

ANIMALS IN KINDERGARTEN

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ANIMALS IN KINDERGARTEN

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## PREFACE

One of the key elements in a child's educational experience is their learning environment. As an educator I am always looking for ways to help the student take an active role in his or her education. To do this I have tried many different things to enhance the learning environment any way possible. This study focused on one particular element of that environment that was lacking actual hands on research. I looked at whether classroom animals enhanced the development of children in a kindergarten class. With a specific look at whether animals in the class effected a child's develop of empathy behavior.

First, I must acknowledge the support of, Dr. Mona Lane, my graduate adviser, whom without, this would not have been possible. Her guidance, advice and patience throughout this study were unmeasurable. Gratitude and appreciation is also extended to the other committee members, Dr. Kathryn Castle and Dr. Arlene Fulton for their support and words of wisdom.

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## CHAPTER I

### INTRODUCTION

Violence in school has become a notable concern in America today. As a result there is increasing interest in the area of prosocial development in children, specifically empathy. There has been significant research covering the development of empathy (Ascione & Weber, 1996; Melson, Peet & Sparks, 1991; Poresky, 1990). Certain research reports claim that empathy development can occur when children have an attachment or bond to a pet (Poresky, 1996).

Educators are interested in classroom methods for developing students' prosocial and empathy behaviors. One classroom practice that has not been researched is having animals in the classroom for a long-term period. The research related to animals has been conducted in family or therapeutic environments, not in the classroom with students and teachers (Bulcroft, 1990; Melson, 1990; Netting, Wilson & New, 1987; Poresky, 1996). These research findings indicate that troubled children make a connection with animals. After working with the animals, the children



had boosted self-esteem, responsibility and awareness of self and others. There is information on how to use animals in the classroom and how beneficial animals can be, but there are few studies measuring the effects on children of having animals in the classroom (Blue, 1986; Huddart & Naherniak, 1996).

The bond between mankind and animals can be seen in history books as far back as one can find. Cave writings and Egyptian history show the importance that animals had with people long ago. Until the 1960's, little theoretical consideration had been given to the role of animals and, more specifically, that of pets, in children's lives (Kale, 1992). Early work explored the benefits that animals provided when used in therapy with hospital patients, disabled people or the elderly (Katcher & Friedman, 1980; Levinson, 1978; Netting, Wilson & New, 1987). Many case studies focused on the positive correlation between pets and the degree of improvement concerning wellness of the elderly, lonely or sick (Katcher & Friedman, 1980; Kidd, 1982; Kidd & Kidd, 1985).

Even now there are few studies on animals in the classroom. Children are introduced to animals through literature, and the animal world is used for inspiration in illustrative stories. Animals and education have long had

an association through many of these paths (Koebel, 1993). It is no wonder that in recent years, the relationship between children and animals has attracted attention from both practitioners and researchers (Nebbe, 1991). Many of these studies focused on the bonding that occurred between the pet and child and how the effects of bonding with an animal may have shaped the development of the child (Levinson, 1978; Poresky, 1990, 1996; Triebenbacher 1998). Hyde, Kurdek and Larson (1983) recorded a positive relationship between pet ownership and children's social sensitivity and interpersonal trust. Poresky (1990) examined a pet's effects on the ability to show empathy or the ability to comprehend and share the feelings of another and found that children who had bonded with an animal had a higher empathy score than those that did not.

The human-animal bond was more than simply the ownership of a pet; it was having a relationship with and caring for the pet. Poresky and Hendrix (1990) reported that some of the first assessments that focused on the influence of pets on human health looked simply at the presence of animals and did not measure the relationship. Some will assume that pet ownership is an adequate measure of the relationship, but existence of a pet is not a measure of the relationship between a pet and the child.

## STATEMENT OF PROBLEM

While there have been studies conducted on the relationship between animals and children, most have focused on the relationship in the home environment or in therapy or hospital settings. There is little research examining the effects on children of having animals in the classroom.

Animals are not found in most classrooms for various reasons. One explanation may be that some children are allergic to furry animals. Additional reasons may be that the school policy does not allow animals to be kept in the classroom, or that the teacher may not choose to have a classroom animal because of the time and expense of caring for it.

The literature suggests that animals in the classroom may benefit the child. Animals in the classroom are thought to be able to establish a sense of security, love, and empathy, as well as to help build respect and responsibility in children (Blue, 1986). Animals in the curriculum are also credited with providing academic benefits including motivation to read, write and talk about

animals as well as causing children to exhibit an excitement about being in school (Owens & Williams, 1995).

#### PURPOSE OF THE STUDY

The purpose of the study was to examine the effects of classroom animals on the children in a kindergarten class, specifically the affects on the empathy behavior of children. The importance of the current study was based on the need for greater insight into how children interact with animals that are introduced into the classroom and what affect the animals may have on the child's development of empathy behavior.

#### Hypothesis

Children who have built a relationship or bond with animals in the classroom are expected to show greater levels of empathy behavior, as documented by pretest and posttest interviews after the animals have been in the classroom.

#### Questions

- 1) After having pets in the classroom, will the children reflect more empathy?
- 2) After having pets in the classroom, will boys or girls reflect more empathy?

- 3) After having pets in the classroom, what types of behavior will be reflected by the children?

## CHAPTER II

### REVIEW OF LITERATURE

#### Animal Companionship

Pet ownership has been in existence for at least 30,000 years (Fogle, 1981). Fifty-nine percent of American households keep pets (Huddart & Naherniak, 1996). Pet ownership has been a valued part of our culture; otherwise pet ownership would not have lasted so long or have become so widespread. Fogle (1981) states that our basic physiological processes have been the same all along: we love, hate, feel parental, and like to touch warm, soft things. We need security and need to feel important. We want love and we need to talk and laugh. The bond between people and pets supplements what is available in human relationships. It satisfies our need to nurture but it does even more. People and their pets have a bond that is more controllable and less intimidating than human associations. The human-pet bond can provide simple nonverbal communication (Fogle, 1981).

The special bond between humans and animals has been credited with lowering blood pressure and helping heart disease patients live longer (Netting, Wilson & New, 1987). These researchers state that pets serve a variety of functions and serve people in many ways. They are used as adjuncts to therapists in clinical settings to relieve the client's anxiety. Pets become companions, assist in reducing loneliness and can provide tactile stimulation. Animals can offer emotional support to those that need a non-judgmental companion. There is abundant evidence to suggest that the companionship provided by pets has the capacity to reduce the frequency of serious disease and prolong life as well as show positive effects on mental health (Levinson, 1976, 1982; Kidd & Kidd, 1985; Triebenbacher, 1998). Researchers have reported the value of pets in the advancement of emotional and intellectual growth (Poresky & Hendrix, 1988 and Poresky 1996).

Most of the current research with children has focused on the effects of children having a pet in their home (Poresky, 1996). Kidd & Kidd (1990) examined the ownership of a pet in the home and concluded that the attitude of the parents was considered to be the most important variable in the child's attitude towards animals. They also found that children who could not have a family pet sought out animal

companionship of other kinds. Pets are found in most children's homes (Marx, Stallones, Garrity, & Johnson, 1988); but where housing regulations restricted pet ownership, children sought ways to have interaction with animals by sharing other people's pets. Children without pets tended to develop imaginary animal companions or temporarily nurtured strays or street animals as substitutes. However, most of these children knew less about pets, and placed less value on animal life than children who owned pets or were able to bond with pets (Kidd & Kidd, 1990). It has been asserted that a possible lack of bonding could lead to childhood cruelty towards animals. This cruelty towards animals by children has been linked with aggressive behavior and violence among criminals (Kellert & Felthous, 1985).

