers can help to buoy this understanding by providing ongoing opportunities for children to transact with books in different ways. Guided discussions in which children are invited to identify literary acts of kindness or to imagine what they would do if they were in a similar situation to a character in the story can help children to develop and refine their understandings of kindness. Pedagogical strategies such as character mapping, readers' theater, and participation in book clubs can help young readers to look closely and delve deeply into the emotional words of characters, making it possible to find both models of and contradictions to a compassionate behavior that are worthy of exploration and critique (Leland, Lewison, & Harste, 2013).

Concluding Thoughts

Near the end of the last century, Vivian Gussin Paley stated that "the task of the teacher is to be nice, to do everything possible to be nice to all the children; to set the model for niceness. It allows the child to take the risk of being nice himself or herself to someone else" (Teaching Tolerance Project, 1997, video comment). Paley based this statement on her observation that modern society was marked by unfairness, harsh tones, and a simple lack of kindness. She reasoned that in such a society, children needed a safe haven in which they could experience something akin to an antidote to a threatening world, a place in which they could see lived compassion as something that was both doable and desirable. In the years since Paley made her statement, the world has seen an increase in terrorism, economic decline, and violence in many schools and communities. The need for having models of niceness in early childhood classrooms has never been greater than today.

Language and literacy classrooms have the potential to be these places, as children learn to find their voices, respect the voices of others, and act in a compassionate manner through meaningful experiences with oral language, writing, and literature. Moreover, quality literature provides a vicarious world in which children can safely learn important life lessons. Within the pages of a book, young readers can encounter these models of niceness and look to characters as literary mentors who provide depictions of compassion in action. Like India Opal Buloni in *Because of Winn-Dixie* (DiCamillo, 2000), they will encounter a host of contradictions and challenges. However, also like Opal, they can learn to find the proverbial Littmus Lozenge melding of sweetness and sorrow that accompanies key life-changing events as well as the more typical occurrences of

daily life. With support, guidance, and opportunities for meaningful language-rich literary encounters, children also have the potential to learn the habits of mind and tangible actions that will help them to act kindly and compassionately in their world.

Appendix 1: Additional Picture Books that Model Compassion

Compassion Is Expressed Through Words and Actions

Gorbachev, V. (2005). *That's what friends are for* (Illustrations by the author). New York: Philomel.
Graham, B. (2008). *How to heal a broken wing* (Illustrations by the author). Cambridge, MA: Candlewick.
Kargman, J., & Kargman, S. (2011). *Pirates & Princesses* (Illustrations by C. Davenier). New York: Dutton.
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Compassion Requires Thoughtfulness and Intentionality

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Chapter 12
Promoting Humane Education Through Intermountain Therapy Animals' R.E.A.D.® Program

Kathy Klotz

Keywords Humane education • Intermountain Therapy Animals (ITA) • Animal-assisted therapy • Therapy dogs

In she came, disheveled and impatient, the 7-year-old girl with whom the team volunteers—a woman and her therapy dog—were scheduled to read. She had been selected for this program because school personnel considered her to be "at risk" of academic failure. The dog's handler described the meeting as follows:

> *This little girl inquired about what was going to happen, and I said I thought it would be fun if she, my dog and I sat together on the blanket and did some reading. She turned to my dog, grabbed her by the collar and shouted at her, "SIT DOWN!!" My dog's eyes opened wide, showing their whites, but she did not sit—she stayed frozen to the spot. The little girl's response: "See? She won't sit down, so how can we sit on the blanket?"*
>
> *I responded, "Well, she's used to hearing kind, soft requests. When you yell at her, she thinks you're mad at her and so she gets upset, because she doesn't know what she did wrong. How do you feel when someone yells at you—do you like that?"*
>
> *"No ... but how else am I supposed to get her to do what I want?"*
>
> *I said, "If you just give her a clear, gentle request, like this—I demonstrated the tone: 'Sit!'—I bet she'll do what you ask."*
>
> *"No way," argued the little girl. "She won't do it."*
>
> *I responded evenly, "Well, why don't you give it a try?"*
>
> *So she did. And my happy, responsive, well-trained dog promptly sat down and smiled up at this unhappy little person. I will never forget the look that melted through her features when that happened. Her eyes went wide, then she smiled, relaxed considerably, and said, beaming up at me, "Wow. She really did it."*
>
> *So began our little journey together. We spent only about 20 minutes with her, once a week, with her reading to my dog, but that was only the first of many experiences that were life-changing for her.*

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So, what were they up to anyway? A child reading to a dog? What made this intervention different from other attempts to support the child's learning is that it included not only guided practice with reading but also the motivational aspect of a mellow dog's presence. Let's back up a bit.

Intermountain Therapy Animals: Organizational Background

Intermountain Therapy Animals (ITA) is a group of volunteers, like many others across the country and around the world, who participate in animal-assisted interactions. Founded in 1993 in Utah and now with more than 350 volunteer teams (a team consisting of a person and their own pet), our mission has always been to enhance the quality of life and therapeutic improvement through the power of the human-animal bond. We visit with people of all ages and diagnoses and all conditions and situations, in a whole spectrum of healthcare facilities. We have found—and studies generally support our experience—that whatever kind of therapy is needed, odds are that adding an animal to the interaction can greatly enhance the environment and provide a catalyst and motivational force for the client or patient who likes animals. (*Note:* The basic research into the human-animal bond is outside the scope of this article, but we would recommend the extensive research libraries available at the Human-Animal Bond Research Institute of Purdue University, www.habricentral.org; and Pet Partners, formerly the Delta Society, at www.petpartners.org.) Our ITA teams visit annually with more than 12,000 clients, providing more than 20,000 hours of service, at more than 100 facilities in Utah, Montana, Idaho, and Nevada. Our teams are screened, trained, tested for temperament and skills, and, if found suitable for the role, provided with liability insurance.

ITA crystallized a mission statement very early on, keeping it simple and clear so that, being part of an emerging and rapidly growing area of practice, we could stay open to whatever possibilities might present themselves that we perhaps hadn't yet contemplated. What we believed passionately then—and have come to know through our experiences ever since—is that animals can inspire an awakening and a connection in people who are suffering through the most difficult moments of their lives and that those sometimes ineffable and often surprising connections can promote healing in many guises. There is a popular phrase among those who rescue and re-home abandoned pets, that "rescue goes both ways," benefiting both the rescued and the rescuers. We have witnessed this phenomenon spreading even farther, including everyone who participates in an animal-assisted interaction, whether patient/client, family members, handler, dog, or facility staff.

There is an important fact that we must bear in mind at all times—that "healing isn't necessarily curing." In many cases, healing or even surviving an accident, disease, or disability is not possible, but the comfort, joy, and distraction offered by our animals provide a unique form of support and satisfaction. In *Made for Each Other: the Biology of the Human-Animal Bond,* author Meg Daley Olmert (2009) cites a wealth of research in many contexts and ultimately credits oxytocin, the "super-bonding hormone," as the key factor in this powerful relationship. She says oxytocin is "not just at the heart of the human-animal bond, but squarely behind the domestication of animals and even the domestication or civilization of humans." She concludes further, "The pieces of the puzzle are falling together. Oxytocin, whether it's released by friendly human contact or various chemical agents, can make us smarter, calmer, friendlier, healthier, even more attractive. But our pets may do this best, since they seem to be particularly good at filling us with oxytocin" (pp. 191–192). Thus, it is the process of establishing, building, and nourishing such relationships—making connections with others—that sets the stage for learning, healing, and growth of all kinds.

Thus, although ITA is considered to be a human service organization, we have always believed that everything we do must be positive and life enhancing not only for the human beings but also for the animals who participate. This starts with emphasizing to prospective volunteers that their animal must be temperamentally suited for enjoying the job, not merely obedient to the handler's requests. Then we provide ongoing education to our human volunteers on animal behavior and research. So it is probably a natural by-product of those efforts that, in 19 years of working with thousands of patient-clients, focusing on physical and emotional therapies, progress, and healing, we have discovered that we can also provide rich opportunities for our clients to learn about humane treatment of animals and appreciation of the role they play in our lives. We see that such experiences with clients may end up enriching life for all those animals that they come into contact with, long after they work with our therapy teams.

We are always eager to learn more and happy to find our work validated with each new research study. We are also rigorous in our commitment to positive training methods, to the best practices in health, safety, and infection control for both people and animals. However, I should be clear that our focus is principally in the world of practical action and experience, rather than research. The true essence of our work is often not easy to measure in quantifiable terms.

We try to keep open minds and hearts and remember that the "teacher is always the student, and the student is always the teacher," so that we won't miss new insights and ideas. We remember that no one answer works for everyone. And we have learned that each team, with its unique human and animal entities, will bring something original to each interaction and come up with some new way to solve a problem or relate with a client that many others of us find inspiring and useful.

Children, companion animals, and the relaxed, quiet times associated with reading are a natural combination

All this, learned and applied by our community of teams over the years, served to nurture the development of a literacy support program which is based on yes—children reading to dogs.

Reading Education Assistance Dogs® (R.E.A.D.®)

By 1999, with 6 years of experience, ITA had become reasonably sophisticated in our practices, and our teams were providing animal-assisted therapy (AAT) in settings as diverse and complex as rehabilitation therapies, the psychiatric and burn intensive care units at the University of Utah Hospital, psychotherapy with abused children in residential treatment care, and work with children with multiple disabilities.

One of our ITA board members was Sandi Martin, a nurse at University of Utah Hospital. As Coordinator of Volunteers and Community Relations, she was a compelling advocate for the idea that patients' pets were significant members of the family and should be permitted to visit them while they were in the hospital. She convinced the hospital to initiate this policy, which has been in effect ever since.

In the fall of 1999, Sandi posed a question to me, as executive director of ITA. She wondered whether the benefits we consistently observed among our healthcare patients would be replicated in the reading environment. It was one of those ideas that, once spoken aloud, seemed like a classic "no-brainer." It certainly had great intuitive appeal. We launched pilot programs in both the library (November 1999) and elementary school (January 2000) settings. What followed became Reading Education Assistance Dogs (R.E.A.D.), the first literacy support model to utilize therapy animals to help young children improve their reading skills and fall in love with reading and books. We target principally those crucial formative years (K-3, ages 4–8) when it is essential for children to learn to read, so that they can spend the rest of their lives reading to learn.

Two things to mention before proceeding: First, we do not claim to have introduced the concept of *reading to dogs*. We have encountered much evidence—including many people's sometimes blushing admissions—that they read to their dogs when they were young. And why wouldn't they? Considering the natural attraction and legendary relationships of kids and dogs, of course that would not only happen but also be documented in art and writing. What we did, rather, was to develop a full literacy support model around this irresistible idea, based on the use of therapy animals and their handlers.

Second, it is important to point out that the R.E.A.D. model is much more than just a dog in the room or a bunch of children all taking turns reading to one visiting dog. While such activities can be fun and entertaining—even motivating to some degree—they do not have the lasting impact of a setting where one dog and handler team comes on a regular basis to read with the same children, one by one by one, ideally for an entire school year. The key to success is (1) removing all peer pressure on the child and (2) employing a handler and a dog who engage with each child individually, forming a relationship that can be trusted and relied upon, and within which the child feels safe, secure, accepted, and appreciated.

What Animals Bring to the Reading Environment

Before reading further, spend a few moments recalling what it felt like when your teacher called on you in school. Were you one of those few who waved your hand in the air, eager to be called? Or, like the larger percentage of the class, did you slouch down in your seat and try to render yourself invisible, hoping the teacher wouldn't see you or choose you? Did your mind go completely blank when all eyes in the class were riveted on you? Did your mouth go dry? Did you forget even answers you knew you knew? Not every child experiences this kind of fear and paralysis, but legions of them do—and not necessarily because they aren't prepared or they are intellectually deficient in any way. As educator William Ayers says so succinctly, "Fear can destroy intelligence."

All this and more hampers children who are at the crucial stage of learning to read. Developing the basic foundation of reading skills is more difficult than we adults remember, but in fact the shadows remain: adults often cite public speaking as

their number one fear. Moreover, adults who read aloud in front of others realize that they are often so nervous about pronouncing the words correctly and "not making fools of themselves" that they are not comprehending much of what they are reading.

Of the many qualities of animals that we have seen to be of benefit to humans in our therapy work, some are particularly pertinent in the reading environment. (Note that many of these are overlapping effects.)

Animals are:

- Genuine, direct, and honest
- Perceived as trustworthy
- Noncritical, nonjudgmental
- Present in the moment
- Excellent listeners
- Powerful catalysts and motivators

Being with animals:

- Offers physiological benefits, including lower heart and respiratory rates and lower blood pressure
- Transforms hard work into a more playful and enjoyable pastime
- Invites transference and projection
- Draws attention outward, away from worry and fear, and toward interest in another
- Reinforces learning and recall
- Lets people feel safe and wholly accepted
- Can enhance confidence and self-esteem
- Dissipates anger, agitation, and aggressive tendencies
- Elicits kindness and nurturing behaviors
- Increases positive expectations of self and others

While it's easy to imagine, and feel instinctively, why each of these qualities might be desirable in a child's reading companion, the children themselves supply the evidence in their comments. Here are typical and quintessential responses from the children in our programs, offered when they were asked what they like about reading to a dog.

- "It seems like they listen more. Mostly when you read to people they're looking around, not listening to you."
- "Bailey never interrupts me or tells me what to do."
- "My mom is always telling me to hurry, and the dog never does that."
- "If I tell Buster my secrets, I know he'll never tell anyone else."
- "Sometimes I stutter, and the dog never laughs at me."
- "I know if I make a mistake he will never go tell my friends that I'm stupid."

Parents and teachers also report to us often and enthusiastically about their kids' reactions to the experience:

- My son burst through the door after school today, saying, "Mom! Today in school I read to a dog! It's the very best thing I've ever done at school—ever!"

- "When my son Keegan started reading to Buddy … I began to notice how excited he was about reading, how he talked about it, and about the dog, all the time, and how the excitement and interest in reading carried over, even when the dog wasn't there."
- One first grader had seen the R.E.A.D. dogs coming and going at his school. He bravely walked by himself into the principal's office and said, "I want to be one of the kids that get to read to the dogs. Where do I sign up?"
- One mother called her son's teacher to report that she had come into the kitchen and discovered that her boy had pulled up a chair and was reading to the picture of his R.E.A.D. dog that was posted on the refrigerator.

