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AN ANALYSIS OF IMPROVING STUDENT PERFORMANCE THROUGH THE
USE OF REGISTERED THERAPY DOGS SERVING AS MOTIVATORS
FOR RELUCTANT READERS

by

JULIE L. PARADISE
B.A. University of South Carolina, 1985
M.Ed. University of Central Florida, 1993

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the Department of Educational Research, Technology, and Leadership
in the College of Education
at the University of Central Florida
Orlando, Florida

Spring Term
2007

Major Professor: Barbara A. Murray

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ABSTRACT

This investigation studied the impact of registered therapy dogs assigned to students in order to improve reading skills. The purpose of this study was to determine if children assigned to registered therapy dogs improve significantly in reading achievement and related school performance such as attendance and discipline when compared to students of similar characteristics not assigned to registered therapy dogs. Specifically, the study used data to ascertain whether students assigned to registered therapy dogs improved their reading skills and if these students demonstrated more or less growth than students of similar characteristics not assigned to registered therapy dogs.

This study analyzed data from the Canine Assisted Reading Education (C.A.R.E. to Read) program, data collected from the teacher responses to the C.A.R.E. to Read Teacher Questionnaire, and data provided by Brevard Public School District. Repeated measures analyses and descriptive statistics clearly revealed that students assigned to registered therapy dogs demonstrated more reading growth than their peers who were not assigned to registered therapy dogs. Additionally, students assigned to the registered therapy dogs had a more positive attitude toward schoolwork, were more willing to participate in classroom activities, were more successful with higher level thinking skills, and were more self-confident after being assigned to the registered therapy dogs.

Recommendations were made to address teacher training concerning classroom environment, higher level thinking skills, and identifying hesitant and resistant learners. Recommendations also were made for additional research on other uses for registered therapy dogs in the educational setting.

For my husband
who was there for me from the beginning
of this project to the very end.

I love you, Honey,
bunches and bunches and bunches and bunches ...

ACKNOWLEDGMENTS

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excited, cried with me when I was frustrated, and lifted my spirits when I was discouraged. Their questions and concerns were invaluable.

I am so blessed to have my parents, Mr. and Mrs. C.C. LeGrand. They have always encouraged me to spread my wings and reach for the stars. They have supported me during this study just as they have supported me during my entire life. My sisters, Beth and Peggy, and my brother-in-laws; Ralph, Dan, and Tommy have also encouraged me during this process.

My children, Stephen and Derek, and my daughter-in-law, Jennifer, have been an inspiration to me throughout this process. They have been patient and kind when I was working at the computer rather than fixing meals. My grandson, Ethan, is always a source of joy and I look forward to spending more time with him now that this is finished. I also look forward to spending time with my brand new granddaughter, Hannah, who was born just a few weeks before I finished this study.

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Finally, I want to acknowledge the following therapy dog teams, C.A.R.E. to Read Pet Teachers and Handlers, for their tireless effort, countless hours, and unconditional love and attention toward those children who need it the most. This research would not have been possible without them.

Current Pet Teachers and Handlers

Dog Handler	Dog	Breed
Curry, Louise	Noble *	Golden Retriever
Dlugopolski, Stan	Wander	Weimaraner
Fernbach, Sue	Ellie May	Golden Retriever
Holder, Ann	Pumkin *	Toy Poodle
	Pippin	Toy Poodle
Knepper, Margaret	Fritz (R)	Golden Retriever/Labrador Mix
	Calvin	Border Terrier
	Hobbes	Border Terrier
Lehr, Joyce	Lunchbox	Yellow Labrador Retriever
Murray, Barbara	GraySea *	Weimaraner
	Apollo	Weimaraner
Roy, Nancy	McKenzie	Border Collie
	Maggie	Toy Poodle
Souder, Kathryn	Love	Salukis
	Kisses	Salukis

* Founding Dog
 (R) Retired Dog
 † Deceased Dog

Former Pet Teachers and Handlers

Dog Handler	Dog	Breed
Joan Bixby	Clair	Australian Shepherd Golden Retriever/Labrador Mix
Betty Bowman	Odie	
Kerry Callahan	Yukon †	Golden Labrador Retriever
Melanie Chan	Inti * †	Peruvian Hairless
Evelyn Dlugopolski	Molly * †	Bouvier Des Flandres
Stan Dlugopolski	Simon * †	Bouvier Des Flandres
Patricia Evangelist	Simba	Maltese Mix
Marjorie Green	Pepper	Toy Poodle
Valerie Harville	Thunder †	Belgian Tervuren
Jo McGinnis	Lady	Springer Spaniel
Virginia Murmo	Luther	Labrador Retriever Mix
Jan Pence	Jazzi	Irish Water Spaniel
Jeanette Ringer	Pippin	Wirehaired Dachshund
	Kassi	Wirehaired Dachshund
Susanne Saether	Grover	Chocolate Labrador Retriever
George Shaw	Mickee * (R)	Sheltie
Lorraine Simpson	Robbie	Sheltie
Karen Zimmerman	Cali *	Borzoi