#### Animal Abuse

Margaret Mead, a noted anthropologist said, "One of the most dangerous things that can happen to a child is to kill or torture an animal and get away with it" (1964, p11). Kellert and Felthous (1985) reported that violence rarely occurs in isolation. The thought is that families in need of treatment for child abuse have also abused animals. If so, this points to a strong link between child



abuse and the abuse of animals. Kellert and Felthous (1985) found that during childhood, a high proportion of violent criminals had abused animals. They studied 152 criminals and non-criminals in Kansas and Connecticut and found that most violent criminals had an excessively high frequency of childhood abuse to animals. Twenty-five percent of the most violent criminals had five or more specific incidents of cruelty to animals, compared to less than six percent of the moderate and non-aggressive criminals, and no occurrence among non-criminals. This high frequency of abuse was coupled with the criminals' family backgrounds and their excessive and repeated abuse as children. They concluded that the aggression among adult criminals could be strongly correlated with a family history of abuse and cruelty to animals when they were children. This should be an alert to researchers, clinicians, and public leaders that childhood animal cruelty can be a possible predictor of future antisocial and aggressive behavior and family problems. Kellert and Felthous (1985) determined that the natural process of a more kind-hearted and compassionate affiliation with one another could possibly be enhanced if we advocated a nurturing behavior between children and animals.

## Empathy

Wispe (1987) took on the task of tracing the history of empathy as a concept. She found it difficult since every so often new concepts replace old ones. The over expansion of information and re-definitions of terms do not even begin to explain the path the concept took from the beginning to now. Wispe also explains empathy as something that essentially requires an attitude or a position of openness to someone else's experience or point of view. This definition of empathy would embrace both the cognitive and affective aspects of empathy.

Eisenberg viewed that defining empathy and placing it in a theory all depends on the theorists and their assumptions about human nature. Theoretically, empathy may be enhanced through communication with another who is dependent upon one's care and indicates this non-verbally as a pet may do (Eisenberg, 1988). When a child tells about his pet, he may validate to others that he often thinks about the feelings of the animal (Kidd & Kidd, 1985). Well-organized reflections about the feelings and needs of others has been associated with the development of empathy in children (Eisenberg, 1988).

Melson, Peet, and Sparks (1991) examined children's attachment to their pets and compared it to three aspects of the attachment theory. They looked first at behavioral attachment, encompassing the child's involvement in activities with the pet such as play and caretaking. The second was affective attachment, encompassing the child's emotional expressions of interest and closeness to the pet. The third was the cognitive attachment looking at the child's ideas about the pet and the care of the pet. They found some support for a connection between attachment to one's pet with perceived competence and empathy towards others.

Ascione (1991) found encouraging correlation between the attitude and empathy measures using the Bryant Primary Empathy Measures, which could be tied to the research on companion animals and research dealing with empathy. Poresky (1990) studied children's empathy towards others in conjunction with children's empathy for pets. Using the Young Children's Empathy Measure, Poresky found children with a strong pet bond had higher scores on empathy for children than young children with no pets. He based his study on two common approaches to measure empathy. One was how the child felt and the other was empathic accuracy. Poresky (1990) explains that empathy behavior is viewed as

a part of pro-social development looking at a child's ability to understand and share the emotions of others. He studied the effect of children bonding with animals had and found that children with pets had a higher empathy score than children without pets. Poresky (1996) did verify that children with a higher score on the relationship with their pets had a tendency to have higher scores on the empathy measure.

Several of the researchers connect the child to pet bond with the human to human bond based on the theory of attachment (Melson, 1988; Poresky, 1990; Ascione, 1991) (Melson, Peet, Sparks, 1991). This study will look into how the attachment theory may help us explore the relationship between empathy development and animals in the classroom.

#### Pets and the Child's Pro-social Development

Pets can play a major role in a child's social development (Kale, 1992; Nebbe, 1991). Pets help children learn empathy, responsibility, and affection. Kidd and Kidd (1990a) found that children that were strongly attached to adults, in pet-owning homes, scored higher on activities with pets and interest in pets than children of weakly attached adults who did not own pets. Hendrix and Poresky

(1990) found a significant correlation between children's bonds with their companion animals and the children's high scores on social competence, empathy, and cooperation using the Iowa Social Competency Scales, The Companion Animal Bonding Scale, a parental survey and The Young Children's Empathy Measure. Poresky and Hendrix (1990) reported that children who had close relationships with dogs as their companion animals were more likely to score higher on child development scales than those who did not have companion animals. In a later study with normal preschool children who had a companion animal, they found that the children's intellectual, motor, and social development was associated with the presence of a companion animal.

There is no companion animal that can be an adequate replacement for a good parent, but it has been observed that a pet can provide many opportunities for the nurturance of love and affection which both humans and animals need. We all need to be shown affection and feel touches; it may be that touch and love are equal for both animals and people (Blue, 1986). An animal that can be stroked, petted, and cuddled often offers the child feelings of closeness and warmth. Take a look at the lifestyles of people today. Many children live in single-parent homes or homes where both parents work. Many

children need the extra love and comfort a pet can provide. Pets provide an unconditional, unequivocal aspect of love which is considered highly significant in aiding the development of the young child (Katz, 1981). Pets love their owner with no strings attached and if a mistake is made the pet loves unconditionally and does not cause an important parental security to be lost (Levinson, 1978).

Young children learn primarily through hands-on exploring of their environment. Children need actual interactions to feel, see and love the animal. This excitement of an encounter with an animal tends to give the child a greater understanding of the world and how it works. Through the nonverbal communication of observing and responding to the animals' needs, the child learns to be more sensitive to the needs of others (Blue, 1986). Children that have housing inadequate for owning pets will never experience this bond unless the classroom provides this opportunity. Children as individuals and working together with others can gain experience caring for and looking after animals, which can develop confidence, cooperative behavior, empathy and respect. This knowledge could then extend to classmates and others (Huddart & Naherniak, 1996).

## Animals in the Classroom

Children learn through training, experiencing and observing. Success in training a pet to behave acceptably can aid in the child's attainment of feelings of competence and self-confidence and teach much about patience, self control and delay of gratification. Caring for a pet often helps a child feel needed, loved and respected (Blue, 1986). This does not happen all by itself. A parent or adult needs to be close by and make sure to notice the quality of the child-pet relationship and discourage any attempts to control or bully the animal. Pets provide many learning opportunities. Many times it is the first experience a child has with grief and mourning is over the loss of a loved pet. They also can provide therapeutic benefit to both psychological and physical health (Blue, 1986). Huddart and Naherniak state that using animals in the class is "education of the heart, and when hearts change the effects are felt nearby and at a distance" (1996, p. 3). In other words, what children gain from caring for animals, can help them deal with other situations. Michael Kaufmann, Director of Education of the American Humane Association has stated that animals of any

type can often reach troubled children when adults often can not (1998).

Since urbanization, the lifestyles of the family and children have changed. Many children have never experienced touching a kitten, rabbit or other furry creature and are almost overcome by a sense of thrill in learning firsthand the meaning of "softness" (Blue, 1986; Weatherill, 1993). Children do, however, encounter daily lessons at school. Each day a child may encounter a story, a math problem or a song about animals. Education and animals have been connected continuously (Koebel, 1993).

Blue (1986) turned the focus on the aspects of pet-person relationships that were most relevant to the growing child. She suggested six areas: 1) love, attachment and comfort; 2) sensorimotor and nonverbal learning; 3) responsibility, nurturance and sense of competence; 4) learning about life, death and grief; 5) therapeutic benefits to psychological and physical health; 6) nurturing humaneness, ecological awareness and ethical responsibility. All of these benefits should make one ponder why the use of animals in education has not been expanded and expected.

Naherniak (1995) thought that the most important thing for children to realize was that they shared the world with



other living things and that we all were alike but different also. He thought this understanding developed a child's empathy and respect for animals and peers. On the other hand, he thought an animal in the classroom was not something to be taken casually. He contended it was the teacher's responsibility to demonstrate, by actions as well as with words, that having an animal as a companion was a commitment for that animal's entire lifetime. There were concerns that an animal would undergo abuse in the classroom, but if an animal was kept with the utmost care and respect in a classroom atmosphere, children's curiosity and empathy could be validated and encouraged to bloom. Koebel (1993) believes that whatever a student learns from the personal interaction with a classroom pet, can affect the way he/she perceives all animals.