And of course, we have reports from the handlers on their many experiences:

> Yesterday was our weekly visit to the school where Ernie and I are a R.E.A.D. team. When one boy, 8 years old, had his turn, Ernie stayed especially close, kissing the boy, nuzzling him, offering his big paw. And when Ernie was lying down beside the boy, the boy kept one hand on Ernie, petting constantly.
>
> The timer went off—our ten minutes were up—but the boy didn't move. He softly said, "My dog died." It broke my heart, so we just sat there so I could ask some questions and get the boy to talk about his dog. Turns out Chip (a chocolate lab—"Chocolate Chip") was the same age as he was. He was hit by a car three weeks ago. I asked about Chip's favorite food, his favorite games and favorite toy—just to get him talking about Chip while Ernie and I listened. It seemed to help.
>
> A big part of the R.E.A.D.® session is to notice when a child doesn't know a word. I will mention that "Ernie doesn't know that word," and we look it up together, then the child explains it to Ernie. After I got home yesterday, I remembered that this particular boy had stopped mid-story and asked me if Ernie knew what a certain word meant. I told him I didn't think so, and to please tell Ernie. That word was "sobbed."

One of our ITA volunteer handlers is a special education teacher, who brings her Sheltie to class. She says she can easily teach complex concepts to her young students with intellectual disabilities by involving her dog. For instance, she can teach prepositions (e.g., at, by, with, from) and adverbs (around, about) by having the dog demonstrate, and she is amazed at how quickly they learn and how well they remember. She notes, "While reading with a third grade boy, he chose a book on amphibians. When he got to the page about poisonous frogs, he spelled out to me that if dogs come in contact with these frogs that they could 'd-i-e.' He then explained that he spelled it so my dog would not hear this and become upset."

Incorporating Humane Concepts

While our principal goal is to develop reading and communication skills, our overarching mission compels us to be sure that everything we do—every activity, every demonstration, and every interaction—be done with reverence, respect, responsibility, and integrity. Our first opportunity is often through a classroom presentation.

Classroom Presentations

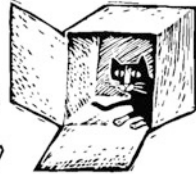
Therapy animals are often invited to classrooms, and we use this venue to not only talk about what therapy animals do but to include important basics such as how to appropriately meet dogs you don't know, responsible care of pets, animal adoptions, and things to think about before bringing a pet into one's family. We have assorted handouts that vary depending on the age of the students. For the youngest students, we typically leave behind both information/coloring sheets and take-home information for parents to reinforce what the students learned *(see coloring sheet example below)*.

What Are Five Things
You Need to Know
About and Do for Your Pet — Every Day?

Your Name ____________
Your Pet's Name__________

1) Good Food: wet food, dry food, treats!

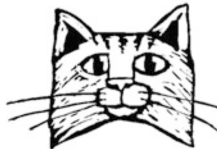
2) Water: Fresh water and plenty of it – at all times!



3) A Place and Space of Its Own
Your pet loves to have its own special place to lie down.
It can be a blanket, a rug, or a bed

4) Exercise and Play – Every Day!

5) Love – Lots of Love
Have you hugged your pet today!?!



Color
Us
Happy!

Coming to visit with the whole class is in fact one of the best ways to introduce a new R.E.A.D.® program. After such a presentation the teacher will say, "These dogs are going to come back every week and some of you will be chosen to read with them. Who would like to do that?" Invariably, everyone's hand shoots up. Names are drawn, and the winners announced—winners having been preselected by the teacher or reading specialist as good candidates for the program. In this way, the participating children feel they have won a special privilege, rather than the discouraging belief that they're off to another remedial reading intervention.

Book Selection

The R.E.A.D® program is designed to facilitate all communication skills. Beyond practice at reading aloud, it includes recognition and acquisition of skills, vocabulary, comprehension, and discussion. Thus, we have many opportunities to discuss real-life comparisons and situations in the context of a safe, trustworthy relationship. In the school setting, where teams read with the same children for an entire semester or school year, the stability and continuity of the relationship engender even more growth and confidence.

Most children are drawn to books about animals, so whenever we are not otherwise constrained by the books assigned by the teachers or reading specialist, we tend to choose animal-themed books to increase the attraction. Many teams carry their own traveling collection of books for the children to choose from. We provide extensive lists to handlers of books that have been tried, tested, and endorsed by the children, categorized by age range, by reading level, and even by dog breeds.

A very short list of some of our favorites for sparking discussion of rescue and adoption issues includes the books *Are You Ready for Me?* (Buchwald, 2007); *Buddy Unchained* (Bix, 2006); *A Dog's Life: The Autobiography of a Stray* (Martin, 2005); *A Home for Dixie* (Jackson, 2008); *"Let's get a pup!" said Kate* (Graham, 2001); and *Everything for a Dog* (Martin, 2009) and the DVD of the episode *Shelter Dog Blues* (Meddaugh, 2010) from the PBS television series, *Martha Speaks.*

Dog Breath: Example of the Possibilities in One Book

Of course the book does not have to be specifically about rescuing a pet to provide many opportunities for discussion and thinking. One picture book that is extremely popular with young children is *Dog Breath* by Dav Pilkey (1994). Clever and witty, with wonderfully engaging illustrations, it inspires all kinds of giggles and is perennially useful in the role-model category. The idea of having dog breath in itself is hilarious to most kids. We have heard endless variations on this conversation:

Handler: It's very special for Fido to be able to read with you, so he got ready by taking a bath, brushing his fur, and brushing his teeth. "Did you brush your teeth this morning?"
Child: "No, I didn't, but if he can do it, so can I!"

Same child, at next session: "Hey, Fido, I brushed my teeth, so I don't have dog breath today!"

But *Dog Breath* is also loaded with an underlying negative message: the parents decide to give their dog away, "free to a good home," because of her bad breath. The children set off to find a cure, but none of them works, so they're down to hoping for a miracle. The miracle occurs that very night when Hally, the dog, knocks two burglars out cold with her bad breath, causing the parents to change their minds and let her stay after all.

Without spoiling the fun, we like to follow up this story with a discussion about "Do you think that could happen in real life? What are some better things the Tosis family might do to solve Hally's problem?"

New Book Rewards

Another feature of the R.E.A.D® program is to let children choose a brand new book to keep after they have accomplished appropriate goals. This is a perfect opportunity to get high quality, highly desirable books into a child's home environment. We have done this since the program's inception, first based on a study which says, not surprisingly, that children value receiving a new book more than a used book. Recent sobering data note that in middle-income neighborhoods, the ratio of books per child is 13 to 1; in low-income neighborhoods, the ratio is one age-appropriate book for every 300 children (Neuman and Dickinson, 2006. p. 31). Further, an extended study by Evans, Kelley, Sikora and Treiman (2010) over 20 years, with 70,000 cases in 27 countries, found that in homes with even as few as 20 books, children averaged three more years of schooling than those in homes without books. These results were not dependent on parents' education, occupation, and "class."

Best of all, the children in our programs get to *choose* which book they want from a number of options, selected for them based on their known preferences, rather than just having a book foisted upon them whether they are drawn to it or not.

Relationships and Connections

The discussion potential of a book like *Dog Breath* illustrates the key to the effectiveness and success of R.E.A.D.® in all dimensions, whether reading skills, personal hygiene, or a better understanding of how to care for and support one's pets. That key is making connections and establishing relationships, and it is by far

the most powerful way the R.E.A.D. program is a positive intervention for children. Our opportunities for humane education teaching moments arise spontaneously, for the most part, rather than being part of an outline or formal curriculum that we attempt to apply during our reading sessions.

Humane Concepts Through Role Models

We are enthusiastic proponents of Katz's (1988, 1999) four categories of learning as they apply to the education of young children. The four categories are (1) knowledge, (2) skills, (3) dispositions or "habits of mind," and (4) feelings. Katz notes that "Results from longitudinal studies suggest that curricula and teaching should be designed to optimize the simultaneous acquisition of knowledge, skills, desirable dispositions, and feelings" (Marcon, 1995). The R.E.A.D. program does just that—it integrates all four categories of learning into one experience. Children can build on their *knowledge* by having their questions answered, getting explanations, descriptions, and accounts of events, as well as through active and constructive processes of making the best sense they can of their own direct observations.

They acquire increasing *skills* from instruction and practice, skills which improve with continued guidance, practice, repetition, and actual use.

As for *feelings*, children immediately experience positive emotional and physiological responses to the presence of the animal. As the relationship evolves and they build competence and confidence, their positive feelings multiply, too.

Dispositions, or habits of mind, are learned primarily from being around people who exhibit them; they are strengthened by being used effectively and by being recognized and appreciated. It is this kind of learning that we have found especially potent for teaching humane principles. The little girl in the anecdote that opened this chapter is a classic example of how this works. She first saw the handler demonstrate a better way to achieve her desired result, and then she had the opportunity to try it herself and saw that the results were effective.

By definition, a majority of the children selected by their teachers and reading specialists for participation in R.E.A.D. are, in the estimation of education professionals, coping with various challenges that may jeopardize their success in school. The challenges that children and families face may be primarily socioeconomic, where even with the best of intentions, parents must work multiple jobs to fulfill basic needs and therefore have little time for home support of children's learning tasks. Or the challenge might be academic, in families where the parents have little education themselves or do not speak English.

Of course there are many unhealthy family dynamics represented in our population, as well, where there may be some level of emotional or physical neglect and/or abuse of children or animals is occurring in the home. Many of the children who participate in our programs come from backgrounds where dogfighting is common and where parents have killed small animals as children watched. Children in all

of these situations need to feel the security and stability of a trusted relationship, the seldom-experienced joy of being with others who are vitally interested in them; who engage and remember; who do not judge, criticize, or diminish one's abilities or efforts; and who are simply happy to see them each week. No one is better than a therapy dog at providing an atmosphere like this. Certainly, while some family dogs may also be such a friend and companion to a child, we see few such relationships in the populations we work with.

The Dogs Are Also Role Models

It is often the dogs themselves who offer compassion and empathy. Following is an example of a meaningful moment that occurred between the child, handler, and dog during a R.E.A.D. session at a special event in a local bookstore:

> It was Halloween, and Samantha, my English Cocker Spaniel, and I were R.E.A.D.ing at a local independent bookstore for a special holiday reading party. The displays were filled with Halloween story books featuring animals as the characters.
>
> Lots of children came up and said, "I want to read to your dog!" Among them was a boy who was taller than most of the other kids. He happened to be one of ITA's clients at a residential treatment center, where the kids have been physically, sexually or emotionally abused, usually by their own family caretakers. They have already suffered much in their young lives, and most are behaviorally difficult and unable to form healthy attachments with others. We sat beside him and I positioned Samantha at his side, facing him.
>
> The boy began to read The Hallo-Wiener, the story of Oscar, a young dachshund who was always being teased by the other dogs. Making matters worse, Oscar's mother had bought him a hot dog bun costume for Halloween and made him wear it. "Wiener dog, wiener dog," all the other dogs would shout, then laugh and run away.
>
> The boy struggled along. He finally sighed, turned to me and said, "I'm not a very good reader." (It must be kind of hard to say that to a virtual stranger, don't you think?) I told him that Samantha and I thought he was doing a fine job and would be happy to help him pronounce any words. And, besides, we weren't in any big hurry, and Samantha really enjoyed hearing the sound of his voice. The boy seemed to take my words to heart, took a deep breath and started again.
>
> As he began again, Samantha looked directly at him with (dare I say) such compassion. Still sitting, she leaned forward and licked the boy on the cheek—twice—slowly and tenderly. She then sat back and continued to look at him. The boy became motionless, his eyes reflecting a deep, inward exploration. Then, he wiped a tear from his cheek with the back of his hand and continued on.
>
> Like many others, I wonder at the intuition of our canine therapists, how Samantha sensed the need of our young friend and knew just how to respond. She had made it safe for him to read aloud because she was nonjudgmental. And her gentle encouragement gave him a brief moment to experience simple love and acceptance.
>
> By the time the story was over, Oscar the Wiener dog had saved the day. I like to think Samantha may have done the same thing for our young friend.

The calm, gentle, nonjudgmental presence of a well-trained dog can reduce the stresses associated with reading aloud

We have learned never to underestimate the dogs' influence as role models even when we do not entirely understand how it may have "worked." This letter is from the mother of a boy with autism spectrum disorder, a child of highly educated and aware parents where all possible resources had been marshaled to help him:

> Joshua is seven years old, my middle child, one of four brothers and a little sister. At first glance, you would simply see a gangly, fair-haired, blue-eyed boy who is always asking questions and in constant motion. You would not see an autistic child who could not speak words until he was four years old, who prior to that could communicate by sign language alone.
>
> You would not see an autistic boy who also has cerebral palsy, who would flap his arms and hands uncontrollably at the sight or mere thought of a ceiling fan. You would not see a little boy who lacked empathy or social skills. Instead, you see a smart, curious boy who learned his academics and speech from years of occupational, physical, speech and specialized autism therapies in his home, 25 hours per week, for years through the Early Autism Project.
>
> Joshua could be taught many, many things, but he never learned about emotion or empathy. He never really loved or felt other people's emotions. He appeared "normal" but was missing a piece of the puzzle. He knew what both crying and laughing meant, but really did not care unless they were his own emotions. We did not really know if he would ever develop this part of his soul and, as he got older, we just dismissed the possibility. Until Sandy, one of his therapists, started taking him to read to a dog named Journey.
>
> We knew Josh was not mean to animals as we had pets of our own. He was mostly indifferent, as though they were a piece of furniture or a stuffed animal. But we began to notice a change in Josh. A few weeks after he began reading to Journey, he started petting his own dog and cat. He started talking to them and interacting lovingly with them.

He eventually bridged this new awareness even further, into relationships with his siblings and parents. He began caring and asking why the baby was crying or why mom was happy. He began to care about others. He began to feel empathy.

Reading to Journey gave Josh the last piece of the puzzle to make him whole. It opened up a part of him, deep inside, that even years of therapy and encouragement and human love could not.

The quiet patience of a R.E.A.D.® dog opened a door that we thought was locked forever.

Reading with dogs can motivate children to persist at the challenging task of deciphering and comprehending the printed word

Training and Preparation

In order to determine if people and their dogs have the appropriate skills and temperament to support people of all ages who are dealing with huge challenges, they must be screened and evaluated. There are several national organizations that do this, including Pet Partners (formerly the Delta Society), Therapy Dogs, Inc., and Therapy Dogs International.