* Founding Dog
 (R) Retired Dog
 † Deceased Dog

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CHAPTER 1 INTRODUCTION

Performance data (National Assessment of Educational Progress, 1998) indicate that United States school children have a serious reading deficiency. According to the National Reading Panel Progress Report (2000), more than 17.5 percent or approximately ten million children will encounter reading problems during their first three years of schooling. Approximately 75 percent of the students identified with reading concerns in the third grade will still be experiencing reading problems when they are in the ninth grade and possibly throughout adulthood (Francis, et al., 1996). Felton and Pepper (1995) conducted a longitudinal study of students with poor word recognition skills in the third grade and found the majority of these students were unable to significantly improve their skills by the end of eighth grade.

According to the National Assessment of Educational Progress (1998) study, proficient readers were in the minority and reading problems were significantly severe for children from disadvantaged homes. Children from lower socioeconomic families and minority students lost substantially more literacy skills during the summer than children from higher income families, and students whose parents graduated from college had a much greater chance of being proficient readers than students whose parents did not complete high school (National Assessment of Educational Progress, 1998).

As these struggling students enter the classroom, their reading problems manifest themselves in different ways. Reluctant learners are students who do not show any interest in learning, achieving, or in life itself. These reluctant learners are not interested in what the teacher is teaching in the classroom, and they struggle to learn within the

traditional time that is allotted. The methods used to present material in most educational classrooms do not meet the needs of these students (Herzog, 2002); thus, they often spend the majority of their time staring into space and disengaged from the learning process (Evans, 1999). These reluctant learners spend most of their energy avoiding challenges, not completing tasks and doing just enough to keep going. Many have the potential to do extremely well but do not seem to have any desire to achieve in school and are extremely lacking in motivation. Identifying the reasons why these students are so reluctant to learn is essential to engaging their interest and helping them succeed (Protheroe, 2004).

According to Evans (1999) teachers can address the needs of these reluctant learners by connecting motivation to presentation of academic work. Students who suffer academically due to a lack of motivation struggle to complete tasks and often demand a disproportionate amount of the teacher's attention. Protheroe (2004) stated that this lack of motivation to achieve and disengagement from academic tasks becomes a recipe for failure that is extremely difficult to change.

Motivating these students and trying to stop this downward spiral is an ongoing task for teachers. Extrinsic motivators such as grades, food, homework passes, and special privileges may ignite a spark for children; but these motivators are often short-lived. When students learn or achieve a goal just to receive a reward, they often do not retain what they have learned because the goal was to get the reward rather than learn the information. Learning has to be meaningful and students have to believe they can succeed (Barkley, 2007).

Alan M. Beck with the Center for the Human-Animal Bond at Purdue University (2000) took a different approach to study motivation in students when he teamed up with

Anthony G. Rud Jr. at the Purdue School of Education and conducted a survey of elementary teachers in Indiana. The responses offered some interesting information concerning the impact of animals in elementary school classrooms. According to the results, caring for the animals motivated the students to improve their work and to complete classroom assignments. When students improved their work and completed assignments, they were given additional opportunities to care for the animals. As the students showed more concern for the animals, they also showed more concern for their classmates.

Kali Miller (2004) also found through her research that animals were motivational to students who were struggling to learn and often had a positive impact on their participation in group activities, their completion of assignments, and their interaction with their peers and their teachers. Miller (2004) found that children would often complete their work and classroom assignments in order to earn opportunities to care for and interact with the animals.

Animal Assisted Therapy may be one answer for reluctant learners and children who are struggling to learn to read. According to Warford (2004) reading comprehension is the foundation for all academic learning; therefore, it is imperative that every child be given every opportunity to learn to read. Educators cannot rest until they have tried every possible strategy to reach those students who do not respond to typical classroom interventions. This study sought to ascertain if reluctant readers benefited from the use of registered therapy dogs in the school environment.

Statement of the Problem

Educational reading assessments strongly suggest that American children have serious reading deficiencies with as many as ten million deficient in kindergarten through third grades. While classroom teachers utilize a variety of strategies and motivators, such practices do not meet the needs of such reluctant readers. In order to meet the needs of these children, educators must be innovative and consider such motivational tools as animal therapy.