Blue (1986) encourages teachers, particularly those that work with young children, to find time to bring live animals into the classroom and make them part of the learning. She also recognizes the increased difficulty for some families to own pets and that the response of persons in school and other formal learning settings is crucial. We need to have a greater awareness of the important fact that pet-people bonds may help to increase our sense of responsibility for balancing today's "high-tech" with much

needed "high-touch". Placing animals in classrooms where they can be held and cuddled may offer a balance especially for those children with no animals in their homes.

Huddart and Naherniak (1996) talked with a teacher that regularly brought his elderly dog to school. The teacher said the dog acted as an agitator for participation. Shy kids got involved, their listening improved, and the class got along better. The teacher had seen enough improvement that he thought every class should have an animal for students to care and connect with. This is not just a detached case of an old dog teaching people new tricks. When students work together to take care of an animal in the classroom, the benefits of cooperation and caring extend naturally to other children, and to the world outside the classroom. Humane education, while focussing on the human/animal relationship, provides a looking glass through which environmental issues, personal health and safety, and cooperative learning can be brought into focus (Huddart and Naherniak, 1996).

One promising area of research on the human-animal bond is in the potential decrease of violence, given the often-cited calming effect of animals' closeness (Blue, 1986; Weatherill, 1993). There do seem to be links between childhood cruelty to animals and anti-social behavior later

in life. Maybe there is a potential for healing such pathologies if the symptoms are treated earlier in the child's life. In a school setting, classroom animals can foster a caring atmosphere while imparting lessons in practical stewardship, such as caring for the animal's daily needs. If educators took a look at it in this way, animals would complement many of the goals of the classroom agenda. However, the teachers must take it upon themselves to learn how to care for and assess the condition of the animals for whom they are responsible (Naherniak, 1995). If teachers are to obtain the maximum benefits of having animals in the classroom then they are to be held accountable for the life they bring into their classroom. The educator is solely responsible for modeling the importance of showing respect for the class animal (Huddart and Naherniak, 1996).

#### Summary

There have been studies on pet visitation in the classroom and how that increased vocalization, attendance and participation (Huddart and Naherniak, 1996; Margadant-van Arcken, 1984). These studies look at the animal as part of the class or at the long-term effect of animals in class. The cost of having animals in the classroom and

maintenance of the animals can be overwhelming. At this point, the research does not reveal that the benefits exceed the requirements of maintaining a pet in the classroom. There are, however, a number of convincing articles that explain in detail about the benefits that may occur when children are able to love and care for animals (Blue, 1986; Naherniak, 1995; Huddart and Naherniak, 1996). Subsequently, since children spend seven hours a day at school, this may be the one opportunity they could have to develop a love and compassion towards other living things. Which could feasibly transform the classroom into a place where a child could form an attachment and or bond to animal that they may not have the opportunities to form any other place.

## CHAPTER III

### METHOD & PROCEDURES

The purpose of this study was to examine the effects of classroom animals on the children in a kindergarten classroom atmosphere. Of particular interest were the children's empathic responses after having experience with pets in the classroom for 25 days.

#### Subjects

The subjects who participated in this study were 25 kindergartners, 12 males and 13 females. The children ranged in age from five years eight months to seven years two months. All of the children were in attendance at a rural kindergarten in a southwestern state. Ethnic backgrounds of the group were as follows: 7 were Native American and 18 were European American.

#### Design of the Study

This study used the one group pretest posttest design. The main reason this procedure was selected is that it

allowed the researcher to compare performance by the same group of subjects both before and after exposure to pets. This study included quantitative measurement, which were the empathic responses made by the children during the interview (YCEM), and also the responses recorded on the two teacher rating scales (EPTS and PBQ). This study also included qualitative measurement through the anecdotal records taken while the participants' interacted with the animals.

#### Procedure

Before the study began, permission was granted by the institutional review board (IRB#HE-01-43). The Superintendent of the school was consulted, and he granted permission to conduct the study (Appendix A). An introductory letter was sent to parents before the animals were introduced, and a parental permission/release form was attached to this letter (Appendix A). The parents signed the release form, granting permission for their child to participate in this study.

A white female graduate student collected the data for this study. Her experience consisted of twelve years of teaching in public schools, of which nine years had been at

the kindergarten level. She was also the classroom teacher of all participants.

After permission was received from parents, the teacher/researcher and the classroom teaching assistant collected data using the teacher rating scales (EPTS and PBQ). Followed up by the pretest interview with each participant (YCEM). After the completion of the preliminary procedures the animals were introduced into the classroom where they remained for 25 days. During the 25 days, anecdotal records were taken during the participants' morning free choice time. The teacher/researcher chose this time of day due to the fact she could be more consistent and attentive to the process.

Upon the completion of the study the posttest interview was given to each participant that was eligible. The data was calculated and processed.

All data collection was contained in a locked filing cabinet in the Superintendent's office near the interviewing room.

#### Data Sources

##### *Teacher Rating Scales*

Two teacher rating scales were chosen for this study to assess prosocial behaviors and cognitive and affective

empathy: The Empathic Perspective Taking Scale (EPTS, 1999), and The Prosocial Behavior Questionnaire (PBQ) (Weir & Duveen, 1981).

#### *The Empathic Perspective Taking Scale*

The Empathic Perspective Taking Scale (EPTS, 1999), a teacher-rating scale comprised of 27 items, was used to measure empathy in elementary school students (Appendix B1). The 27 questions consisted of statements that described typical empathic behaviors which children may demonstrate during a typical school day. The questions were then rated as never, rarely, sometimes, and often. The items were scored as a Likert scale, with "Never" resulting in a score of 1, "Rarely" in a score of 2, "Sometimes" in a score of 3 and "Often" in a score of 4. Higher scores reflected higher levels of empathic responding.

The classroom teacher/researcher and the classroom assistant completed the instrument on each participant. Each participant could have obtained a total of 108 point's total. The midpoint was set at 54 with any score above 54 rated as average. The higher the total score of the participant, compared to the participant modeling the more preferred empathic behaviors.



### *The Prosocial Behavior Questionnaire*

The Prosocial Behavior Questionnaire (PBQ) (Weir & Duveen, 1981), a teacher-rating scale comprised of 20 items was used to measure prosocial behaviors, which were typically shown by children during the school day.

(Appendix B2). This scale was chosen because the prosocial behaviors described in the items appear logically related to the empathic responding behaviors described in the EPTS. This questionnaire has been demonstrated to have good reliability and validity, test-retest .91 (Weir & Duveen, 1981).

The teacher/researcher and assistant completed the scale in regard to the subject's prosocial behaviors toward other children in the classroom. There were a total of 100 points possible with a midpoint of 50. Any score above the midpoint showed the participant modeled some prosocial behaviors. The higher the score the subject achieved the more prosocial skills the subject modeled.

### *Young Children's Empathy Measure*

One by one the participants were interviewed using the Young Children's Empathy Measure (Poresky, 1990). The Young Children's Empathy Measure (Poresky, 1990), a

questionnaire answered by the children, was used to assess the children's cognitive and affective perspective responses. The measure was used in this study with one adaptation to the original Poresky measure. During the presentation of the vignettes, computer generated drawings were presented that depicted the short statement so that the children had a visual cue to help them interpret each vignette (Appendix C). This measure had been tested in previous research, and the internal reliability determined by the Cronbach alpha coefficient was 0.69 for the empathy score that was acceptable, interrater reliability was 3.19 across four raters. Four verbally presented vignettes were administered to each subject. The empathy vignettes and expected emotions are:

1. Sadness - "A child has just lost his/her best friend."
2. Fear - "A child is chased by a big, nasty monster."
3. Anger - "A child really wants to go out but is not allowed."
4. Happiness - "A child is going to his/her favorite park to play."