Ethologist Patricia McConnell (2012) says that very few dogs have the temperament to do therapy work and that it is among the hardest job we ask our dogs to do because by thousands of years of evolution, dogs are by nature trusting of their own pack members and slow to accept those outside that pack. To be effective, therapy animals must enjoy and engage with countless strangers—often who are suffering some degree of pain, discomfort, or emotional difficulty—week after month after year.

The best organizations test a team at least every 2 years and offer extensive training for both human and canine elements of the team.

After a handler/therapy dog team is qualified, registered, and insured for liability, those teams who are interested in learning how to support a child who is learning to read must go through additional training and licensing. Our R.E.A.D. training package, for example, includes a 220-page manual and a 25-min team training DVD, and while it can be completed by home study, we also have a network of licensed instructors throughout the USA and beyond to provide half- and whole-day workshops to help potential handlers learn and practice the essential and desirable skills.

Once properly trained and prepared, a committed R.E.A.D. team can be a formidable influence on the life of a child, with ongoing responsibility and opportunities to be role models, to demonstrate the effects of kindness, nurturing, and positive interaction.

Here is a letter from an ELL teacher, on the return of a team for a second year:

> I just wanted to let you know how thrilled my students and I are to have you and Buddy come again this year.
>
> I am just in awe of what you and Buddy and other R.E.A.D. volunteers have the potential to accomplish with students who are struggling readers. Of course as an E.S.L. teacher I think especially of my little group of English language learners and I think of the several different levels on which they are touched by your visits.
>
> First of all, since most of my students come from homes where no English is spoken at all, they face the challenge of coming to school every morning just trying to learn to communicate in their adopted language. It is amazing how one look at Buddy can tear down the scariest of barriers in the most timid, non-English-speaking student. Doggies are a universal love and I can see that in the eyes of my boys and girls when they first see Buddy. And since the boys and girls are for a short time unafraid and comfortable they can open up and communicate about what you and Buddy are doing . . . reading! What a motivator!
>
> Secondly, these students tend to come from low socio-economic homes where both parents work full time in order to provide for their children. There is often not enough time or money left to spare to encourage and motivate young readers or indulge them with books to read. This makes the gift of the books from you and Buddy especially important because, for some of my students, it may literally be the only book they personally own. Many of the boys and girls came to school the day after you visited only to tell me that they had read most of the book that very night!
>
> Finally, I have seen your visits touch my students in another exceptional way. Several of my boys, like many children today, tend toward at least some aggressive and sometimes violent behavior. However, when these same boys dealt with Buddy all I heard was how awesome he was and how much they wished they could have a dog like Buddy to take care of and befriend. Wow! A free book, a reading lesson and a lesson in compassion all in one sitting, what a concept! That is what you and Buddy have taught us that R.E.A.D. volunteers can do in a school setting. Not to mention the fact that my students, like all children today, often desperately need a little unconditional acceptance and a few free hugs. Nothing warms a little body and mind more than to know that he or she is loved and cared about by someone. That is what you and Buddy bring to our little class and what I imagine all R.E.A.D. volunteers bring to the students they visit. Thank you for blessing our class with all of these gifts. We can't thank you enough and we would do anything we could to make these special visits available to more students. We can't wait for next week!

R.E.A.D.® in Alternative Settings

While the principal focus of R.E.A.D. is with children K-3, the techniques and tools we employ in the R.E.A.D. setting are certainly adaptable to many other environments beyond elementary schools. Libraries are the other principal mainstay of the proliferation of reading-with-dogs programs over the last decade, and we have also established effective programs in youth detention and after-school programs, bookstores, in-hospital tutoring, and in ELL and special education classrooms.

Conclusion

There are numerous potential benefits of bringing animals into the classroom, including programs like R.E.A.D.® (McCardle et al., 2011, pp. 126–127), even while calling for more ongoing studies. They also caution about the importance of using "well-trained, seasoned, qualified animals" (pp. 136–137). We know that R.E.A.D®. works, and that it is not just a gimmick or passing fad; we have now registered more than 3,000 therapy teams across the entire United States, Canada, and communities as far afield as Spain, Italy, Sweden, South Africa, and Slovenia.

We also agree with Lori Friesen (2009) who says, "With each year of experience I gain as an educator, the more I realize how relationships are at the heart of teaching and learning." Based in the key context of positive relationships, the R.E.A.D. program has been able to promote humane goals along with improved reading and communication skills. It offers a valuable and meaningful way to make a positive difference in the lives of children, one by one by one.

Getting Started: How to Implement a Reading Education Assistance Dog® Program

Mary Renck Jalongo

1. *Understand the training component.* In R.E.A.D.®, the handlers are trained to work with their dogs and provide reading support to the children. Teachers and reading specialists contribute the expertise in reading assessment and often work with school and/or public librarians to identify appropriate books for each child. Dogs for reading assistance are at a different training level than a service dog, so the animals used in reading programs are not being "taken away" from children with special needs. Additionally, if a dog is well trained, that training may have been provided in another setting originally (e.g., the prison dog training programs that are emerging around the country). If the dog has mastered the commands, this training will transfer over to another competent

dog handler. Therapy dogs need to be even tempered around adults, children, and other dogs. They also need to be graduates of advanced obedience training that teaches them to ignore distractions, adapt quickly to different situations, and respond reliably to commands.

2. *Gain strong administrative support and educate colleagues.* Begin by making it clear that this is *not* a request to bring an untrained family pet along to school as a diversion or just a large group presentation. Rather, R.E.A.D.® is a carefully planned *reading* program that involves collaboration among, at the very least, reading professionals, registered and insured therapy dogs and handlers, school and/or local library and media specialists, and the families/community (see printable brochure at www.therapyanimals.org). Most schools will require all literacy mentors to have a criminal record check and child abuse history clearance.
3. *Address safety and liability issues.* The best protection is prevention of problems. Work exclusively with trained, registered, and regularly evaluated handler/dog teams. The dogs of Therapy Dogs International, Inc. (www.tdi-dog.org) and the Pet Partners Program of the Delta Society (www.deltasociety.org) are rigorously evaluated prior to earning their registration, and these dogs are taken on many visits to public places to ensure that they are reliable, steady, and predictable (Peterson, 1999). In order to maintain their certification, handlers must renew their annual membership. The Delta Society requires all teams to retest every 2 years.

   TDI, Inc. provides members in good standing with liability insurance; however, this coverage is for volunteers only. Therefore, a teacher cannot bring her or his own therapy dog to class and have insurance coverage because he or she is in the role of employee rather than volunteer. One way for teachers to have the opportunity to work with their own therapy dogs is to volunteer for an after-school, summer program, or library program in which they would be categorized as volunteers.
4. *Consider the community.* Before championing an animal-assisted therapy program, think about what the community will support and adopt a culturally responsive approach to pursuing the project. In urban settings, fierce dogs may be kept as protection and as a status symbol. As a result, children may have been taught to fear dogs. In some cultures, dogs are viewed with disgust, as a nuisance or as a food source. Identify some community organizations and agencies that might lend support. Participation in the program needs to be completely voluntary, and attractive alternatives to participation must be provided.
5. *Plan the budget.* Generate a list of everything that will be necessary to deliver the program, and then determine who will be responsible for payment. Talk with others who have experience in operating these innovative programs to get a sense of what to expect in terms of overall cost. Financial arrangements for these intervention programs vary. Usually, the dogs and their handlers work on a volunteer basis. Some handler/therapy dog teams have financial support from multiple sources, such as grants, professional organizations, or private

donations. Typically, the major expense is the consumables—the books that are given to the children. Some teachers apply for mini-grants through their schools or work with local businesses or charitable organizations to defray the cost of the books. It is best to put the financial plans into a written budget that is shared with all of the people responsible for the program.

6. *Determine which children are to participate.* Realize that there may not be enough dog/handler teams to accommodate every child at the school. Therapy dog programs often focus on children with reading difficulties. Perhaps it might be better to use therapy dogs as an incentive in a summer program for children who need additional support in literacy learning. Realize also that animals, like people, have unique characteristics so give careful consideration to the match between child and dog. A child who is very distractible might benefit from an older, mellow dog, while a child who is disinterested may brighten at the antics of a livelier animal.
7. *Secure parents'/guardians' permissions.* After obtaining the support of supervisory personnel, obtain permission from the parent(s)/guardian(s) of every child to be involved in the program. After securing permission from families, determine if the individual child wants to participate. Make sure to verify the child's medical history so that children who are allergic to dogs or afraid of dogs will not be included. All registered therapy dogs are bathed or well groomed immediately before a visit and many handlersuse an anti-dander spray or wipes so that the most common source of allergic reactions is significantly reduced. If a child's allergies are mild, meeting in an outdoor space is another option. It is strongly advised that the parent/guardian consult with the child's doctor if the child has any medical condition that might prohibit participation in the program.
8. *Address sanitation concerns.* Although animals can spread disease and infection or carry parasites, all registered therapy animals have regular checkups with their veterinarians and are cared for by their handlers. All Therapy Dogs International, Inc. and Delta Society handlers are required to provide proof of vaccination and vet visits as well as proof of insurance to any institutions they visit. The field of pediatric nursing is an excellent resource for infection and disease control advice (Brodie Biley, & Shewring, 2002) since over 600 hospitals in the United States sponsor animal-assisted activities and therapy programs (Peterson, 1999). On rare occasion, even a highly trained dog will become ill suddenly and vomit, urinate, or defecate in the school or on school property. Their handlers bear responsibility for cleaning up after their animals and are prepared to do so appropriately.
9. *Inform colleagues, staff, and families.* After all the necessary clearances are obtained, be certain to send a letter out to all of the families that reminds them about the program and their child's participation in it. Make an attractive information board that highlights the purposes of the program. Take photographs of the handler/dog teams that will be visiting and post them on the bulletin board. You may want to get permission to take digital photos to post on the school's website before the program begins. Expect that such information will generate genuine excitement and animated conversations among the students.

10. *Prepare children and staff.* Before the program officially begins, plan an interactive group presentation by the handlers that coaches the children on appropriate ways to interact with their canine reading companions. Children will be eager for the dogs to like them, so this is the time to reinforce being quiet, slow, and gentle when interacting with their reading buddies. Make this large group session open to parents/families and make multiple copies on videotape and compact disc so that families who were unable to attend can learn about the project at home.
11. *Plan for the dogs' safety and well-being.* Adults responsible for the program must be vigilant in protecting therapy dogs from harm. It is never the case that dogs and children are simply thrown together while adults stand idly by on the sidelines. Rather, it is important for all of the adults involved to observe carefully and be alert to the first signs of difficulty. Children can sometimes get excited and act unpredictably around the dogs, accidentally injuring them in the process. All of the Therapy Dog International, Inc. dogs are tested around hospital equipment, children, other dogs, and distractions (e.g., startling noises, food placed on the floor). Attention must also be paid to the dog's health and stamina. It is unfair and unethical to over schedule therapy animals to the point where they are exhausted; Intermountain Therapy Animals recommend no more than 1.5 h of work at a time for the dogs.
12. *Decide how expansive the program will become.* If a reading/therapy dog program is implemented with those students who have reading difficulties, do not be surprised if many other children and families wish to participate. Unlike other reading interventions that may inadvertently stigmatize children who lag behind peers in reading, one great advantage of R.E.A.D.® and other quality programs like it is that most children reading at or above grade level genuinely want to participate too. Meeting this demand may require quite a few more registered therapy dogs and handlers. This is where another level of community collaboration can come in as educators, humane organizations, animal shelters, dog trainers, AKC members, 4-H, high school students, senior citizens, adults with special needs, and incarcerated individuals can all play a role in selecting, training, and evaluating therapy dogs. Accommodating children without reading difficulties may be best accomplished in a library-based program where children can sign up for a read aloud session with the therapy dog and handler.

    Source: Updated from: Jalongo, M. R. (2005). "What are all of these dogs doing at school?" Therapy dogs to promote children's reading practice. *Childhood Education, 81*(3), 152–158; reprinted with permission from the Association for Childhood Education International.
13. *Conform to the site's safety precautions.* Many schools require visitors to ring a buzzer in order to have the doors unlocked, sign in and out on a visitor's log, wear a name badge, and provide emergency contact information. Literacy mentors need to submit copies of their paperwork and wear their identification badges.

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Kathy Klotz is the Executive Director of Intermountain Therapy Animals and Reading Education Assistance Dogs® (R.E.A.D.®). She has directed Intermountain Therapy Animals (ITA) since January of 1997, helping it grow to become one of the largest groups of its kind in the world. Kathy was educated at Brigham Young University in a multi-major humanities program and spent 26 years in the corporate world in California, managing the delivery of professional services ranging from political opinion polls to hydrogeological groundwater services. The direction of her life changed completely when she got Foster, her Australian Shepherd, and began volunteering with him as Pet Partners® at the Utah Schools for the Deaf & the Blind and Primary Children's Residential Treatment Center in 1993.

In her work with ITA, Kathy has collaborated with and made presentations to the full spectrum of health care and social work professionals, including physicians, nurses, therapists, social workers, and educators, as well as countless school children and community groups. She holds certifications from the Delta Society as an Advanced Team Evaluator and a Pet Partner Training Instructor, as well as being a Pet Partner herself since 1993.

Kathy directed ITA's introduction of Reading Education Assistance Dogs® (the R.E.A.D.® Program) in November of 1999 and has been instrumental in the growth and development of the program ever since, writing the training manuals, presentations, and video productions and directing the training of teams, instructors, and facility personnel.

Recognitions and awards earned for ITA and the R.E.A.D. program during Kathy's tenure include:

- National Educational Outreach Partner with PBS Television's "Martha Speaks" series, 2009–2011
- US Senate Resolution No. 338, declaring a national Reading Education Assistance Dogs® Day on November 14, 2009
- "Best of Salt Lake"—Human Service Organization, 2008 and 2009
- Delta Society "Beyond Limits" 2004 national awards for Affiliate Organization of the Year, Therapy Animal of the Year, and AAT Practicing Professional of the Year
- Latham Foundation "Search for Excellence" Biannual Video Awards, Grand Prize (Gwen Thebault Award) for "How to Become a R.E.A.D. Team," for Excellence in Humane Education.
- Utah Libraries Association "Special Service to Libraries" Award, May 8, 2003
- Utah Council of the International Reading Association "Celebrate Literacy," November 14, 2003
- National Daily Point of Light Award, June 12, 2002

Chapter 13
Guardians of the Earth: Teaching Children to Care for All Living Things

Audrey C. Rule and Ksenia S. Zhbanova

Keywords Attitudes toward animals • Biodiversity • Biophilia • Environmental education • Humane education

Biophilia

Consider the following excerpts from researchers' notes concerning first and second grade students' views of various creatures.