To date little formal research has occurred to measure the impact of registered therapy dogs assigned to students in order to improve reading skills. The purpose of this study was to ascertain if children assigned to registered therapy dogs improve significantly in reading achievement and related school performance such as attendance and discipline when compared to students of similar characteristics who were not assigned to registered therapy dogs. The study investigated whether students assigned to registered therapy dogs improved their reading skills and if these students demonstrated more or less growth than students of similar characteristics not assigned to registered therapy dogs. The study was guided by the following research questions:

- 1) What reading skills changed among students assigned to registered therapy dogs?
- 2) What other school related behaviors (attendance, classroom behavior, etc.) changed among students assigned to registered therapy dogs?

The following hypotheses were tested:

- H1) Is there a significant difference in achievement growth in reading between students assigned to registered therapy dogs, students of similar characteristics not

assigned to registered therapy dogs, and a reading standard for individual grade levels?.

H2) Is there a significant difference between the scores on standardized achievement tests for students assigned to registered therapy dogs and students of similar characteristics not assigned to registered therapy dogs?

Significance of the Study

Every day, students who are struggling to read enter the classroom. Every day, teachers try desperately to motivate these students and help them overcome the obstacles that prevent them from being proficient readers. Each one of these students thinks, feels, and acts differently; thus, each student is motivated by something different (Gordon, 2002).

This study investigated the impact of using registered therapy dogs as motivators for reluctant readers. The challenge of teaching all children to read is large and traditional reading programs have not been as successful as hoped (Allington, 1999). According to Kame'enui (2004) there is no one right approach to literacy instruction, and the belief that there is one right approach takes its greatest toll on students who are struggling to read. Educators cannot afford to invest any more time trying to determine why reluctant learners are struggling or where the blame should be placed for their failures. Educators must spend their time more wisely and invest it in creating, implementing, and authenticating instructional programs and interventions for reluctant learners. These programs and interventions should not be tied to any one instructional method but should simply work for the targeted students. The data from this study was

used to determine if the use of registered therapy dogs in the classroom was an intervention that moved reluctant readers closer to becoming proficient readers.

Delimitations of the Study

- 1) The data was restricted to the students in selected counties in Florida who were identified by their teachers as learners who met the criteria for and received parent permission to participate in the C.A.R.E. to Read program.
- 2) A self-administered questionnaire was sent to the classroom teachers of students who participated in the C.A.R.E. to Read program.
- 3) The focus of the questionnaire was the observations teachers made before and after students participated in the C.A.R.E. to Read program.

Limitations

- 1) This study was limited by the amount of time that lapsed between the students' actual participation in the program and the teachers' receipt of the questionnaire concerning changes in student behaviors.
- 2) Although training occurred, the difference in skill among dog handlers as they observed reading behaviors demonstrated by student participants and the accuracy with which these behaviors were recorded may vary.
- 3) Each team was made up of a student, a registered therapy dog, and a dog handler. The difference in relationships between the different team members were likely to vary and therefore may have limited the findings in the study. The primary relationship which would vary was bonding.

- 4) Accuracy of the teachers to identify and select students who were substantially deficient in reading or at least one grade level behind in reading.
- 5) The control group was made up of only first and second graders.
- 6) Even though the students selected for the program were not in an exceptional education program at that time, some of them were identified for exceptional education programs at a later date.

Definition of Terms

For the purpose of this study, the following definitions were utilized to clarify terminology:

Animal Assisted Therapy (AAT)--improving the physical, social, emotional, and/or cognitive functioning of humans through the use of animals utilizing formalized and measurable behavioral goals and objectives.

Canine Assisted Reading Education Program--an Animal Therapy program whereby registered therapy dogs and their handlers work one on one with students who are struggling to read.

C.A.R.E. to Read--Canine Assisted Reading Education Program

Debilitating Anxiety--a situation that generates unwarranted worry and self-doubt in a second language learner and causes the student to participate less and avoid situations that require using language.

Delta Society--an international, non-profit organization with its headquarters in Renton, Washington. This organization is extremely involved in Animal Assisted Therapy including testing and registering dogs for therapy work.

Dog Handler--a person who has been trained to work with a dog in an Animal Assisted Therapy program.

Effective Learning Strategies--research-based instructional practices used in the classroom to improve student achievement.

Emotional Intelligence--a form of social intelligence that involves a person's ability to monitor his/her own emotions along with the emotions of others and to use that information to make decisions about appropriate actions.

Extrinsic Motivators--tangible rewards used to encourage students towards positive performance.