Each of the four vignettes was presented to each subject. The interviewer read the statement, asked the

questions, showed the drawing and recorded the child's responses, using written and audio methods. These questions measured the cognitive perspective taking the affective perspective taking aspects of empathy. The cognitive perspective was approached as such, "How does that child feel?" This was asked for each of the four short vignettes. The affective perspective was, "How do you feel about this?" for the same vignettes.

The accuracy ratings for the cognitive and affective perspective taking responses were 4 points for an exact match to the intended emotion. If the intended emotion were sadness, an exact match would be "sad". There would be 3 points awarded for similar emotion. If the intended emotion were sadness a similar emotion would be "bad or mad". If an emotion was presented such as "happy" and the intended emotion was "sadness" then 2 points would be awarded. If the student said, "I don't know", or submitted a non-emotional response, 1 point would be awarded and if no response was submitted, then no points were awarded. The empathy scores were figured by calculating the eight accuracy scores for each child. (See Appendix B, score sheet).

The investigator said, "I have some short stories I would like to share with you and see what you think about

them. Would you like to go with me and hear them now?" Upon consent of the child, the experimenter took the child to the interviewing office, began telling stories to the participant and then submitted the questions. If the child was not willing, or at any time lost interest in the stories, the child would have been allowed to return to the classroom. This never occurred during the interviewing. The Young Children's Empathy Measure was administered in a small office near the classroom.

#### *Anecdotal Records*

During the 25 days that the animals were in the classroom, the teacher/researcher observed the children's reactions to the animals and wrote anecdotal records of their behavior. This was executed during the morning free choice time because the researcher/teacher's schedule allowed her to be more consistent and give more attention to the discussions during that time.

#### *Animals*

After the initial interview, four guinea pigs, one rabbit and a bird were introduced to the classroom. This was the first exposure to animals in this classroom experienced by this subject group, with the exception of a

fish tank. The animals used for this study were received from a breeder for classroom use prior to the study. The guinea pigs, rabbit and bird had been raised in a classroom setting and they were accustomed to being cared for by children. The animals used in this study had inhabited this classroom the previous year and were placed on loan to another classroom during the research year until they were introduced to the test subjects. All animals were in suitable housing conditions during the study. A local veterinarian examined the animals and each animal had been given a certificate of good health before being introduced to the classroom.

During this time the children were guided and encouraged to take responsibility for the welfare of these animals for 25 days. Then the instrument was repeated to the subjects.

## CHAPTER IV

### RESULTS OF THE STUDY

The main goal of this project was to analyze the effects of classroom animals on the children in a kindergarten classroom. Of particular interest was how the presence of animals in the classroom affected the children's empathic behavior.

#### Measurements

The quantitative measurement used in this study was the empathic responses made by the children in the interviews (YCEM) and the responses recorded on the two teacher rating scales (EPTS and PBQ). The qualitative measurement was the anecdotal records. Since 10 of the 25 subjects were absent due to illness, no inferential statistics were used. The raw data and the percentages were used in the analysis.

#### Subjects

The subjects were a classroom of kindergarten children. There were 15 children who participated in this

study, seven males and eight females. Ten students were dismissed as subjects because these 10 students missed school for a period of at least three or more days due to colds and illness at some point during the 25-day study that was conducted in the spring. The children ranged in age from five years eight months to seven years two months. All of the children were in attendance at a rural public kindergarten in a southwestern state. Of the 15 children, six were Native American and nine were European Americans.

#### Type of Research

This study was descriptive research. This study included a pretest posttest design with a student interview, two teacher rating scales, and anecdotal data was gathered. The hypothesis for this study, as referred to in Chapter 1, was that classroom animals would affect the empathy behavior of children in a kindergarten class.

To access each participants level of empathic behaviors and prosocial behaviors before the animals were introduced the researcher/teacher and assistant teacher completed the EPTS and the PBQ on each subject. The first behavior scale was the Empathic Perspective Taking Scale, a four-point scale with 27 items, that encompassed and measured cognitive and affective perspective taking. The

second behavior scale, the Prosocial Behavior Questionnaire, was a five-point scale with 20 items on which a score of 1 indicated a low level of performance of the indicated prosocial behaviors and a score of 5 indicated a high level of performance of the indicated prosocial behaviors.

The EPTS had a possible score of 108 and a midpoint of 54, with participants' scores ranging from a low score of 63 to a high score of 99. There was one subject that ranged in the 60's (6%), six subjects (40%) that ranged in the 70's, five (30%) scored in the 80's and three (20%) scored in the 90's. All of the participants scored above the midpoint and had modeled the intended behaviors to moderate to above average degree.

The PBQ had a possible score of 100 and a midpoint of 50. There were 2 subjects (13%) whose scores ranged in the 50's, 4 (27%) in the 60's, 4 (27%) in the 70's, 3 (20%) in the 80's and 2 (13%) ranged in the 90's. Once again all of the participants scored above the midpoint and modeled the intended behaviors moderately to an above average degree.

The first research question, "After having pets in the classroom, will the child reflect more empathy?" was addressed in using descriptive data that is summarized in Table 1. The cognitive and affective scores were combined



in Table 1 on the YCEM. Nine children (60%) increased in the posttest scores, four children (26%) stayed the same and two (13%) decreased. Since the cognitive and affective scores were similar, and the posttest scores on the cognitive and affective statements were also similar, these scores can be seen individually (see Table 2). The possible range was from 0-32 and the pretest scores ranged from 24 to 30. The posttest scores ranged from 26 to 30. The baseline score, of 24 in the pretest, was raised to 26, in the posttest, but the maximum score stayed the same level, which remained 30 for the pre and posttest. No subject had a perfect score of 32 on either the pretest or posttest. This shows a slight increase of the baseline score, which implies that animals in the classroom could create more empathy on the part of the student.

The second research question, "After having pets in the classroom, will boys or girls reflect more empathy?" was also addressed in the descriptive data that is summarized in Table 1. The girls are A-H and the boys are I-O. In the posttest YCEM, 5 girls (63% of the girls) increased in scores, 2 (14%) stayed the same, and one (13%) decreased. Four boys (57%) increased on the posttest, two (29%) stayed the same, and one (14%) decreased. This shows that 5 out of 8 girls had an increased empathy score on the

posttest and 4 out of 7 boys increased their empathy scores, which leads to the conclusion that yes, the empathy scores did reflect an increase after pets were in the classroom.

The third research question, "After having pets in the classroom, what types of behavior will be reflected by the children?" was addressed in the anecdotal records.

Anecdotal records were taken during free choice time while the students cared for the animals. During the students free choice time the researcher/teacher observed that the animal area became the busiest area of the room. These records indicated a great deal of interest in the animals and allowed for an increase usage of verbal skills along with cooperative behavior. The following is a description of the compiled records. There were many conversations about the guinea pigs being boys or girls. There actually were two males and two females. The females were housed together and the males together. The students and teacher took Polaroid pictures of each animal and placed them on the front of the cages so the children would know where each animal resided. When building large structures for the pigs to exercise, the students had to make sure to keep the males and females separated. Some statements were, "You can't put her in there, that is the

boys cage." "Teacher someone put Pepper in with Ginger". "You can't put those two together, that's the mama and that's the dad" Many of the other statements were along this line same form.

The students corrected each other on how to hold the animals, and they were careful to place each animal back in the same cage it had come out of. The students had a lot of conversations about what they were building and how high the walls should be. They decided the walls had to be at least two blocks high so the animals would stay in the play area. They talked about building hiding places and bridges for the guinea pigs. They figured out that nothing would keep the rabbit in because he would jump over the walls and get loose in the room. They decided to just let the rabbit roam the room after being held in the basket for a few minutes. The students made comments on how the rabbit ran and hid and how hard it was to catch him. When a subject noticed the rabbit jumping and running for the first time they usually said, "Look, look at Sprinkles. He is silly." They laughed when they got to see him twist and jump as he ran along. They would say, "Look at that!" and then several would try to watch him for awhile until he would dash off again and put on a show. One student mentioned that "Sprinkles hops like a kangaroo." After several

little droplets of feces were deposited on the ground and the subjects saying "Yuck, he went to the bathroom on the floor", they decided to bundle up the guinea pigs and rabbit in a towel when feeding treats and holding the animals. This also kept the animals' legs from dangling and scratching their arms. One conversation about clipping the animals nails was as follows, "Does that hurt him," the researcher replied, "No, not unless he moves or I cut the nail to short." The researcher explained it was "just like cutting our own nails and we just need to be careful".