Researcher: *"Please complete the sentence as fast as you can. Tell the first thing you can think of to finish the sentence."*
Researcher: *"When Phyllis sees a spider in a web, she . . . "*
Student: *" . . . celebrates and calls somebody to help research it."*
Researcher: *"Tony thinks snakes are . . . "*
Student: *" . . . fascinating because they have no legs."*
Researcher: *"When Charlotte sees a dead skunk on the road, she . . . "*
Student: *" . . . feels really sad and prays for it."*
Researcher: *"You don't like some creatures because . . . "*
Student: *" . . . they are all cool in some way; there are none I don't like!"*
Researcher: *"When Jim sees a cockroach, he . . . "*
Student: *" . . . says, 'Oh look! A cockroach like in the movie Wallee."*
Researcher: *"When Lisa sees someone killing a bug, she . . . "*
Student: *" . . . says, 'Stop! Don't kill it – they help the environment!"*
Researcher: *"When you hear other kids talk about how much they hate bats, you . . . "*
Student: *" . . . scream, 'I am upset you are saying those things!'"*

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The foregoing selected responses from first and second grade students, collected by the authors, reveal students' positive feelings toward nature. Across cultures, humans display a basic valuing of nature (Ulrich, 1993) called biophilia (love of nature) (Wilson, 1984) that has been postulated to have developed during hunter-gatherer times and which modern humans have inherited (Kellert, 1993). "Biophilia asserts the existence of a fundamental, genetically based, human need and propensity to affiliate with life and lifelike processes" (Kahn, 1997, p. 1). Even children younger than 2 years old have exhibited biophilia (Moore & Marcus, 2008).

There are compelling lines of evidence for biophilia's existence. Ulrich (1981) conducted several studies that showed the positive effects of viewing nature in reducing stress, decreasing anxiety, maintaining attention, and improving mood. One study showed that participants who viewed images of natural water scenes recovered from psychophysiological stress more quickly than those patients viewing urban scenes of human-made structures. Participants viewing nature also exhibited more positive emotional states and wakeful relaxation. West (1986) conducted a study concerning the health of prison inmates. Those inmates who could see meadows or mountains from their cell windows had significantly lower rates of stress-related sick calls than inmates with window views of the prison courtyard. National Renewable Energy Laboratory (2002), in a review of the literature on the effects of natural light on building occupants, concluded that natural light has been shown to improve the health, productivity, and safety of occupants, including research findings that showed that students learning in natural light environments achieved higher test scores. Bowler, Buyung-Ali, Knight, and Pullin (2010) conducted a meta-analysis of studies comparing the effects on health of walking or running in a natural (park or landscaped campus) versus a synthetic (indoor/outdoor track) environment. They found evidence of more positive emotions, greater ability to concentrate, and improved cardiovascular functioning for persons moving through the natural environments. Faber Taylor and Kuo (2006) summarized several studies showing that children's exposure to green spaces positively affected their ability to concentrate and mitigated some effects of attention deficit hyperactivity disorder.

Kahn (1997) and Kahn and Lourenco (2002) conducted interview studies to determine the presence and progression of ideas related to biophilia of several widely different populations of elementary and middle school children, including urban African-American students in Texas, Brazilian children from Manaus along with a small remote Amazon village, children from the Prince William Sound in Alaska, and children in Spain. The majority of children in all groups were aware of local environmental issues, talked about them with their families, valued aspects of nature, and acted to help the environment. They concluded that children—a cross cultures and even in impoverished urban conditions—show concern for nature.

Children's Ways of Knowing

Experiences in natural areas are among the most significant of childhood as determined by a study of adult recollections (Sebba, 1991). This is because children experience the world in a deep sensory way supporting peak experiences. Children's ways of knowing differ from those of adults; young children learn through concrete perceptual information gathered through their senses and from movement or action with or against objects, passing through the sensorimotor stage to the concrete operational period (Crain, 2000; Piaget, 1952). In contrast, adults use cognitive models to more abstractly view the world and direct their perceptions.

White (2006) cautioned that a central problem to most environmental education programs is that teaching is done from an adult perspective with premature abstraction, rather than the child's way of concrete discovery and sensory exploration. A negative result of attempting to teach children too early about rainforest destruction and endangered species is that children become anxious and seek to avoid learning anything else about the issue—they develop *biophobia*, which can develop into a fear of any contact with the natural world. Elementary and preschool children's environmental education should focus on developing children's emotional and affective values of nature rather than abstract, logical, rational perspectives (Kellert, 2002). The more personal children's experiences are with nature, the more likely they are to later become environmentally active (Bunting & Cousins, 1985; Harvey, 1989) because children's values are formed in their earliest years (Piaget, 1952; Wilson, 1997). However, if children are deprived of contact with the natural world, biophobia may develop, in which people regard nature as nothing more than a disposable resource (Dutcher, Finley, Luloff, & Johnson, 2007) or source of danger.

Throughout most of human history, children freely played in wild areas, perhaps in or under a large tree, on the banks of a creek, or in nearby woodlands (Pyle, 2002). For much of the last two centuries, children lived on farms or in villages surrounded by natural areas. Unfortunately, during the late twentieth century, many children's environments became urbanized (Chawla, 1994). However, even as recently as 1970, children still had freedom to roam neighborhoods, play on sidewalks, greenways, vacant lots, and parks (Clements, 2004). The disconnect between today's children and nature has been called *nature-deficit disorder* (Louv, 2005). Moore and Marcus (2008), along with White and Stoecklin (2008), recommended unstructured time spent in nature (not manicured landscape areas) each day in interacting with the plants, animals, and insects.

What types of experiences are needed for developing a love for nature? Malone and Tranter (2003) identified three essential aspects of environmental education: (1) learning about interrelationships in the environment, (2) discussing environmental stewardship, and (3) having interactions and experiences in the environment. They noted that opportunities for all, but especially urban children, to experience the

natural environment in a safe, unpolluted way are lacking. Even children's use of school playgrounds has been curtailed because of crowded play areas, shortening of playtimes, removal of equipment, increased bullying, and closure of school grounds after hours (Evans, 1998). Access to former traditional play environments such as streets and wild spaces has been lost partly because of parents' fears of traffic danger, bullying, or attack from strangers but also partly because of the disappearance of natural spaces and current perceptions of what children ought to be doing. Instead of outdoor roaming and free play, children spend time in scheduled, supervised sports activities or play inside each other's homes or commercial recreation facilities. This lack of exposure to the natural environment has long-lasting consequences for children's social and emotional competence (Tranter & Pawson, 2001). For example, Herrington and Studtmann (1998) found that when children played in an environment dominated by play structures rather than trees and bushes of the natural environment, they established a social hierarchy based on athletic ability, but when playing in an open grassy shrub-studded area, they engaged in fantasy play with the social hierarchy being dominated by children with inventive and imaginative ideas.

What happens to children who are separated from nature—those who grow up in air-conditioned, sanitized homes playing video games or sports on mowed fields? Consider another set of selected excerpts revealing some first and second grade children's views of animals.

Researcher: *"When Fred sees a spider in a web, he . . . "*
Student: *" . . . gets a stick and wraps the web and makes the spider fall down and steps on it."*
Researcher: *"Tammy thinks snakes are . . . "*
Student: *" . . . really scary!"*
Researcher: *"When Charlie sees a dead skunk on the road, he . . . "*
Student: *" . . . probably says, 'Eww! Run over it - I don't care about skunks."*
Researcher: *"You don't like some creatures because . . . "*
Student: *" . . . they all have weird features."*
Researcher: *"When Jane sees a cockroach, she . . . "*
Student: *" . . . stomps on it."*
Researcher: *"When Leo sees someone killing a bug, he . . . "*
Student: *" . . . feels happy – one less bug in the world."*
Researcher: *"When you hear other kids talk about how much they hate bats, you . . . "*
Student: *" . . . let it go because I don't like bats either."*

White (2006) stated that loss of contact with nature results in a hampering of the child's development and acquisition of knowledge of the natural world, leading to apathy toward ecology and continuing loss of nature through industrial and personal exploitation. Ballouard, Brischoux, and Bonnet (2011) hypothesized that because today's children tend to play indoors and are strongly influenced by the media focusing on conservation of a few iconic, appealing, and usually exotic species, children's knowledge and concerns about local biodiversity may be diminished. They determined the animals most often addressed and then surveyed children,

finding that children knew very little about local fauna (being able to identify local animals only minimally), being concerned mostly with publicized species. They concluded that environmental education must focus on outdoor activities that develop conservation consciousness about the local environment.

Human Attitudes Toward Conservation

Serpell (2004), building on earlier work of Kellert and Berry (1980), identified two main areas of motivation for conservation of animals and their environments: (1) affective motivations of caring and emotional responses to the species and (2) utility and economic value. In a seminal article on public perceptions of predator animals derived from a national study, Kellert (1985, p. 170) characterized nine categories of attitudes toward animals based on area of primary interest:

- Naturalistic (interest/affection for wildlife and outdoors)
- Ecologistic (concern for environment as a system of interrelationships)
- Humanistic (strong affection for individual animals, principally pets)
- Moralistic (concern for the right and wrong treatment of animals)
- Scientistic (focus on physical aspects and biological functioning)
- Aesthetic (interest in artistic and symbolic characteristics)
- Utilitarian (concern for practical and material value of animals)
- Dominionistic (satisfaction derived from the mastery and control over animals)
- Negativistic (avoidance of animals due to indifference, dislike, or fear)

Kellert (1985) also identified animal categories ranked by human preference. The category of domestic animals was most preferred followed by attractive animals. Predators were less liked followed by animals associated with property damage and then human injury. Unattractive animals were liked even less with biting, stinging invertebrates being the most disliked of all. Kellert found that study participants who had positive perceptions of predators tended to be more appreciative of wildlife in general and evidenced a greater interest in protecting wildlife and natural habitats. Children are strongly influenced by adults. Therefore, parents and teachers need to model a comfort with and enjoyment of nature, along with respect for all living things (Chawla, 2007; Phenice & Griffore, 2003).

Animal Characteristics That Influence Human Attitudes

Human attitudes are affected by the physical and behavioral aspects of a species (consider cuddly koalas or colorful parrots) with animals closely related phylogenetically to humans (e.g., chimpanzees and gorillas) or similar in physical characteristics being preferred to those more distant or dissimilar (Plous, 1993). Schlegel and Rupf (2010) studied Swiss primary and grammar school children's attitudes toward 27 native animals, finding that children valued appearance above whether the species was beneficial or rare. Other influences were size

(Bitgood, Patterson, & Benefield, 1988) and morphology (Lorenz, 1981): consider people's aversion to insects, small creatures with unusual body shapes. Muris, Mayer, Huijding, and Koning (2007) found that the perceived level of cleanliness of an animal had the potential to strongly repel a person, becoming a decisive factor in acceptance or repulsion. Therefore, a focus on the positive aspects of an organism in education is essential. Human perceptions of animals also are affected by past and current interactions with specific species (e.g., cattle, goats) and cultural factors such as religion and tradition or property relationships (e.g., horses) and use in recreation (e.g., dogs, fish).

An example of culture and religion affecting the biodiversity of natural areas was described by Shen et al. (2012). These researchers studied the local bird diversity of nine similar villages in Tibet. Traditional Tibetan Buddhist culture seeks to develop a harmonious relationship between humans and nature in which all life is respected and protected. Each village had a sacred mountain area it protected from farming, hunting, or logging. The researchers found that bird diversity was greatest around the most traditional villages, which were generally populated with people who had less formal education. Although some villages had residents with more education and formal knowledge of ecology but less adherence to religious traditions, bird diversity was reduced in these areas.

There are sex differences in attitudes toward animals. Females tend to show more affective connections to animals with less concern for socioeconomic value with men's trends being the opposite (Burghardt & Herzog, 1989). However, in a study of Oregon citizens' willingness to pay for salmon recovery, Montgomery and Helvoigt (2006) found that males, persons with graduate degrees, and persons of Native American identity were more willing to support this endeavor. Other socioeconomic variables include the tendency for urban dwellers compared to rural residents and people of higher socioeconomic status compared to those of lower socioeconomic status to support conservation (Kellert & Berry, 1980).

Generating Willingness to Protect Biodiversity and the Environment

"[N]o society can retain for long its economic or cultural prosperity if it is built upon a despoiled natural world . . . We must dispel the great fallacy of the modern age that human society no longer requires varied and satisfying connections with the nonhuman world" (Kellert, 1996, pp. 216–217). As the world population continues to grow, human and wildlife populations come into closer contact, with conflicts between people and animals increasing. Li et al. (2010) studied the factors influencing local Chinese people's attitudes toward wild boar in a national nature preserve through interviews. Wild boars enjoy protection because of the endangered Sika Deer in the preserve and are expanding their territories into the neighboring rice paddies, which are severely damaged by the intrusion. In an effort to curtail losses, local farmers have switched to cotton crops less damaged by boars. Unfortunately, cotton does not yield well in the moist soils, and cotton farmers must then purchase

rice for food, causing both direct and indirect economic hardship. The researchers concluded that the key to this situation is to reduce the effects of crop damage and to educate the local people on the importance of protecting the ecosystem.

In recent years, researchers have attempted to show the economic impacts of biodiversity and loss of species as a way of generating public interest in preserving biodiversity. Ecosystems, "biological communities that interact with the physical and chemical environment, with adjacent ecosystems and with the atmosphere" (Holling, Schindler, Walker, & Roughgarden, 1995, p. 54), provide benefits to humans by maintaining a genetic storehouse of organisms, providing food sources, protecting watersheds, and assimilating wastes (Folke, Holling, & Perrings, 1996). The economic value of biodiversity is a recognized important factor in policymaking and protection, but not an easy task because economic values are not directly observable through monetary transactions in markets (Martin-Lopez, Montes, & Benayas, 2007). Human attitudes toward biodiversity influence financial support; therefore, it is important to understand human attitudes toward different species. Additionally, it is largely *human* activity that has reduced biodiversity and brought habitats into peril; human behavior must change if loss of species is to be halted (Montgomery, 2002). Economic development, especially the expansion of agriculture, tourism, and urbanization projects, has a large impact on the biodiversity of natural areas.