Facilitating Anxiety--situations in the educational setting that make it easier for second language learners to stay engaged in classroom activities that help them grow in their use of language and knowledge of content. This positive anxiety occurs in classrooms where second language learners are free to ask questions, are encouraged to try again, and are not ridiculed or disciplined for making mistakes but are challenged at the appropriate academic and social levels.

Florida Comprehensive Assessment Test (FCAT)--a statewide criterion referenced test in Florida given annually to students in grades 3-11 in order to determine student achievement and growth. The test is based on the Sunshine State Standards.

Guided Reading--small group instruction in which a teacher supports each reader's development of effective strategies for processing new texts at increasingly challenging levels of difficulty.

Intermountain Therapy Animals--an Animal Assisted Therapy organization located in Salt Lake City, Utah, and sponsor of the R.E.A.D. program (Reading Education Assistance Dogs).

Proficient Reader--a student who is able to read and comprehend texts written on or above the student's grade level.

Reading Deficiency--a lack of reading achievement that equates to a student being at least one year below the student's grade level in reading comprehension.

Reading Education Assistance Dogs Program (R.E.A.D.)--a reading program designed by Intermountain Therapy Animals to improve the literacy skills of children who suffer from low self-esteem and struggle to learn.

Registered Therapy Dog--a dog that is obedience trained, tested, and registered by an authorized therapy pet organization.

Reluctant Learner--a student who shows no interest in learning, in achieving, or in life itself.

Second Language Learner--a student who is learning English as a second language.

Self-esteem--feeling confident in one's abilities to achieve.

Self-efficacy--the power to produce a desired effect

Social Skills -- interpersonal skills used to communicate and relate to other individuals or groups of people.

Standard of reading growth--a measure of comparison for reading growth based on the beginning and ending book levels for grade levels one through five as defined by Irene Fountas and Gay Su Pinnell.

Student Data Sheet for Pet Teacher and Handler--data sheet used by the dog handlers and certified teachers to record reading behaviors observed during each reading session.

Therapy Dog Incorporated--an Animal Assisted Therapy organization located in Cheyenne, Wyoming which is extremely involved in animal assisted therapy including testing and registering dogs for therapy work.

Weighted mean--the mean of each of the three objectives on the C.A.R.E. to Read Student Data Sheet for Pet Teacher and Handler multiplied by the level of the book used during that reading session.

Theoretical Framework

The theoretical framework supporting this research study was based on motivational theories. Evans (1999) and Protheroe (2004) both found a direct correlation between a student's self-efficacy and motivation to learn. According to Evans (1999) reluctant learners are often characterized by low self-esteem or self-efficacy which can be explained by Abraham Maslow's Hierarchy of Needs Theory (Gordon, 2002).

Maslow found that people were driven from within to reach their full potential or self-actualization (Gordon, 2002). According to Maslow's theory, people worked in order to satisfy their needs. First they had to satisfy their basic physiological needs and once these needs were met people were motivated to move up the hierarchy to meet their needs of safety and security. Once these needs were met the focus became meeting the needs of belongingness and love, then esteem, and finally self-actualization.

The lower four needs (basic physiological needs, security and safety, social affiliation, esteem) are called deficiency needs because their deficiency motivates people to meet them. People find it difficult to respond to higher-order needs until these deficiencies have been met (Gordon, 2002).

Evans (1999) and Protheroe (2004) both found in their research that a characteristic of reluctant learners is low self-esteem. Since esteem is higher on the hierarchy than physiological needs, safety and security, and social affiliation; it would stand to reason that reluctant learners may have lower order needs that are not being met. If these learners are going to reach self-actualization; teachers, administrators, and parents have to find ways to ensure that these students have their lower order needs met so they can be motivated by higher order needs.

Another theory that provided the framework for this study was David McClelland's drive theory which was an expansion of the work by John Atkinson (Marzano, 2003). According to Atkinson, motivation is based on two competing drives: striving for success and fear of failure. These drives operate simultaneously and as people grow and learn they develop a propensity to be either success oriented or failure avoidant. Students who are success oriented are generally motivated to engage in new tasks because they expect emotional rewards whereas students who are failure avoidant are not motivated to engage in new tasks because failing brings about negative feelings.

Students who are failure avoidant can develop self-handicapping strategies that ensure they fail for reasons other than lack of ability. These students have learned to use self-helplessness as a means of survival. According to Protheroe (2004) reluctant learners spend their time avoiding challenges, spending as little effort as possible, and

giving up. The challenge for educators becomes moving reluctant learners from failure avoidant to success oriented.