The cockatiel seemed to be a favorite animal. The students raced to be first to hold the bird on their finger or have it sit on their shoulder. They would make lists of who would get to hold the bird next and for how long. They would use the manual timer to time each other and then switch and mark others' names off the list. This went on most days, but sometimes they would sit at a table passing the bird to each other, taking turns. One conversation when the bird was in the cage was about the bird standing on one leg, and one student said, "Look he is magic, he can stand on one leg". The conversation went on a little while about him being magic since he could stand on one leg. One of the subjects asked, "Is he really magic" and the researcher replied, "Can you stand on one leg" and the

subjects said, "yes" and the researcher asked, "Are you magic," and the subjects answered, "no".

In this current study, raw data was also taken on how often the students took care of the animals and or held them at some point during the study. There were 11 out of 15 subjects that fed and watered the animals without being reminded, and 13 out of 15 subjects talked to and held the animals several times during the study, at least three times a week. The other two subjects took responsibility about twice a week. Out of the 15 subjects, 12 were always gentle with the animals and never had to be reminded to be considerate.

Throughout the research the subjects appeared to have increased verbal communication along with extended periods of time to work on mutual cooperation skills. The subjects had been a part of this classroom for seven months before the animals were placed in the classroom and immediately the animals brought the students together in different daily routines that had not been detectable previously in the year.

The researcher and assistant observed numerous positive social behaviors that occurred and developed after the animals were placed in the classroom. As the children cared for the animals, conversations about building a

bigger space for the guinea pigs to run around in so that they would have more room was mentioned. The children made sure to save fresh vegetables from lunch plates when ever the cafeteria served them, about three times a week, that people would be throwing away to give the animals special treats. The students would also start a baggie around to collect leftover salad, and they would make sure there was no dressing on it, "Because that is not good for them". If there was dressing or brown spots, it was thrown away because that sort of stuff was not good for the animals. The researcher/teacher had read a book about animals as an introduction that what each animal could eat and not eat. Several children would always remember to check and make sure the animals had food and water daily. They would then check again at the end of the day to make sure they had enough to make it until the next day. Over the weekend, extra amounts of food were given to get the animals through the extra days.

For that reason, the answer to the third question would also be naturally. The anecdote records indicate that the children used more language skills and cooperative behavior performances during an average school day than had been observed before. Various responses indicated that the subjects were thinking about how an animal might feel or

question the behavior. Before long the actions of the participants seemed natural and demonstrated that they knew the animals and cared for the animals'.

## CHAPTER V

### CONCLUSIONS AND DISCUSSION

The hypothesis stated that children who have built a relationship or bond with animals in the classroom are expected to show greater levels of empathic behavior, as documented by pretest and posttest interviews given before and after the animals have been in the classroom. The researcher cannot conclude that the introduction of animals made a major change in the empathic behavior as based on the YCEM score of the children; however, the majority did indicate an increase between their pre and posttest scores on the YCEM.

There were three research questions to be considered:

- (1) After having pets in the classroom, will the child reflect more empathy?
- (2) After having pets in the classroom, will boys or girls reflect more empathy? And
- (3) After having pets in the classroom, what types of behavior will be reflected by the children?

The first question looked at the empathy scores before and after the placement of animals in the classroom,



particularly considering whether there were differences in the pretest scores and posttest scores. As referenced in Chapter 4, 60% of the whole group increased in their posttest scores.

The second question dealt with comparing boys' and girls' pretests and posttests (see Table 2). On the YCEM, 63% of the girls increased in their posttest scores compared with 57% of the boys. Both sexes displayed a gain in their empathy posttest scores.

The third question wanted to reexamine the anecdotal records in accordance to whether there was evidence contained in the records that should be considered. The accounts presented a record of increased verbal and written communication skills along with compassionate reasoning and mutual cooperation. These would all be considered evidence showing distinctive affects after the placement of animals in the classroom. Some of which would be evidence of empathy.

All the students in the classroom enjoyed playing with and caring for the animals. The animals were the center of attention during any free choice time and the topic of many discussions and drawings. The animals also enticed the students to use writing skills along with encouraging cooperation with each other while taking turns with the

animals. Which would be a majority, but the sample size was too small to count statistically. At the beginning of the study, on the teacher rating scales, the girls and boys scores were similar; however, seven girls scored 80 and above, six boys scored 80 and above. One boy scored in the 60s and one girl scored in the 70s. There appears to be a slight difference.

#### Implications for the Classroom

In addition to the results of the study, other affects of having the animals in the classroom would be conceivable to look into. The parent observers in the classroom made comments to the researcher/teacher on several occasions regarding the warmth and homey feeling the animals brought to the classroom. They also expressed appreciation for the time and expense that would be involved. The students also seemed to really enjoy showing the animals off to their parents, grandparents and siblings when they entered the room. The teacher/researcher and the classroom assistant noticed how busy the animals kept the children and how the children had to share and take turns with the animals.

Furthermore, the animals had been in this classroom for many years prior to the study and former students would return each year to get updates on old and new animals.

They hold and caress the animals and some come weekly to see their favorite animal. They were disappointed during the first several months of the research year when the animals were not in the classroom. These former students expressed concern as to where the animals were. They continued to check in until the animals arrived back and then they began visiting periodically. Students from the research group have also been returning during this new school year to get updates and give the animals a stroke or two.

The available records of this study could be of interest to classroom teachers. Animals tend to be discounted as just something for an experiment or science project. Animals can be looked at as a liability or an extra expense. However, what if they add comfort and friendship to a lonely child? An animal can be added to a classroom for an affordable amount and, depending upon the type of animal, cost very little to maintain.

A teacher is always exploring new ways to entice and motivate the students. Teachers are also looking for ways to get the students to take an active part in their learning, They are always looking for new things to make the learning environment a place of comfort--one which will increase a student's chance to succeed. Rosenfeld (1977)

stated, "The best curriculum and the highest hopes have little chance of being realized unless the stage for learning is appropriately set" (p. 167).

#### Implication for Future Research

Further research is needed to explore the affect of classroom animals upon the students in the classroom. Few studies using classroom animals as pets exist that prove teachers should have pets in the classroom. There are even fewer measurements that are dependable for measuring a young child's prosocial skills in relation to animals. Throughout the literature, many writers have stated that animals are good conductors of prosocial skills, but little measurable data exist to test this aspect. Studies using animals should take on a larger sample size and increase the length of study. A larger sample size would accommodate statistical data analysis and could also consider gender as a larger component.

If the pretest were done at the first of the year with anecdotal records taken over a longer period of time, such as three months, then the posttest could be given at the end of such time. This would make it possible to gain a more accurate idea of the child's empathy level and how the animals may or may not affect the empathy development. The

collection of qualitative data in addition to quantitative data may help to observe the significant results if any. Most interesting data came from anecdotal records in this study. A study that took systematic records that focuses on the frequency each student touch, felt, and cared for the animals and how often each animal was interacted with would prove to be more enlightening. Also, it would be interesting to see if animals in a special needs classroom would generate any observable situations and whether it would promote empathy development or possibly elevated socialization and interaction among students.

In conclusion, the incorporation of animals in one kindergarten classroom over a period of 25 days did show a slight difference in the empathic scores on the YCEM of kindergarten. The animals were cherished and enjoyed by teachers, parents and students of both genders. Two students at the end of the study volunteered to give new homes to two of the animals and their parents also agreed to the placement. The animals received more attention than any other area of interest in the classroom and the children's prosocial observable behaviors were increased considerably.