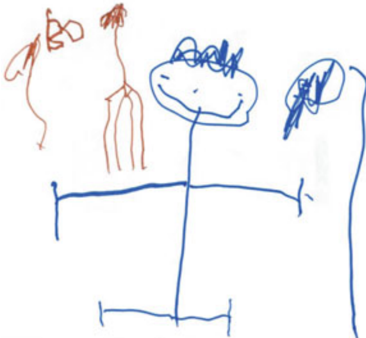
Impact of Education

People's knowledge of an animal species affects their valuing of biodiversity (Serpell, 2004); scientific research and popularization of a species through the media have been effective in influencing the public's view, often creating a charismatic species. A possible problem with this approach is that conservation policies emphasizing charismatic megafauna—relatively large animals that people admire, such as bald eagles, grizzly bears, wolves, condors, and mountain lions—leave much of the landscape not immediately habituated by those "star" animals open to exploitation (Montgomery, 2002). However, sometimes, a charismatic or "flagship" species can be identified that has habitat requirements that correspond to the needs of many other species, thereby positively influencing their well-being. Although strategies that focus on charismatic creatures gain considerable public attention and funding, much of the ecosystem relies on less well-known and less-liked creatures that need to be conserved. Therefore, understanding factors that affect the public's view of animals and wildlife preservation can assist in developing effective programs.

Familiar creatures (Schlegel & Rupf, 2010), such as those common in zoos and animals with important local use, tend to be valued. This variable can be positively affected by education. For example, a Swiss project called "Nature on the Way to School" was able to educate children about the names and appearances of native plants and animals, resulting in student preferences for native species rather than showier garden plants and "lovable" pets (Lindemann-Matthies, 2005). Organisms that are not aesthetically appealing (e.g., worms), too small to notice

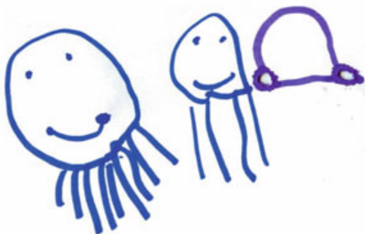
(e.g., algae, bacteria, fungi), or that generate fear (e.g., scorpions, centipedes) tend to be devalued. Martin-Lopez and others (2007) in a study of various groups' reactions to caring for biodiversity in a national park area in Spain found that ecological knowledge was a mitigating factor in dislike of feared animals such as snakes, spiders, and bats. In Schlegel and Rupf's study (2010), Swiss school children ranked attractive birds and butterflies above large carnivorous mammals, taking into account the potential danger of each animal with smaller vegetation-eating hares more positively perceived. However, animals that are recognized as vulnerable or endangered may engender positive emotions (Gunnthorsdottir, 2001).

Wildlife media such as television programs and nature magazines can have a profound effect on human attitudes toward nature conservation (Martin-Lopez et al., 2007). Montgomery (2002) found that when people were aware of the various benefits of conserving different species in an ecosystem, they ranked those benefits ahead of economic, recreational, aesthetic, or symbolic values. Environmental education may also take place at zoological parks. Morgan and Hodgkinson (1999) reported that a majority of family groups visited the small Kansas zoo in their study, their primary purposes were to teach children about animals, take time to be in nature, and have fun as a group. They suggested that zoos increase natural habitat enclosures to benefit the animals *and* to educate visitors about environments and wildlife conservation.

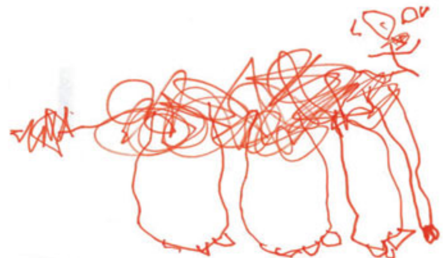


"Daddy is at the zoo. He likes giraffes" by Bobby, age 4

"A bear and a lion" by Ethan, age 4



"This is a dog and a octopus. I made a window for them to look out the house" by Alyssa, age 4



"This is a lion. It has four legs and a tail and a face" by Dominic, age 4

Young children are sometimes fearful of—but also intrigued by—animals. In these drawings, preschoolers attempt to represent what they know about wild animals

Effective Humane Education Programs

Faver (2010) identified three different approaches of teaching humane education to students: presenting curriculum-blended lessons, reading and discussing literature with humane themes, and promoting action projects that involve students with animals. Such humane education lessons can be effectively delivered either as intense single sessions or as an extended series of lessons and result in children's attitudes toward animals becoming more positive (Malcarne, 1983). Ascione and Weber (1996) showed that the results (more positive attitudes toward animals *and* humans) of humane education lessons can be lasting in a year-later follow-up study of a project with fourth graders. Another somewhat related intervention is *animal-assisted therapy,* which involves the central use of an animal in all sessions conducted. Rather than being a teaching tool, the animal is used in a therapeutic way to redress empathy "deficits" or to promote pro-animal attitudes during a therapy session aimed at helping the persons in the program in some other way usually not directly related to humane education (Arbour, Signal, & Taylor, 2009). Although there are many humane education programs operating in the USA (Kruger, Trachtenberg, and Serpell estimated 2,000 modern programs in 2004), research on their utility and efficacy is limited. Many studies were conducted with poor research design such as posttest information only, no control group, or inappropriate measures. The programs span diverse disciplines, having animals present, focusing on literature, or both, making it difficult to identify the most effective programs (Arbour et al.).

One well-designed older study with pretest-posttest data and a control group (Ascione, 1992) investigated the effects of a 40-h, year-long curriculum-based humane education program on elementary students using several standardized attitude scales demonstrated statistically significant results. First graders showed positive animal-related attitudes, but no change in empathy toward humans. Second grade students evidenced no differences in animal attitudes or empathy. However, fourth graders showed improvements in both areas, and fifth graders showed changes on the human empathy measure alone. Ascione reported that the changes for fourth graders were long lasting, being present 1 year later.

Some studies have shown that humane *actions* do not immediately follow changes in self-reported attitudes, indicating that more time or more than a single intervention program may be necessary to affect desired behaviors. An analysis of a 4-month-long curriculum project by Nicoll, Trifone, and Samuels (2008) that featured therapy animals visiting a first grade showed the program improved students' self-reported attitudes toward animals, but there was no discernible change from self-reports of children's interactions with animal companions. Arbour and others (2009) reported the results of an eight-lesson, 4-week program conducted in Australia. The lessons did not involve live animals, but the program ended in a field trip to visit animals at the Royal Society for the Prevention of Cruelty to Animals. Boys' attitudes toward other people improved but their self-reports of humane treatment of animals did not change significantly from pretest to posttest. There were no significant changes in either measure for girls.

One humane education program that potentially showed a difference in student behaviors was investigated by Sprinkle (2008). This 11-week program in violence prevention and character education featured a shelter dog during the 45-min weekly classroom visits. Students exhibited an improvement in attitude and the number of school suspensions decreased, although these could have been influenced by some other variable, as no control group was present. Prokop and Tunnicliffe (2010) investigated whether having pets at home influenced Slovakian children's attitudes toward three generally unpopular animals—a crop pest (potato beetle), a predator (wolf), and a carrier of disease (mouse)—finding that having pets was associated with more positive attitudes toward and better knowledge of both unpopular and popular animals in the study (ladybug, rabbit, squirrel). Also recently, Aguirre and Orihuela (2010) conducted a pretest-posttest control group study of a humane education curriculum package (ten 1-h lessons spread over 10 weeks) with first graders in Mexico. The program, which featured role playing, decision making, creative writing, and research activities, was found to increase children's knowledge of animals and safe ways of interacting. Several unique early childhood programs that immerse children in nature are "outdoors-all-weather" nursery schools and "forest kindergartens." In places such as Germany, Scotland, Scandinavia, Switzerland, and Austria, children spend their entire day outdoors unless there is extreme weather (Esterl, 2008; Moore & Marcus, 2008), allowing them to form deep bonds with the natural world. Elementary students should have time to explore natural areas, create imaginary worlds, make things with natural materials (mud pies, pretend leaf salads, forts, and structures), collect "treasures," take care of animals, and plant gardens (Kellert, 2002; Sobel, 1996; White & Stoecklin, 2008).

Kahn, Severson, and Ruckert (2009) warned that two global trends—degradation or destruction of natural areas and unprecedented technological development—have resulted in the replacement of actual nature experiences with remote or vicarious experiences via video, webcam, robotic animals, and immersive virtual environments. Several studies by these researchers indicate that technology, such as a plasma screen image of the outdoors replacing a real glass window, produced psychological effects not as beneficial as the actual nature experience. Similarly, interacting with a robotic dog or tending a garden through a remotely controlled robotic arm did not produce the same positive psychological effects as interaction with the real animal or environment. The researchers further assert that exposure of people to virtual environments may cause them to lose contact with the natural world, resulting in less support for the environment as people have less and less knowledge of what they are missing.

Recent Work in Humane Education by the Authors

The authors of this chapter conducted a recent pretest-posttest control group designed study of first and second grade students with 26 students in the experimental group and 16 in the control group (Rule & Zhbanova, 2012). This set of curriculum

integrated lessons focused on knowledge of animal lifestyles to change attitudes toward generally disliked animals: bat, skunk, snake, mouse, spider, centipede, cockroach, and mosquito. Children viewed appealing color images of the animals and read/listened to facts about each animal's ecology, making observations and inferences. Fine motor skills and art were integrated through craft making of the animals set against student-drawn scenes of the environment. Literacy skills were practiced as children analyzed animal poetry for rhyme and meaning, then wrote dialogues for a human and an animal puppet discussing their views of the animal's characteristics and behavior. Student attitudes were assessed by students rating their liking of the animals on a scale of 1 (hate) to 10 (love) before and 2 weeks after the six 1-h lessons over 6 weeks. Results showed significant improvement in attitudes toward the targeted animals considered as a whole for the experimental group, but not for the control group. Student reactions to the lessons were initially cautious but quickly changed to excited anticipation as the researchers arrived each time to teach the lesson. They enjoyed the poems and worked intently on the craft projects, which were made into a book.

Examples of some of the animal poems used in the study's integrated curriculum, written by the first author of this chapter, are provided in Rule and Zhbanova (2012). Two additional examples are given here for classroom teachers considering implementing a similar unit themselves. The first poem here, written by Audrey Rule, was designed to highlight animals that depend upon mosquitoes for food. Because the first and second graders in the study were also learning Spanish, the author incorporated a Spanish phrase that rhymed with "mosquito" into the poem. The second poem was also written by Rule to show one of the major ecological roles bats play—that of eating insects and thereby preventing them from over-multiplying to consume all the available resources.

A Poquito **– Little by Little**
Small mosquito, *a poquito*,
You feed bats on the wing,
Small mosquito, *a poquito*,
You make barn swallows sing.
Small mosquito, *a poquito*,
To frogs' tongues you do cling.
Small mosquito, *a poquito*,
You're shiny fish bait bling.
Small mosquito, *a poquito*,
In size, you're a small thing,
But little by little, each mosquito
Does a full belly bring!

BATTY about BATS
Be**A**s**T**s that **B**l**A**s**T** from **B**l**A**ckes**T** cave,
BATtling, **B**e**AT**ing the insect wave:
Be**A**u**T**iful **BAT**s, of you I rave.
By e**AT**ing bug**S**, the world you save!

Summary

Humane education programs have the potential to strongly influence children's perceptions of the natural world and their willingness to protect it. Effective programs need to focus on children's concrete sensory ways of knowing rather than presenting material in an abstract format. Elementary children need to develop a connection and love for nature through actual structured and unstructured interactions in the natural environment before they are told the anxiety-provoking news of how human actions have endangered many species. Programs that educate children in the characteristics and lifestyles of local organisms can have a strong impact of children's caring for their surroundings.

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Chapter 14
Humane Education in an Early Childhood Science Education Curriculum

Amanda K. Onion

Keywords Science education • Humane education • Animals • Projects • Early childhood • Empathy

Introduction

Science educators and humane education supporters recognize the importance of understanding the pressing issues that humans, animals, and the planet are facing. Professional educators from both disciplines acknowledge that all living creatures depend on the natural world for survival; therefore, it is vital for all learners to understand the impact of environmental issues for both humans and nonhuman animals. Science and humane educators equally urge learners to cultivate appreciation for the ways that even the smallest decisions impact our daily lives and have far-reaching consequences (National Research Council [NRC], 1996; Weil, 2006). The guiding principles of science education and the essential elements of humane education are highlighted in Table 14.1.

Both disciplines recognize that critical thinking and creative problem-solving processes are fundamental to making responsible decisions in our own lives and the lives of others whom our decisions affect (Institute for Humane Education [IHE], 2010; NRC, 1996).

Developmentally appropriate interaction with animals is an active process that helps children understand the shared needs of humans and nonhumans and provides opportunities for children to discover how they can meet those needs in their daily

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Table 14.1 Alignment of science education and humane education principles

Science education guiding principles	Humane education essential elements	The common thread
Improving science education is part of systemic education reform	Providing accurate information about issues	Systemic educational reform
Learning science is an active process	Fostering curiosity, creativity, and critical thinking	Learning is an active process
Science is for all learners	Offering positive choices and tools for problem solving	All learners can develop tools for problem solving
Science learning should reflect the intellectual and cultural traditions that characterize the practice of contemporary science	Instilling reverence, respect, and responsibility	Developing respect for differences

Sources: National Science Education Standards, National Research Council (1996) and the Institute for Humane Education (www.humaneeducation.org)

lives (Nicoll, Trifone, & Samuels, 2008). Young children benefit from positive interactions with animals, particularly in regards to social-emotional development and emerging concepts of empathy (Meadan & Jegatheesan, 2010; National Institutes of Health [NIH], 2009).

Although early childhood science education and humane education are not routinely linked in the literature, this chapter will explore common threads between the four guiding principles of science education and the essential elements of humane education. Each "thread" will be exemplified by learning experiences that demonstrate the natural integration of humane education and science education curricula through child-directed investigations about animals.

Common Thread 1: Systemic Educational Reform

"Actions have consequences." This simple three-word sentence is a lifelong lesson that is learned by young children as they explore their environment. Developmentally appropriate humane education offered to young children develops awareness of the effects of their choices as well as understanding the connection between humans, environmental health, compassionate treatment of other animals, and ways of building a more sustainable society (Weil, 2006). The preamble of the *National Science Education Standards* encourages educators to move forward to a shared vision if we are to integrate systems and produce coherent efforts toward shared goals (NRC, 1996). Science opportunities that are developmentally appropriate imbedded with humane education ideals support young children as they develop science process skills. The lesson that "actions have consequences" is part of every investigation where children are actively engaged in practicing

science process skills. Extending the learning of science process skills to incorporate humane education elements is illustrated by the following account of Lucky the kitten.