In the past few years there has been a great deal of emphasis placed on the development of empathy towards

others. We are faced with tragedy when we read a newspaper, listen to the radio or even when we turn on the television. There are people killing people and even children killing children. Quality education needs to be teaching our children to care, respect and to value the life of themselves and others. The investigation of animals in the classroom should be an ongoing project to explore the effects that animals in the classroom have on the empathy and prosocial development of young children. If animals can be used as a moral and humane educational tool, and if animals can be proven as a benefit to children, wouldn't it make sense to place animals where children spend a good portion of their life and where guidance can occur?

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TABLES

TABLE I  
SCORES ON THE YCEM, EPTS, PBQ

Subject	YCEM Pretest Total Score	YCEM Posttest Total Score	EPTS Score <i>before study began</i>	PBQ Score <i>before study began</i>
A	28	26	85	72
B	30	30	82	79
C	24	29	88	86
D	30	30	90	90
E	26	27	82	64
F	30	31	83	80
G	25	27	92	93
H	25	28	75	54
I	30	29	73	69
J	30	30	79	77
K	26	30	71	60
L	24	28	63	56
M	28	30	99	80
N	28	28	77	66
O	28	29	74	70

TABLE II

SCORES ON THE YCEM COGNITIVE,  
 YCEM PRETEST AFFECTIVE,  
 YCEM POSTTEST COGNITIVE AND  
 YCEM POSTTEST AFFECTIVE

Subject	YCEM Pretest Cognitive	YCEM Pretest Affective	YCEM Posttest Cognitive	YCEM Posttest Affective
A	15	10	15	13
B	15	15	15	14
C	15	15	15	15
D	13	13	15	15
E	12	12	14	14
F	15	14	15	15
G	14	14	14	14
H	15	10	15	14
I	12	13	13	14
J	15	15	15	15
K	12	12	14	15
L	15	15	15	15
M	13	13	13	14
N	15	15	16	15
O	14	14	13	13

APPENDIXES

APPENDIX A  
HUMAN SUBJECT CORRESPONDENCE

March 1, 2001

Jim Langston, Superintendent  
North Rock Creek School  
42400 Garrett's Lake Road  
Shawnee, OK 74804

Dear Sir:

As a component of the requirements for my Master's thesis, at Oklahoma State University in the Department of Family Relations and Child Development, I am going to be conducting a research study. I would like to ask for your consent to implement this research in a kindergarten classroom at North Rock Creek School.

I will observe kindergarten students and the effect animals in the classroom have on their empathy development. I would like to conduct the study over a four to five week period during the spring of 2001.

After receiving your permission and the approval of the review board I will send consent forms home to the parents of each child in the classroom chosen. Only the children that return the consent forms will be participate in the study. The time will be determined by the classroom teacher and will not interfere with their ongoing class schedule.

I have attached the parent letter and consent form for you consideration. Thank you for your cooperation.

Sincerely,

Jamie Bowles Kelly



Dear Parent and/or Guardian:

I am a graduate student at Oklahoma State University in the Department of Family Relations and Child Development. I am also a teacher at North Rock Creek School. I am conducting research in my kindergarten class at North Rock Creek School. This will be done as part of the requirement for my Master's thesis.

This study involves young children and animals in the classroom. I will be studying the effect animals in the classroom have on the child's empathy development. Additional details are described on the enclosed consent form.

I would like to work with your child individually at the school for two short sessions no longer than 30 minutes each time. The first session will take place approximately March 20 and the second session will take place approximately one month later. The time will be determined by the classroom teacher/researcher as to not interfere with the ongoing class schedule.

In order for your child to participate I need for you to fill out the enclosed consent form and return it to me by March 15, 2001. For your convenience, you may return the form to the envelop on the inside of your child's classroom. It will be labeled "empathy research consent forms."

Thank you for your consideration on this matter. If you have any questions please feel free to contact me.

Sincerely,

Jamie Bowles Kelly  
Graduate Student  
NRC Kindergarten Teacher

CONSENT TO PARTICIPATE IN RESEARCH PROJECT

I, \_\_\_\_\_, agree for my child, \_\_\_\_\_, to participate in the masters thesis research project of Jamie Bowles Kelly, which has been approved by the Department of Family Relations and Child Development, North Rock Creek School, and the Institutional Review Board of Oklahoma State University.

Jamie Bowles Kelly, principal investigator, under the supervision of Dr. Mona Lane, will carry out this research. The purpose of this study is to determine what effect animals in the classroom have on the children's development of empathy in the kindergarten classroom. The research procedure will involve asking your child to listen to a few short stories and then orally answer four questions. The task will take less than 30 minutes for each of the two sessions.

Your child's participation in this study is voluntary. The child will be asked if he/she would like to hear some stories and if the child agree, he/she have the right to discontinue the story at any time if he/she becomes disinterested. You also have not waived any of your legal rights or released this institution for liability for negligence. You may revoke you consent and withdraw your child from this study at any time. Records and results of this study will protect your family's confidentiality by not identifying you or your child by name. All records will be stored in a locked filing cabinet until they are destroyed.

If you have questions about your child's rights as research subjects, you may consult with Jamie Bowles Kelly or Dr. Mona Lane, FRCD, by calling (405) 744-5057 or contact, Sharon Bacher, at the Institutional Review Board at (405) 744-5700.

I have read this consent form and understand its contents, and I freely consent for my child to participate in this study under the conditions described. I understand that I will receive a copy of this signed consent form. I understand that I may revoke my consent of consent for my child at any time.

\_\_\_\_\_  
Name of Child

\_\_\_\_\_  
Birth date

\_\_\_\_\_  
Signature of Parent/Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Principal Investigator

\_\_\_\_\_  
Date

APPENDIX B

Teacher Questionnaires and Score Sheets

Empathic Perspective Taking Scale (EPTS)  
Development by E. A. Stetson  
Digital Dissertation 1998

Directions:

1. Following is a list of 31 statements describing behaviors, which might be shown by a child during the school day. Based on your knowledge of the child, please circle the number which best describes how often this child currently does what is described in each statement:  
  
1 = Never, or hardly ever. (About 10% of the time or less)  
2 = Rarely. (About 20-30% of the time)  
3 = Sometimes. (About 40-60% of the time)  
4 = Often. (About 70% of the time, or more)
2. Although it is difficult, it is important to try and answer each question as objectively and independently as possible - in rating each statement, disregard your ratings for that child on every other statement. Try not to let general impressions of the child influence your decision about the ratings, but consider each statement individually.
3. If any statement is particularly difficult to rate for a child, feel free to write comments in the space provided at the bottom of the page. But please go ahead and circle a rating even in such a case. It is important to get ratings on all statements for all children in your class.
4. When finished, please check the form to ensure that every statement has been rated.

Student #: \_\_\_\_\_

1=Never, or hardly ever / about 10% of the time or less

2=Rarely / about 20-30% of the time

3=Sometimes / about 40-60% of the time

4=Often / about 70% of the time or more

Statements	N	R	S	O
1. This child laughs when others in the class are laughing.	1	2	3	4
2. This child winces when another child is hurt.	1	2	3	4
3. This child compromises when there is conflict, by considering others' feelings along with his/her own.	1	2	3	4
4. This child accurately labels his/her own emotional state.	1	2	3	4
5. This child understands that people sometimes do things which they do not intend to do (teacher is not aware of a student who is raising her hand; she may look like she is ignoring the student, but this child would understand that the teacher does not see her.)	1	2	3	4
6. This child does not expect everyone else to feel the same as he/she does about significant events ( he/she does not expect everyone in his/her class to be excited about the field trip to the Art Museum just because he/she really likes to go There.)	1	2	3	4
7. This child looks upset when he/she hears about some injustice done to a person or group of people he/she does not know, (i.e., slavery in America, the crash of the space shuttle, etc.)	1	2	3	4
8. This child knows that his/her peers may feel differently about interests or activities (movies, baseball, horses) than he/she does.	1	2	3	4
9. This child responds similarly to the emotion shown by characters in a movie/video or story (appears sad when hearing a story with a sad theme.)	1	2	3	4
10. This child listens to others' ideas and considers those ideas along with his/her own when deciding about rules to a game, which they will play together.	1	2	3	4
11. This child becomes angry when others around him/her are angry.	1	2	3	4
12. This child accurately labels the emotional state of their peers, (can say, Missy is happy or John is angry,) accurately.	1	2	3	4
13. During free time, this child does not assume that everyone will want to play what he/she wants to play.	1	2	3	4
14. This child acknowledges that people can have more than one emotion or "mixed feelings" about something.	1	2	3	4
15. This child appears upset when a classmate is being disciplined by a teacher.	1	2	3	4
16. This child looks distressed when others in the group are distressed.	1	2	3	4