My daughter took care of Lucky for a few days. He had been neglected for too long by the time he found us. He lived his last few days well fed, warm, and loved. Although she was only 4 years old, she developed a realization of the effects of making choices for herself and others. Over the next several years, many more kittens came in and went out of our lives, in addition to puppies, birds, baby goats, baby pigs, and cows. My daughter continued to develop her science skills and values during that time. Twenty years later she has rarely been without an animal in her life. Presently her "baby" is a pure black Italian Mastiff who outweighs her by 20 pounds!

This tiny kitten was an experience in the lesson "actions have consequences" for my daughter. He staggered up the driveway severely dehydrated, his eyes were matted shut, and his hair was falling out; she named him Lucky. This 4-year-old child knew that what had happened to Lucky was not the way an animal should be treated. She went with me to take him to the veterinarian, she asked question after question about why his "people" didn't want him anymore and how to take care of him. As a preschooler she used the science process skills of observing, measuring, inferring, predicting, and communicating to make sense of the experience. Taking care of Lucky became a focused investigation into learning about kittens, how to take care of them, and the harsh realization that not everyone shares the same feelings of responsibility to another living creature. The concept of making choices that affect someone or something else became very concrete to her.

Beginning in early childhood, animals dominate children's literature, toys, clothing, furnishings, and utensils. Many young children regard their pets as a sibling. It is no surprise that children show a heightened interest in animals. The typical goal of a humane education program is to cultivate a positive attitude toward animals, promote social awareness and respect for life, and encourage children to be compassionate (Daly & Suggs, 2010). A widely held belief is that this attitude will extend into kindness toward people (Arbour, Signal, &Taylor, 2009). There is a growing body of research that underscores the development of empathy in children who have exposure to animals. Signal and Taylor (2007) also found a significant relationship between positive attitudes toward animals and demonstration of high levels of human empathy. In an earlier study Daly and Morton (2003) reported that child ownership of a dog seemed to show significant influence on higher levels of empathy development. In their subsequent study (Daly & Morton, 2009) individuals who reported having a dog as an adult as well as in childhood scored higher in an Empathy Quotient/Social Skills factors measurement. Vizek-Vidović, Arambašić, Keresteš, Kuterovac-Jagodíc, and Vlahović-Štetić (2001) also conducted research in the area of adult reflections on relationships with childhood pets. The findings showed similarities with current research indicating that adults who had pets as children were more empathetic as adolescents and adults. Additionally, the findings indicated that childhood pet ownership may influence career choices in "helping professions."

Collectively, the research points in the direction of pet ownership experiences as children impacting adult personal behavior skills such as empathy. The body of literature indicates that childhood interaction with animals has positive effects on both childhood and adult social and emotional development.

The experience my daughter had with the kitten embodies the type of investigation that the *National Science Education Standards* encourages for young children. Improving science education as part of systemic education reform focuses on emphasizing in-depth understandings and investigations of concepts, themes, and principles rather than emphasis on lower-level skills such as memorization. The values and goals of educational systems are dynamic and change in response to the needs of citizens and society. Those needs become the "actions that have consequences" in terms of educational reform. The *National Science Education Standards* is not a curriculum but rather a framework for educators and citizens to use for making decisions about how well their educational system is supporting science learners. The standards address the educational system as a whole and require that all aspects of the educational system change. In this way, the standards provide for sustainable change and promote educational change that can realistically occur and be maintained (NRC, 1996). Science program improvement also provides equal opportunities for learners that are developmentally appropriate, inquiry oriented, interesting, and relevant to learners' lives.

Humane education typically has an insignificant place in the curriculum of most schools. If present at all in the early childhood curriculum, it frequently consists of using programs and materials from organizations such as the Humane Society of the United States, the American Humane Association, the American Society for the Prevention of Cruelty to Animals, and the Dumb Friends League. Even though humane education activity at the informal level is increasing significantly, the more formalized approach of imbedding humane education in programs for young children and in teacher preparation programs has not occurred (Burnett, 2000). One of the essential elements of humane education is "Providing accurate information so students understand the consequences of their decisions as consumers and citizens" (Weil, 2006, p. 32). She also describes humane education as the "umbrella that encompasses many educational reform movements" (p. 32). Those reforms include sustainability education, animal protection education, social justice education, character education, and various interventions designed to reduce violence and aggression.

Systemic educational reform is a common thread between science education and humane education. If the goals of education are to be modified in response to the needs of society, then increasingly apparent is the need of imbedding humane education into early childhood science curricula.

As science educators we are preparing young children to live in a world that is experiencing exponential technological, human, and nonhuman change. We are preparing learners to solve problems that do not exist yet. As early childhood educators, we strive to support the physical, cognitive, and social-emotional development of young children. It is therefore imperative that we offer children purposefully designed learning experiences that encompass the elements of humane education,

empathy and compassion, while developing emerging science education elements of problem-solving skills. A science education curriculum that includes humane education will support children in thinking critically and carefully about making choices and choosing solutions to problems.

Common Thread 2: Learning Is an Active Process

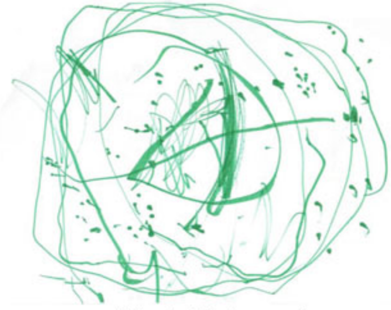
A guiding principle of science education is that learning science is an active process (NRC, 1996). The *National Science Education Standards* (NRC) defines an active process as one that includes both physical and mental activity. This principle has a corresponding thread in humane education of fostering curiosity, creativity, and critical thinking so that people can evaluate information and solve problems (Weil, 2006). Emphasizing active science learning means shifting emphasis away from teachers presenting information and covering science topics to children establishing connections between their current knowledge of science and the scientific knowledge found in many sources including their own investigations. Conezio and French (2002) found that preschool-age children can "create strong and enduring mental representations of what they have experienced in investigating the everyday world" (p. 12). Teachers can encourage preschoolers' natural tendencies to investigate the natural world through everyday investigations such as a simple trip to the playground. Play experiences provide children with hands-on opportunities to develop scientific understanding of the world around them. Beginning with their immediate environment, children gain direct experience with living things, their habitats, and life cycles that become the basis for future understanding of biological concepts (NRC).

Thompson and Gullone (2003) point out that children's innate curiosity about other species leads to sustained scientific investigations, this in turn fosters intrinsic motivation for learning. An illustration of this thread of active exploration happened in a local Head Start classroom. The children had selected the focus of a project to be worms. Young children do not come to investigations with empty minds; they already possess many ideas about living things, both accurate and inaccurate. The worms did not offer the children the physical observation of biological body parts that they are familiar with when taking care of a living creature. They could not see the mouth of the worm or eyes or ears, yet the children learned and recognized that the worms had those body parts and that they had need of food, water, and shelter to survive. Young children think of animals in terms of the biological domain. They perceive animals as being individual beings that can be harmed or helped and often assign human emotions to animals to explain animal behavior (Thomas, 2007). This perception puts animals in the position of potentially being the most powerful object of caring in the natural world of a young child (Myers, Saunders, & Garrett, 2004). This was evidenced in the worm project as the children progressed from stomping around outside stepping on worms that were "yucky" to developing empathy for the worms in their classroom.

From an instructional-oriented perspective, using animals during investigations is an effective tool for addressing ecological, physiological, and ethological content. Daly and Suggs (2010) indicate that children who develop an emotional attachment to animals show an increased positive attitude toward science. However, the research by Prokop and Tunnicliffe (2010) suggests that attitudes toward animals are influenced by the species and type of animal used. People tend to be less sympathetic toward animals they see as unpopular such as reptiles and insects. This phenomenon is speculated to be related to the public simply being unable to improve attitudes toward animals that were associated with danger in human evolutionary history. The children investigating worms appear to have developed a positive attitude that is outside typical behavior.

Children need to apply science content to new questions; engage in problem solving, planning, decision making, and group discussions; and experience assessments that are consistent with an active approach to learning. Nurturing the development of the essential elements of humane education and science process skills requires hands-on learning experiences that encourage development of critical thinking skills. For early childhood educators, that means planning developmentally appropriate interactive learning experiences for children to actively engage in the processes of science rather than providing answers to their questions about the natural world. Children must be offered opportunities to practice the skills to "uncover" their own questions and answers.

"I drawed a big snake" by Gabriel, age 3



"A snake." by Jace, age 3

"A big, long snake and a running mouse" by Austin, age 4

Young children's fascination with animals extends beyond the furry, cute, and cuddly as these three snake drawings show

Common Thread 3: All Learners Can Develop Tools for Problem Solving

Science must be for all children regardless of age, sex, cultural or ethnic background, disabilities, aspirations, or interest and motivation in science. Early childhood educators realize that children will achieve understanding in different ways and at different depths as they answer questions about the natural world. Also realized is that children will achieve the outcomes at different rates, but all should have opportunities in the form of multiple challenging science learning experiences over several years to develop understanding and tools for problem solving (Copple & Bredekamp, 2009). Included in those tools is the humane education element of making positive choices that benefit themselves, other people, animals, and the environment. Problem solving has a tendency to sound like a math activity and is contrived (e.g., brain teaser). When presented in such a manner, direct challenges to children (or adults for that matter) to solve a given problem become tiresome. Effective early childhood science educators understand how to look for openings in daily interactions that provide opportunities for genuine problem solving. Problem solving for young children may include physical activity for infants and toddlers as they test the limits of their own bodies and the concepts of cause and effect. Preschoolers will problem solve using materials for a purpose other than their intended function. Four- and five-year-olds will begin to ask "what if" questions as they try new approaches. Five- and six-year-olds will begin to discuss problems and possible solutions before trying them out (Rivkin, 2001).

An example of this process happened with a group of preschoolers who had adopted a hermit crab as a classroom pet. Their first activity was to name him Herman. As they investigated hermit crabs, the teacher documented the children's conversations. These language samples illustrate the developing communication problem-solving skills (Table 14.2). A challenging problem to solve is a basic ongoing human activity.

Regardless of whether it is in a university classroom or preschool classroom, science involves people searching for new knowledge through testing and evaluating theories. For young children real science begins with curiosity and a need to solve a problem about how things work in their environment. Science is a creative process and children are naturally inclined to discuss their observations and theories. Teachers who engage children in problem-solving conversations offer opportunities for learning vocabulary and model ways they think about the experience (Conezio & French, 2002). Children can be encouraged to generate ideas about a science phenomenon through questioning and conversation that includes questions such as "What might happen if....?" "Is this different if I look at it from this way?" or "What would you like to try next?" Adults can facilitate children's evaluation of a problem by restating the problem and asking children if they think their solution is acceptable or unacceptable (Chen, 2009). Some children are developmentally unprepared to see a problem from any other perspective than their own or how their actions affect others. Asking children to think about how their solution to a problem would affect others or how they think someone else might solve the problem

Table 14.2 Hermit crab project language samples

	Ben's comments	Alex's comments
Day 1	If the water was out of here, he done. It's choral. [coral] Spongebob is a sponge	He moving his sucker. He moving. Fishies can't slide. He's leaping [leaving] slime on the tank. The fish food eating the snail.
Day 2	That looks scary. What's the shiny stuff? Those black things are scales. Some fish can change colors. I put lots of gills over the fish.	He has antennas. Use antennas to smell.
Day 3	Are those real shells? The spikes poked me. This one is twisty. I have a shell like this at home.	I like pink shells. Pink is my favorite color. I got the smooth shell. This one is bumpy.
Day 4	I don't think he's scary. They can use their pinchers. They get water from the ocean. I love hermit crabs. They tickle you with their feet. I know where the missing legs are.	His shell was too small. He's gonna get a new shell. He putted the sea shell on his house. He's gonna put the snail on his shell. Why did he step out of his shell? Is he going to put those on his shell. It protects their back. Maybe when we take a nap he will switch shells.
Day 5	His eyes are way out here. So Herman can drink. Herman got the oil on it. This sponge is a lot of work. He's coming out! I want you to flip the shell over.	We have to make sure it gets really wet. Who's gonna feed him? We each all get a different job. Look how full that bowl's gettin'. The crab has one big claw and a little claw. You have to be careful or you'll hurt him.
Day 6	Snapping turtles have eggs Sharks have eggs Life cycle is what they go through He's looking at me Can you flip him over again? Can we see his claw?	We take care of Hermey cage. You have to put some in. Show the water doesn't get dirty.
Day 7	The biggest hermit crab is four inches. Can you help me with the life cycle? I made thirteen eggs. Herman hasn't eaten any food. He uses his shell for protection. He didn't even pinch me.	When they get bigger, they go in a different shell. Keep the water cwean [clean]. I still need to draw a sponge. He tries to pinch us and I would cry. What if he use his claw? You want to know why he's in his shell? because everyone's loud. Look at the cwam [clam].

Source: Amanda K. Onion anecdotal records

encourages development of critical thinking skills. A problem that is generated by children's interests will be engaging and sustained learning that uses both mind and body (Rivkin, 2001). Excellence in science and humane education embodies the ideal that all children can achieve understanding of science if they are given the opportunity (IHE, 2010; NRC, 1996).

Common Thread 4: Developing Respect for Differences

The principles of science education guide educators to design learning experiences that reflect the intellectual and cultural aspects of science. Scientific literacy is an explicit goal of the *National Science Education Standards.* Scientific literacy means that children increase their knowledge specifically in the areas of physical, life, and earth sciences. It also includes understanding the nature of science, scientific enterprise, and the role of science in the social and personal perspective. Many individuals have contributed to the traditions of science, and science has been practiced in many different cultures (NRC, 1996). The standards (NRC) direct educators that "Children should develop an understanding of what science is, what science is not, what science can and cannot do, and how science contributes to culture" (p. 21). The essentials of humane education include instilling the desire and capacity to live with integrity and compassion while providing the tools for putting knowledge into meaningful action (IHE, 2010). The role of science in society and personal lives as well as the role of humane education in society is to inspire in children a sense of responsibility toward discovering solutions to problems that benefit humans, nonhumans, and the environment in all cultures.

In education, cultural pluralism has replaced the term multiculturalism but still refers to appreciating the value of others' cultural identity. Science education and humane education encourage exploration of ways people have contributed to science beyond the Western world. Children should be encouraged to engage in the authentic cultural science activities of their communities. A relationship exists between education that is culturally relevant and education of conservation practices for Earth's environments. Scientific literacy can be enhanced through combined educational opportunities that develop children's abilities to be informed consumers of the science needed for everyday life (Mueller & Bentley, 2007). Both science and humane educators have a responsibility to provide experiences that are both appropriate for children and respectful of the earth. Before young children can understand and develop appreciation for another's culture, they must extend their perspective to people and animals beyond themselves.

Empathy is considered to be an essential dimension of moral reasoning. There is also interest in the relationship between empathy and prosocial behavior regarding the development of social-emotional competence in young children. Eisenberg defines prosocial behavior as moral, voluntary behavior intended to benefit others, including helping, sharing, and comforting (Eisenberg, Losoya, & Guthrie, 1997). Thompson and Gullone (2003) found that children as young as 1 year can understand others' emotional experiences. By age two, toddlers show more sophistication in reacting to those emotions usually including verbal expressions

of sympathy. Zahn-Waxler and Radke-Yarrow (1990) found that children between the ages of one and two can interpret a physical and psychological state of distress and can translate that into prosocial actions on behalf of a person or animal.

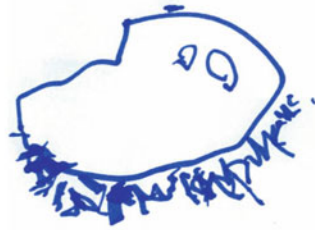
A most unusual experience demonstrated this concept during an encounter with a group of toddlers. During the process of getting to know these children, the subject of spiders arose from an observation one of the children made. The children became intent on wondering about spiders. After researching various species of spiders, the teachers procured a spider appropriate for the classroom. The teachers planned learning experiences for the children about how to take care of the spider, what to feed it, and how to identify the behaviors of the spider. The children also learned to identify body parts of a spider and their corresponding purposes. An expert came to the facility to handle the spider and gave the children the opportunity to see the body parts much closer.

As discussed in the first thread of this chapter, it is proposed that a young child interacting directly with animals is a method for building empathy that will transfer to humans (Thompson & Gullone, 2003). Thus, developing a sense of empathy would be necessary for young children before assuming responsibility for making decisions that affect themselves and others. In recent times an increasing number of authors have proposed that humane education programs that aim at promoting empathy development and prosocial behavior could be more effective if they incorporated interaction with animals (Meadan & Jegatheesan, 2010; Thompson & Gullone, 2003). Relationships with animals also offer children opportunity for an emotional investment that is not subject to rejection (Fawcett & Gullone, 2001) which supports development of children's willingness to take a chance and care about another human. The research into studies of animals in classrooms as a way to enhance empathy in school age children is sparse. Two of the most often referred to studies concerning empathy development in literature are by Ascione (1992) and Ascione and Weber (1996). The initial study followed a group of primary school classrooms implementing a humane education program for a year in which children explored animal-related curricula. The study findings showed children developed more positive attitudes toward animals. In the follow-up study a year later (Ascione & Weber, 1996), the benefits of the program appeared to sustain the children's positive attitudes toward animals and had generalized to human-directed empathy. A more recent study by Daly and Suggs (2010) delves into teachers' experiences with animals in the classroom. The study reports teachers who have classroom pets as having had positive experiences even though they are by far in the minority. The issues of liability and increased responsibilities presently seem to outweigh the benefits of adding an animal to the classroom.

The children in the spider investigation developed an attachment to their spider, even though they couldn't touch it or feed it like some animals. They knew the spider was upset about being handled because it was making silk and it assumed a posture that they had learned previously was a sign that the spider made when it felt threatened. The sense of empathy for the spider was very apparent as they worried about it and decided it should be put back in its home to calm down. The empathy they directed toward the spider was manifested in prosocial behaviors on behalf of the spider.

Science education experiences integrated with humane education essentials offer early childhood educators a venue for involving young children in inquiry-based projects focusing on animal behavior and care that promotes the development of empathy and prosocial behavior. Selvan (2004) supports this by adding that all humans have the right to pursue happiness and in doing so would indicate that it is a duty to respect this same right in others, not to obstruct it, but promote it. By implication there has to be respect for variety and differences to accomplish this. The application of empathy and prosocial behaviors to other human beings supports the principles and goals of both disciplines in respecting individual and cultural uniqueness within science education.

"It's a spider" by Maddison, age 4



"It's a worm" by Kaitlin, age 3

"This is my crocodile. I drew his teeth" by Rockey, age 4

"That's an octopus swimming" by Payton, age 4.

"This is a tadpole" by Gracie, age 4

Young children represent their emerging ideas about science through drawing

Conclusion

The inclusion of animals as the topic of project investigations provides early childhood educators with opportunities to design learning experiences that promote the shared goals of science education and humane education. Science education curricula that incorporate the ideals and elements of humane education during the course of active, authentic, real-world investigations using animals provide children the means to develop positive dispositions toward science and improvement of environmental conditions for all inhabitants of their world. Learners who develop appreciation and respect for the shared needs of humans and animals also develop empathy and problem-solving skills to make responsible decisions concerning themselves and others around them, including nonhumans.

Recommendations for educators include becoming familiar with services and animal welfare programs in the local community and incorporate service projects to benefit those programs. Teachers can also encourage children to explore literature containing humane education themes in the classroom. Faver (2010) also recommends providing dog safety lessons for children. Children are victims of over half of the dog bites a year, and as such it is a public safety issue (Centers for Disease Control and Protection [CDC], 2012). Programs that address dog safety for children are a perfect opportunity to bring humane education into the curriculum. This could be part of an extended investigation conducted by children about dogs. Teachers who are seeking to implement humane education should emphasize that it is a form of character education that is designed to be blended into regular curriculum and can meet standards for early childhood social and emotional development.

Although not commonly combined and practiced, it is becoming more prevalent, more widely accepted, and agreed upon by early childhood educators as developmentally appropriate and beneficial to integrate the ideals and principles of humane education into science education curricula for young children. In an increasingly complex world, developing curiosity for the natural world, practicing problem-solving skills, embracing prosocial behavior, and assumption of roles of responsibility require that educators begin with young children who can be motivated through science experiences to embrace multiple viewpoints of respect for Earth's environment and empathy for all living things.

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Chapter 15
Epilogue: Humane Education for a Humane World

Zoe Weil

Keywords Humane education • Recycling • Animal protection • Environmental preservation • Social justice • Human population • Global warming • Extinction • Educational goals

What Is Humane Education?

Throughout this book, authors have focused on the early years, birth through 8 years. In this epilogue, I extend these concepts further to discuss how, with this foundation securely in place, we can continue to promote humane education in older children and into adult life.

The fifth graders at the Philadelphia school where I visited each month were rather rowdy when I walked into their classroom, but as I climbed onto their teacher's desk with a big plastic garbage bag in my hand, the room became hushed. After pausing dramatically atop the desk, I opened the bag, turned it upside down, and allowed the contents to spill out on the floor. A plastic milk jug, a trawl net float, 35 ft of nylon rope, a large blob of rubber, a spool of fishing line, two plastic soda bottles, several plastic grocery bags, a plastic cup and plate, and a piece of Styrofoam littered their classroom. Then I dropped the green trash bag itself, and it floated slowly to the floor.

After the shocked exclamations subsided, I explained what these items had in common. Ones like them were found inside a dying 28-ft sperm whale on a North Carolina beach. Veterinarians determined that the ingestion of all the garbage was the most likely cause of death.

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These same students had learned about marine mammals in a previous class. They'd watched a film that described the vast migrations of the whales and heard the songs of the humpbacks. They'd grown to appreciate these intelligent mammals who live in the sea. Now they were learning about the threats to these animals, and they were fully engaged. I invited the students to come up and take an item from the floor back to their desks, and I asked them to take a few minutes to think about what else could have been done with it so that it didn't wind up in the ocean killing a whale.

Students came up with great ideas. Some items could have been recycled or reused in obvious ways, but others required more creative thinking. One student said that the Styrofoam and fishing line could be used in art projects. Another commented that the plastic milk jug could have been made into a bird feeder. Most agreed that the items could have been kept out of the waste stream to begin with so that they would not have wound up in the ocean.

The students were fully involved in thinking about how to produce less garbage. They cared about the whale who died, and they recognized their part in protecting the environment and other animals.

This is humane education.

Dani Dennenberg is a humane educator who for many years visited classrooms all over San Diego County. In one class, she placed the following objects on a table in front of the students:

- A box for a name brand athletic shoe
- The container for a fast-food hamburger
- The wrapping of a commonly sold chocolate bar

Dani asked the students if they recognized these items, and all of them did. She asked if any of them had used, eaten, or purchased any of these items, and all their hands went up. Then she said to the class:

"When you buy these products, you probably think that you are only buying the item inside, but you're actually buying more than that. I need three volunteers to come up and share with the class what else you're purchasing and to read about some other 'ingredients' in these products."

A girl came up and opened the shoe box. On the inside of the box, she saw some writing. Dani asked her to read it out aloud.

"When you buy this item, in addition to the shoes themselves, jobs for people, and economic growth, you may also be contributing to sweatshop labor, pollution, and animal suffering."

A boy opened the fast-food container and read:

"When you buy this item, in addition to a tasty, convenient meal, jobs for people, and economic growth, you may also be contributing to rainforest destruction, species extinction, the suffering of cows, pesticide use, water waste, pollution, increases in heart disease, cancer, and obesity, and strip mall development."

A third student came up, opened the chocolate bar wrapper and read:

"When you buy this item, in addition to a delicious snack, jobs for people, economic development, and world trade, you may also be contributing to child and slave labor."

Dani spent the next 25 minutes discussing the issues raised by the packaging "ingredients." She explained how children in West Africa, many of them slaves, gather cocoa beans that wind up in our chocolate; about sweatshops where many name brand athletic shoes are produced; and about environmental, health, human rights, and animal welfare issues involved in fast food. Then Dani described other choices that contribute to economic health and personal happiness and well-being without causing so much harm to other people, animals, or the environment. She helped them to identify the systems that perpetuate destructive and inhumane products and invited them to use their critical and creative thinking skills to come up with ideas for transforming unjust systems into ones that are restorative and healthy for all.

This is humane education.

A group of third graders eagerly awaits their introduction to Pedro. Their teacher has been telling them for a week that Pedro is coming to talk to their class, but she hasn't told them much more. "Who's Pedro?" the students ask, but their teacher is secretive. All she will say is that Pedro is from Central America and that he is anxious to share his story with them.

It turns out that Pedro is a Panamanian parrot, a handmade papier-mâché puppet to be more precise, and on the morning Pedro is visiting, the teacher has placed him on a low branch in a tree by the school. She leads the class to the tree and asks the students to look up to meet Pedro. Sliding her hand into the puppet, she asks Pedro if he would like to come into the classroom to talk to the children.

"Si, Senora!" answers Pedro, and the teacher gently lifts him from the tree and returns to the school building with her class, Pedro squawking the whole way, asking whether there will be delicious fruits and nuts in the school, whether the children will help him, and whether they have ever seen such a magnificent bird.

Back in the classroom, Pedro tells the children his story. First he describes the beautiful rainforest where he is from, painting a vivid picture of the lush, wet, life-filled world that is home to parrots and so many other species. He describes the complexity of interdependent life in the forests and explains that half of all species on earth reside in rainforests. Pedro teaches the children that the rainforests produce oxygen and are home to plants that are used to make medicines. When the image is complete, he tells the children what is happening to the rainforests and how they are being cut down for fancy wood furniture and burned in order to create pasture for cattle grazing and crops. He describes the devastation that follows deforestation, explaining that the soil cannot support crops or grass for very long once the forests have been destroyed and that each second of each day an area of rainforest the size of two football fields is destroyed.

Then Pedro says, “But that’s not all! It’s bad enough that our homes are being ruined, but we parrots are scared of something else, too!” Pedro goes on to say that adult parrots are being killed so that their young can be gathered from nests, crammed into boxes, and shipped illegally to other countries (including the United States) where they will be sold as pets. He tells the children that usually about half of the young parrots die before they ever reach a pet store. Then Pedro reveals that he himself watched this happen, but escaped to tell others: “That is why I’m here today, to tell you about what is happening to parrots and to rainforests, so that you can help me and my friends.”

This is humane education.

“Which choice helps more, and harms less?” Freeman Wicklund, a humane educator from Minneapolis, asks a group of middle schoolers as he hands out a stack of cards. Printed on each card is a choice between two similar products or activities. Some of the cards read:

Car ride
or
Bike ride

Cleaning solution of baking soda and water
or
Conventional scouring powder

Fair trade, shade grown, organic coffee
or
Conventional coffee

Freeman invites the students to think about the products and activities on the cards in relation to other people, other species, and the earth and to decide which of the two choices on each card causes greater harm and which does more good.

Freeman teaches the students what concepts like “fair trade” and “shade grown” mean. He has learned about these terms and issues himself, and he is able to answer students’ questions accurately and provide the background information necessary to determine which choices harm less and help more.

Some of the Choices Cards introduce words or concepts that are less obvious, such as:

Cirque du Soleil
or
Ringling Bros. circus

Rugmark rug
or
Imported rug without a Rugmark (or similar) label

Freeman explains that Cirque du Soleil is a circus troupe that relies upon human talent rather than animal acts to entertain audiences and that Rugmark is a label that ensures that a rug is made without slave labor and by people who work under decent conditions and receive fair wages. After he’s answered students’ questions, they use the information to decide which choice harms less.

In just a few minutes, the students in Freeman's class have considered the impact of various products and actions on the environment, animals, and people around the world. They have learned that their own choices can make a difference. Freeman hasn't told the students which choices to make, but he has asked them to think about choices in a new way, based upon their impact on others.

This is humane education.

What Is Schooling for?

What is the purpose of schooling? This isn't a question we ask ourselves very often. When we do – usually as a society through educational agencies in government – our answers, if we actually articulate them, boil down to something like this: to provide our children with verbal, mathematical, and scientific literacy so that they can find jobs and compete in the global economy.