17. This child recognizes that people may act in a different way than they feel ( a peer gets several items wrong on a worksheet and pretends he does not care, but this child understands that the peer does care and is putting on a show or others.)	1	2	3	4
18. When deciding what to play during free time, this child considers what others want, rather than trying to push his/her own idea of what they should play.	1	2	3	4
19. This child understands that people appear to feel differently than they really do, (they understand someone might pretend to be happy when opening a birthday present that they dislike, in order to be polite, even when they do not feel happy.)	1	2	3	4
20. This child understands that each child in a group should have a chance to take a turn with the toy or game that group is playing with.	1	2	3	4
21. This child knows that two people can have different opinions about the same issue (knows that some people think you should not eat meat, while others believe it is OK, and see both points of view as legitimate.)	1	2	3	4
22. This child can tell when peers are trying to fool or con them, (if this child was told by another that they would be this child's best friend if they would only give that child their lunch money, this child would realize that the peer is just trying to get the money.)	1	2	3	4
23. This child knows that certain situations could potentially elicit multiple feelings, (if you asked this child how someone might feel if they beat their best friend in a race, this child would tell you that the person could feel both proud and concerned or happy and sad.)	1	2	3	4
24. This child recognizes that their peers can have viewpoints different than this child's own, (knows that while they think it is better to live in the city than the country, peers may feel the opposite.)	1	2	3	4
25. This child laughs when their playmate laughs.	1	2	3	4
26. This child appears happy when viewing a video/movie or hearing a story with a happy theme.	1	2	3	4
27. This child can tell when someone is "faking" a feeling (when a child pretends to cry in order to be the first person to play with a new toy, this child would recognize that it was not genuine.)	1	2	3	4
STOP - PLEASE CHECK TO SEE THAT ALL ITEMS HAVE A RATING.	1	2	3	4

The Prosocial Behavior Scale  
Teacher Questionnaire:  
K. Weir and G. Duveen, 1981

Directions:

1. On the next page is a list of 20 statements describing behaviors that you may observe during the school. Mark the appropriate column based on your knowledge of the child over the last semester.
2. Although it is difficult, please try to answer each question as objectively and independently as possible.
3. In rating each statement, disregard your ratings for the child on every other statement. Try not to let general impressions color your judgments about specific aspects of the child's behavior.
4. In rating each statement, scores range from (1) rarely applies to (3) applies somewhat to (5) certainly applies. Please circle the appropriate number for each item.
5. If you feel that there are any special difficulties in rating this child for whatever reason, please feel free to space provided for comments on the back.

PLEASE BE SURE TO MARK EVERY STATEMENT. ONCE YOU HAVE COMPLETED THE QUESTIONNAIRE, PLEASE RETURN IT TO THE LABELED FOLDER IN YOUR CLASSROOM

THANK YOU FOR YOUR HELP

Student # \_\_\_\_\_

Rate on a 5 point scale where 1 indicates rarely applies, 3 indicates applies somewhat, and 5 indicates certainly applies for the child identified on the previous page.

Questions	1	2	3	4	5
1. Will try to stop a quarrel or dispute.					
2. Offers to share scissors or glue being used in a task.					
3. Will invite bystanders to join in an activity.					
4. Will try to help someone who has been hurt.					
5. Apologizes spontaneously after a misdemeanor.					
6. Shares limited resources in the classroom with peers.					
7. Is considerate of the teacher's feelings.					
8. Stops talking quickly when asked to.					
9. Spontaneously helps to pick up objects which another child has dropped (e.g., blocks, markers)					
10. Takes the opportunity to praise the work of less-able children.					
11. Shows sympathy to someone who has made a mistake.					
12. Offers to help other children who have difficulty with a task in the classroom.					
13. Helps other children who are feeling sick.					
14. Can work easily in a small peer group.					
15. Comforts a child who is crying or upset.					
16. Is efficient in carrying out regular tasks such as helping with "clean-up time."					
17. Settles down to an activity quickly.					
18. Will clap or smile if someone else does something well in class.					
19. Volunteers to help clear up a mess someone else has made.					
20. Tries to be fair in games.					



APPENDIX C

The Young Children's Empathy Measure

Data and Record Sheets

Computer Generated Drawings



Pre-Test and Post-Test Record Sheet

Young Children's Empathy Measure  
Data Sheet

Subject Number: \_\_\_\_\_ Sex: \_\_\_\_\_  
Birthdate: \_\_\_\_\_ Age: \_\_\_\_\_

Points awarded: 4=exact match to intended emotion,  
3=similar emotion, 2=some emotion,  
1=nonemotional response and 0=no response

Pre-Test \_\_\_\_\_  
Date \_\_\_\_\_

Cognitive (about someone)

Affective (themselves)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Post-Test \_\_\_\_\_  
Date \_\_\_\_\_

Cognitive (about someone)

Affective (themselves)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

How often did the child interact with the animals in the  
classroom? \_\_\_\_\_

A child has just lost their best friend. (for a girl)



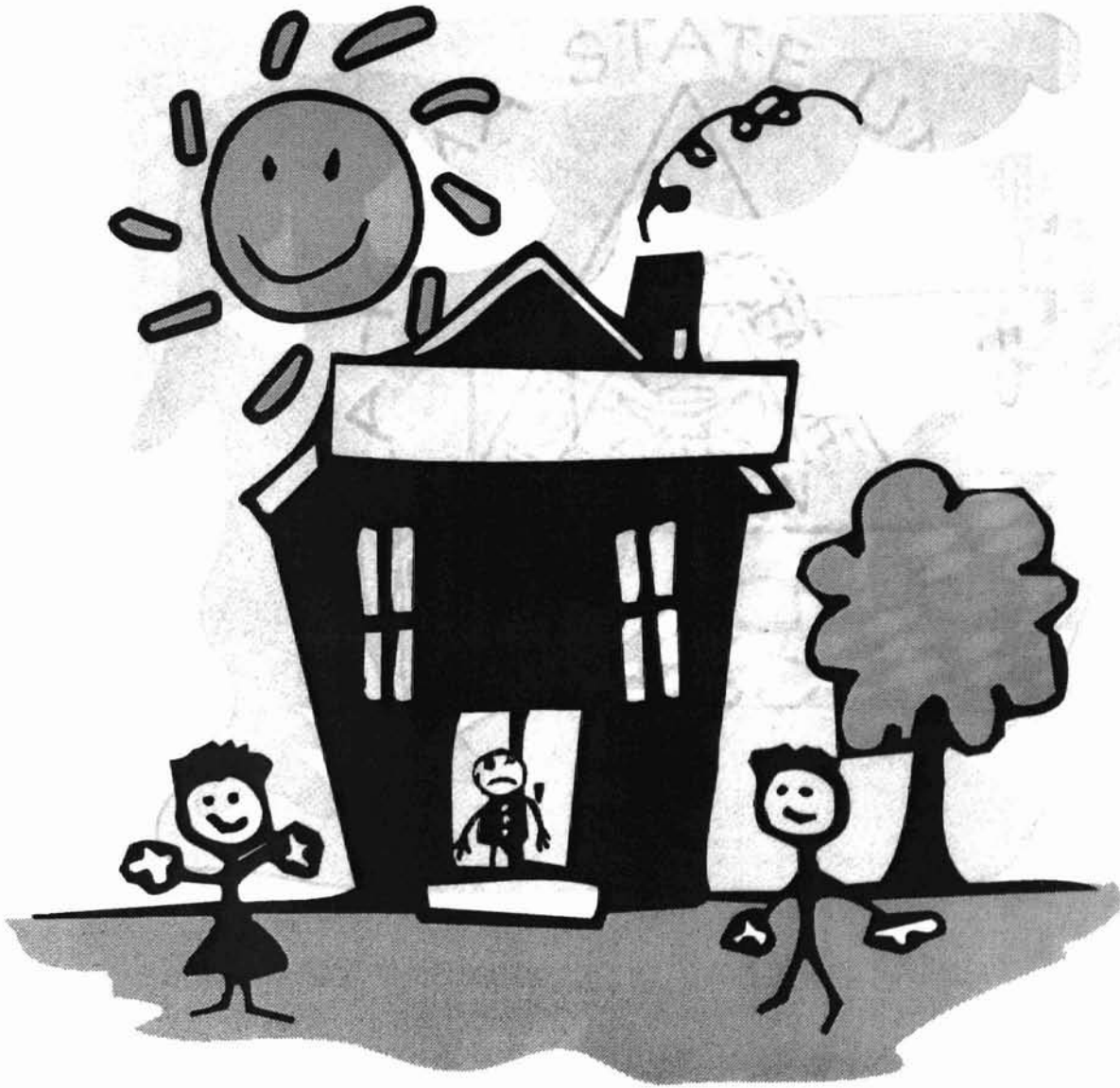
A child has just lost their best friend. (for a boy)