Competing in the global economy seems to be the buzz phrase of our time, with politicians and policy makers bemoaning our children's decline in educational preparedness and their mediocre test scores in comparison with other developed nations. And so we have decided as a nation to buckle down and administer more tests, "race to the top," and leave "no child left behind" in our effort to win this "competition."

So here is a thought experiment.

Let's imagine that we are successful at winning this fabricated competition. Let's imagine that all of our children graduate from high school having passed their myriad standardized bubble tests with flying colors and their scores rise above those of children in other countries. Let's imagine further that every single one of our graduates is able to find a decent job, or go to college and find a better job, or go to college and graduate school and find an even better job, so that we have 100 % employment. Let's go one step further. Let's imagine that the US economy is booming.

Would we think that we'd been successful at achieving our educational goals? It's hard to imagine that we wouldn't. After all, by the standards we've created, we would be awash in pride at our achievement. What could possibly be wrong with this picture or this goal for our children?

Our planet has over seven billion people on it, and the human population continues to grow. About one billion of us do not have adequate nutrition (http://www.wfp.org/stories/number-world-hungry-tops-billion) or access to clean water (http://www.worldwatercouncil.org/index.php?id=25). While the rate of violence may have declined from previous eras, with seven plus billion people, the actual numbers of those who are abused, exploited, trafficked, enslaved, and oppressed are staggering. Our planet is warming even faster than what was predicted by scientists just a decade ago (http://www.sciencedaily.com/releases/2009/02/090214162648.htm). Species are becoming extinct at such an alarming rate that we may lose half of all species on earth by the end of the century (http://www.unep.org/wed/2010/english/biodiversity.asp). Fishery after fishery is collapsing through practices that

are not only destructive to whole species but which are also unimaginably cruel to the individual animals killed in the process. In fact, cruelty to animals is the norm in food procurement and production, with approximately one trillion land and sea animals killed each year around the globe (http://www.foodispower.org/commercialfishing.htm).

If we continue to pursue our current educational goals, and if we are successful at achieving them, our graduates are likely to perpetuate and perhaps escalate this suffering and exploitation because their successes will enable them to further deplete resources, exacerbate pollution, utilize sweatshop and slave labor from a perpetual underclass, and exploit and kill ever more billions of animals as sentient as our dogs and cats.

Seen this way, our educational goals begin to look outmoded for today's world. While our students must certainly be literate and knowledgeable, math, verbal, and scientific skills should be foundational, not ends to themselves. And while we certainly want our graduates to be employable and prosperous, in a world with such profound challenges, we need a bigger purpose for schooling that goes beyond economic well-being.

I believe that our bigger purpose should be this: to provide all children, in age-appropriate ways, with the knowledge, tools, and motivation to be conscientious choicemakers and engaged changemakers for a peaceful, healthy, and humane world for all people, animals, and the environment. Put another way, I believe we need to graduate a generation of what I call solutionaries.

Solutionaries are people who understand the complex issues of our time, as well as the systems that perpetuate injustice and suffering, and who use their knowledge and skills in whatever fields they pursue to ensure that the systems in their chosen professions are just, sustainable, and humane. Solutionaries are people who are committed to embodying the best qualities of human beings, such as compassion, kindness, wisdom, honesty, integrity, perseverance, and courage, and putting these qualities into practice in far-reaching ways to solve challenges and contribute to a healthier world.

Given that our simplest choices, from what we eat to what we wear to what we buy, have profound implications and effects in a globalized economy, it's critical that our children learn about the ways in which their choices, both as consumers and citizens, affect others. In the complex and interconnected world of the twenty-first century, the educational approaches and subject categories of the nineteenth and twentieth century are outdated. Our children are still learning by rote the names and dates of battles. Advanced placement American History students are still memorizing the names and dates of American presidents. These factoids are a click away on devices that fit into a child's pocket. Meanwhile ice caps are melting; we are still resorting to violence to sort out our problems and solve our conflicts; the era of fossil fuels may come to an end before we've prepared ourselves for a transition to clean, renewable fuels; economies are strained or faltering; women and girls are still oppressed and victimized across the globe; sentient animals are being brutalized routinely in a number of industries; and the list goes on.

A Humane Education Approach to Schooling

Were we to embrace a bigger goal for schooling – to graduate a generation of solutionaries who have the knowledge and skills to develop systems that are healthy and just for all people, animals, and the environment – we would need some new approaches to educating youth. We would need humane education.

At the Institute for Humane Education, www.HumaneEducation.org, we believe that there are four key elements that comprise quality humane education. They are:

1. To provide students with accurate information about the pressing challenges of our time
2. To foster the 3 Cs of curiosity, creativity, and critical thinking
3. To nurture the 3 Rs of reverence, respect, and responsibility
4. To offer positive choices and the tools for problem solving

Combined, these four elements provide the structure for an education that enables students to learn how to be wise solutionaries. Humane education expands the body of knowledge we consider important for youth, offers the skill set to address entrenched and pervasive problems, and provides the ethical underpinnings that motivate us to do good in the world, to be of service, and to be "part of the solution" rather than "part of the problem."

Humane educators themselves need to embody and then inculcate in students the 3 Is of inquiry, introspection, and integrity so that they model for their students lifelong learning, self-reflection, and living according to one's values. To bring humane education into classrooms, we need teachers who are not only proficient in their subject categories (math, science, history, language arts, etc.) but also knowledgeable about global ethical issues, from worldwide slavery to factory farming to political and economic challenges across the world to energy needs to the ethical issues implicit within everyday production of the ubiquitous items in our lives.

What I'm suggesting is that our teachers need be truly exemplary human beings. This is quite a demand, especially of people who receive only a moderate salary and don't garner the status of other professionals, yet who have, in my mind, the most noble task of all: educating the next generation. While teachers need to model the qualities they seek to cultivate, they need not be experts on every humane issue, which would be impossible. Instead, they must have reasonable knowledge about global issues related to human rights, animal protection, and environmental preservation, and the critical thinking skills to evaluate information for accuracy and truthfulness. This is what their students also need in an information age. As teachers introduce these humane education issues into their curriculum and give their students the critical thinking skills to further their own education, they will be providing them with a launch pad for their lifelong search for truth.

Teachers can bring humane education topics into the curricula through math problems relevant to solving global issues, literature that explores abiding values and offers insight into behaviors, and through the skills and mind-set of science that

seeks truth through experimentation and which can address real-life issues (e.g., pollution, ecosystem impacts, species extinction).

Ideally, every school would also have expert humane educators, those who have studied global ethical issues the way math teachers have studied math. I believe that humane education ought not only to infuse all subject categories, adding relevancy and meaning to the existing curricula, but also be offered as its own subject category, with students from kindergarten through high school cultivating their reverence, respect, and responsibility for a humane and just world and acquiring the tools to put their deepest value into practice in concrete ways, first through their everyday choices and later through their participation in changemaking, democracy, and citizenship.

In the early years – toddlerhood through age 6 – the job of a humane educator is primarily to foster students' innate curiosity and instill their reverence for the beautiful world in which we live and for all who inhabit it. By focusing on reverence and curiosity, the groundwork is laid for those children to cultivate their creative and critical thinking skills, to embody respect, and to embrace their responsibility to work toward a more humane, peaceable, and just world.

Recently, I offered a weeklong humane education course to middle school students. On Monday, I asked them to identify the qualities most important to them. They had a hard time with this question, with only two volunteering the qualities of kindness and honesty. When their teacher added compassion, the class agreed that this was another quality they valued. Yet, when asked at the end of that first day whether they felt responsible for helping to alleviate poverty (as the subject of our day's lesson, Muhammad Yunus, founder of the microcredit movement, did), only one said "a little." Some felt that since they didn't cause poverty they weren't responsible for solving it, while others felt that people were poor primarily through their own choices.

I found this dismaying. I felt as if the groundwork had not been laid for them during their early years so that they would now feel their own sense of agency during their middle years of childhood. Might I have met a different class if their abiding love for the earth, other species, and all people had been cultivated more assiduously? Might they have been more eager to make a difference if they'd come to see themselves as deeply connected to the plight of others? Had they "met" Pedro years earlier, might they now be eager to act on their compassion?

It's worth noting, though, that humane education can make a difference no matter when it is introduced. As the week with this class continued, and they learned about other changemakers in the world identifying and solving persistent problems (specifically pollution, slavery, and animal cruelty), they grew to see themselves differently. They began to more deeply embrace the qualities of kindness, honesty, and compassion that had been identified that first day as worthy goals and to see themselves as responsible for and desirous of making a difference. As one girl wrote in a letter to me at the end of the class:

> I cannot thank you enough for coming to our class. I have learned so much. I will carry what you have taught for as long as I can, and I will try to make a difference to the best of my ability. I have this desire to help now, and I owe that to you.

Better late than never, but how much better would it have been to have these children ready and eager to learn about their role in creating a more humane world from day one? Receiving such letters is not uncommon for visiting humane educators who bring issues of social justice, animal protection, and environmental preservation into classrooms. A few years ago, after a similar course, I received this letter:

> Spending that week with you was the most inspiring five days of my life so far. You made me realize how much just one person can do to help the world and how much more you can do by educating others about the issues. I have already started teaching my parents.... It really feels good to know that I can take sometimes simple and sometimes complex actions to save a life and our world. Thank you so much for this opportunity! I will carry that week with me for a lifetime.

Initially, I was delighted when I received this letter, but over time I've begun to see it less as a positive reflection on my class and more as a negative reflection on our current system of schooling. A week with me should not be the most inspiring 5 days of a middle schooler's life. Her education should have always been infused with meaning, purpose, and inspiration, commencing in early childhood. She should always have been learning how her life could make a difference so that her generosity and sense of citizenship would come naturally to her by middle school. Had humane education been part and parcel of her schooling experience from the earliest years, she would have been taking simple actions all along and thus be prepared for the more complex actions that would come later.

I was once asked to be the speaker at a National Honors Society induction at a local high school. During my brief talk, I did the activity "True Price," in which we analyzed a conventional cotton T-shirt, asking about its effects, both positive and negative, on individual consumers, other people, animals, and the environment. Just scratching the surface reveals that something as ubiquitous as a cheap cotton T-shirt contributes to pollution, slave and sweatshop labor, and animal cruelty (through the testing of the toxic dyes). At the end of the induction, a colleague asked one of the inductees what she thought of my talk. She responded that it made her angry because, and this is a direct quote, "We should have been learning this since Kindergarten!"

I agree. Humane education should not be peripheral to our children's education; it should be the centerpiece from the earliest years through college. Rather than offer unconnected academic disciplines, imagine if each year of school covered a single overarching issue, such as sustenance, energy, production, or protection, all essential to our survival. Teachers with expertise in different subjects could provide students with the skills to conduct research into current systems and articulate new viewpoints, understand and use scientific and mathematical equations and methods to solve systemic problems, and draw upon history, politics, economics, psychology, sociology, and geography to analyze, assess, propose, and create new or improved systems. And the arts, relegated to the chopping block because of budget cuts, could find new life as vehicles for expression of visionary ideas.

Imagine if instead of debate teams, in which students are assigned either one side or another of a fabricated either/or scenario and told to research, argue, and win,

we had solutionary teams in which students came up with and presented ideas to solve problems. For example, rather than endless debates about "jobs v. endangered species," which have been presented to us by the media and politicians ad nauseam since the Northern Spotted Owl was declared endangered, we had solutionary teams come up with viable ideas about how to protect other species and keep people employed at the same time. Since we love to compete and honor our victors, the "winners" (those with the really brilliant, practical, and cost-effective ideas) could actually participate in the implementation of their solutions. Such teams could tackle problems in their school, communities, country, or even global challenges and in so doing make a profound, and profoundly rewarding, contribution.

If humane education became commonplace, students everywhere might revamp their school buildings for renewable energy sources or transform their food service systems and cafeterias so that they received healthy, sustainably, and humanely produced lunches. Think what the students would learn about chemistry, ecology, biology, physics, business, farming, architecture, and construction from just these two projects alone. Imagine how fully the teachers could contribute their knowledge and passion for the subjects they know best. There are already teachers who do such projects with their students within the constraints of the current public school system, but they face perpetual hurdles. When we hear about them, we laud them in the news. But their work shouldn't be newsworthy; it should be the norm.

Were we to embrace a new goal for schooling and place humane education and humane educators in the center of our educational approach, we could, in a single generation, solve many (if not all) of the grave challenges we face. Our children would know from the youngest age that their lives mattered, that what they learn in school is actually relevant not just to getting a job some day but also to solving our most pressing problems, and that using their creativity and good critical thinking in service to the longings of their caring hearts for a kind, healthy, and just society is deeply satisfying. They would find, as we all do, that when we are of service, when we do good, when we live with integrity, we are also happier.

Fortunately, there is a growing movement to achieve this goal. At the Institute for Humane Education (www.HumaneEducation.org), where I work, we are training thousands of people to be humane educators through graduate programs, workshops, Summer Institutes, and online courses, as well as providing free resources for teachers across the globe. All over the world, innovative programs are emerging with humane education approaches and solutionary goals. This bigger purpose for schooling is capturing people's imaginations and generating new ideas, new curricula, new approaches, and new school initiatives. As these are then replicated, and as we educate more and more teachers with the knowledge that will enable them to bring relevant, pressing issues into the classroom, we will discover that our curious, creative, and committed youth are ready and able to take on the challenges ahead and that this process should rightly begin during the early childhood years.

Zoe Weil is the president of the Institute for Humane Education, which offers online graduate programs in humane education through affiliations with Valparaiso University and Saybrook University, online professional development courses, Summer Institutes for educators, and free, downloadable activities and lesson plans at its award-winning resource center on its website, www.HumaneEducation.org. Zoe is the author of *The Power and Promise of Humane Education*; Nautilus Silver Medal winner, *Most Good, Least Harm: A Simple Principle for a Better World and Meaningful Life*; *Above All, Be Kind: Raising a Humane Child in Challenging Times*; and Moonbeam Gold Medal winner for juvenile fiction, *Claude and Medea*, which follows the adventures of 12-year-olds in New York City who are inspired by an eccentric teacher to right wrongs where they find them. She has given an acclaimed TEDx talk "The World Becomes What You Teach" as well as several other TEDx talks and blogs at www.zoeweil.com. Zoe received the Women in Environmental Leadership award from Unity College in 2012, and her portrait is included in the Americans Who Tell the Truth portrait series. She holds master's degrees from Harvard Divinity School and the University of Pennsylvania.

ERRATUM

Teaching Compassion: Humane Education in Early Childhood

Mary Renck Jalongo

Editor

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