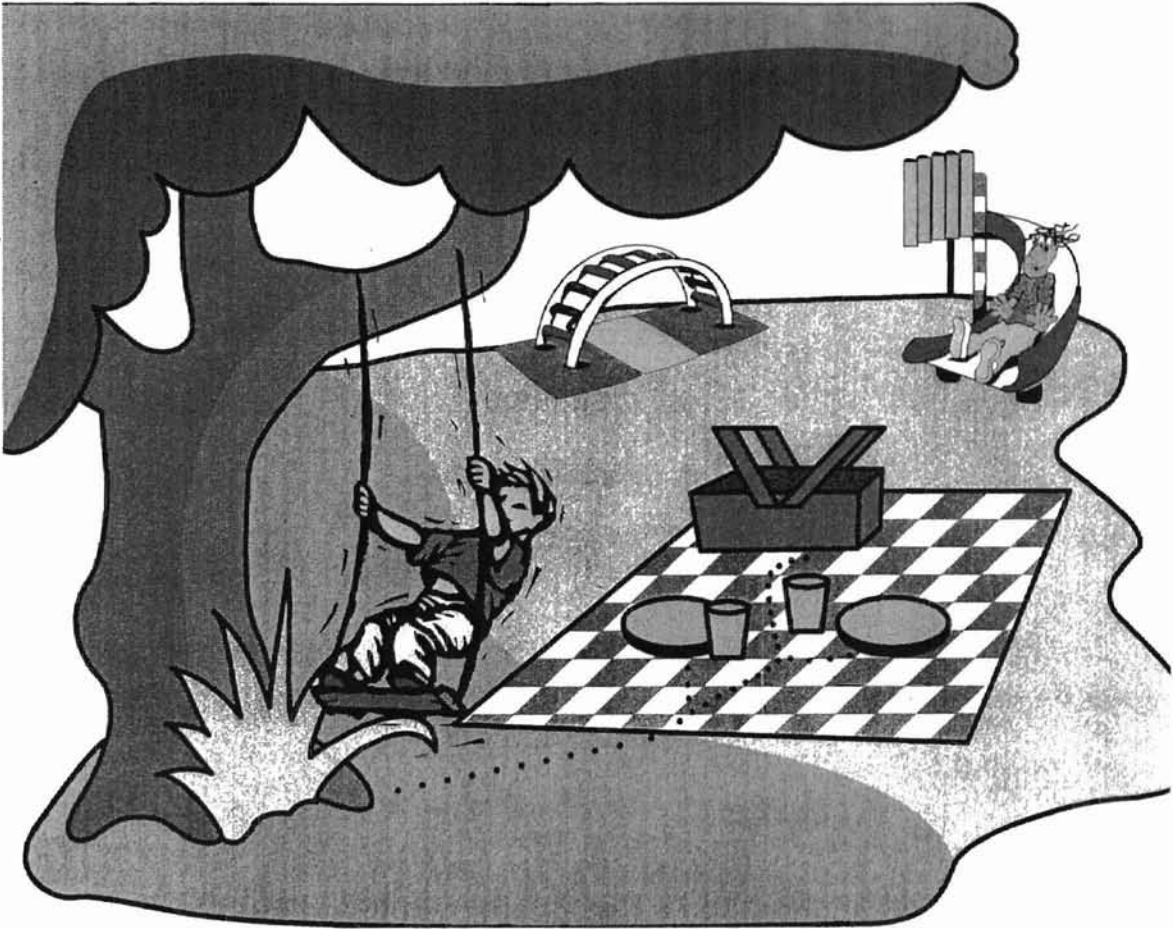
A child is chased by a big, nasty monster. (for both)



A child really wants to go out but is not allowed.



A child is going to their most favorite park to play.





Oklahoma State University  
Institutional Review Board

Protocol Expires: 11/31/22

Protocol #:

IRB #:

PI:

IRB Chair:

PI:

PI:

PI:

PI:

PI:

APPENDIX D

IRB Approval Page

PI:

PI:

PI:

PI:

PI:

PI:

PI:

Oklahoma State University  
Institutional Review Board

Protocol Expires: 3/4/02

Date: Monday, March 05, 2001

IRB Application No HE0143

Proposal Title: THE EFFECT PETS IN THE CLASSROOM HAVE ON THE EMPATHY DEVELOPMENT  
OF YOUNG CHILDREN - ANIMALS IN KINDERGARTEN

Principal  
Investigator(s):

Jamie Bowles Kelly  
2307 Libra  
Shawnee, OK 74804

Dr. Mona Lane  
333E HES  
Stillwater, OK 74078

Reviewed and  
Processed as: Expedited (Spec Pop)

Approval Status Recommended by Reviewer(s): Approved

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Signature:



Carol Olson, Director of University Research Compliance

Monday, March 05, 2001

Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

VITA

Jamie Lenee' Bowles

Candidate for Degree of  
Masters of Science

Thesis: ANIMALS IN KINDERGARTEN

Major Field: Family Relations and Child Development

Biographical:

Personal Data: Born in Shawnee, Oklahoma, June 3, 1965, the daughter of J. C. and Carol Bowles. Married to James Franklin Kelly on April 6, 1991.

Education: Graduated from Shawnee High School, Shawnee, Oklahoma, in May of 1983; attended Oklahoma Baptist University, Shawnee, Oklahoma, from August 1983 to Spring of 1986; received Bachelor of Science degree in Family Relations and Child Development with emphasis in Early Childhood Education, from Oklahoma State University, Stillwater, Oklahoma, in May 1989. Completed requirements for Master of Science degree with a major in Family Relations and Child Development at Oklahoma State University in December 2001.

Professional Experience: Extensive child care Experience through out junior high, high school and college, 1978 to 1989; private and public school student teaching experiences as an undergraduate, 1986 to 1989. Employed as a public school teacher, 1989 to present, severing one year as a 3<sup>rd</sup> grade teacher, 1989 to 1990, in the state of Texas. Employed by the state of Oklahoma since 1990 severing two years as a 1<sup>st</sup> grade teacher, 1990 to 1992, and as a kindergarten teacher since 1992 to present at North Rock Creek School, Shawnee.

Professional Memberships: Oklahoma Early Childhood Association, Pottowatomie Early Childhood Association, National Association for the Education of Young Children, American Teacher Education Association, National Technology Council, Oklahoma State Staff Development Council, National Staff Development Council, Parent and Teachers Association, National Cheerleaders of America, Oklahoma State Bus Drivers, Teaching with Love and Logic, Delta Society, Oklahoma Autism Society