Barkley (2007) also found that reluctant learners either avoid situations where learning might lead to failure or they expect to fail and accept failure as a way of life. These learners believe their ability is fixed and success is impossible. They see no relationship between applying effort and increasing their ability. In their minds effort is a direct link to success and when they apply effort and do not immediately succeed, they shut down. These low-performing learners have accepted their limitations; and even though they may try to learn more, they believe their ability to learn is diminished. These students see themselves as incompetent and have no idea that increasing their effort will increase their abilities which will increase their likelihood of success (Barkley, 2007).

Methodology

The researcher analyzed the data from the Canine Assisted Reading Education program referred to as C.A.R.E. to Read. Dog handlers trained in the facilitation of reading activities collected the data using an instrument entitled *Student Data Sheet for Pet Teacher and Handler* (Murray, 2001). The instrument was based on the principles of guided reading as defined by Fountas and Pinnell (1996). The elements of reading were delineated into learning strategies and formatted on a scale to reflect accurate responses by students. In addition anecdotal notes concerned with student behaviors were recorded. Such student behaviors included but were not limited to shyness, reading processes, sounding out words, general comments, and inappropriate behaviors. The instrument was

piloted in the spring semester of 2002 and screened for improvements toward user friendliness and appropriateness of content identified as improved reading achievement.

The data collected from C.A.R.E. to Read for this study covered the time period from February 2002 through May 2006. The population for the study was 136 first through fifth grade students who participated in the C.A.R.E. to Read program, 19 students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs, and 46 students who were identified as being in the lowest quartile for reading in their respective schools. Students who participated in fewer than four sessions with a registered therapy dog and dog handler were excluded from the sample size. Additionally, some students were excluded due to incomplete or missing data as a result of hurricanes, school closures, and the availability of registered therapy dogs due to retirements.

The sample for the study was 98 first through fifth grade students who participated in the C.A.R.E. to Read program and were assigned to registered therapy dogs, 19 students participating in a control group who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs, and 46 students who were identified as being in the lowest quartile in reading in their respective schools. The students were enrolled in 29 elementary schools located in selected counties in Florida.

Eighty-two classroom teachers for students involved in the C.A.R.E. to Read program were surveyed using the C.A.R.E. to Read Program Teacher Questionnaire. This questionnaire was designed by the researcher and validated by expert opinion. The questionnaire consisted of nine open-ended questions regarding teacher observations of

student behaviors related to reading, self-esteem, appearance, attendance, schoolwork and homework.

The researcher also collected reading data from Brevard Public Schools. This data was used to compare and contrast the standardized test scores of students in the C.A.R.E. to Read Program who were assigned to registered therapy dogs with students in the control group who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs. Additionally, data was collected to compare the reading growth for students who were assigned to registered therapy dogs to students of similar characteristics who were not assigned to registered therapy dogs. The students of similar characteristics were randomly selected from students who were identified as being in the lowest quartile for reading in their respective schools.

Organization of the Dissertation

This dissertation is made up of five chapters. Chapter I consists of the Introduction, Statement of the Problem, Significance of the Study, Delimitations, Limitations, Definitions, Theoretical Framework and Organization of the Dissertation. Chapter II presents the Review of Related Literature which was relevant to the study. Chapter III is a description of the methodology used to conduct the study. Chapter IV is an Analysis of the Findings, as well as, the presentation of all statistical data related to the reading achievement of the students assigned to registered therapy dogs, students receiving one on one instruction from a certified teacher and not assigned to registered therapy dogs, and students identified as part of the lowest quartile in reading in their

respective schools. Statistical data related to the survey instrument is also included in Chapter IV. Chapter V contains the Summary, Conclusions and Recommendations.

CHAPTER 2 REVIEW OF LITERATURE

This chapter is divided into six sections: (1) reluctant learners, (2) second language learners, (3) social-emotional development, (4) reading instruction, (5) animal assisted therapy, and (6) C.A.R.E. to Read, Inc.

The researcher compiled information from books, articles, journals, and the internet that pertained to reluctant learners and second language learners struggling to read in the traditional classroom. The research also addressed the social-emotional development of these students and reading instruction. Animal assisted therapy and programs using therapy animals were discussed.

Reluctant Learners

Mike Farris (2002) described four types of reluctant learners: the plodder, the quick finisher, the pleasure seeker, and the distracted student. The plodder is the reluctant learner who works in slow motion which results in the learner being overwhelmed with the workload; whereas the quick finisher is the learner who gets the work done but the quality of the work is extremely low. The pleasure seeker is the learner who does well on topics he/she enjoys but shows no interest in topics that are difficult or perceived as boring and the distracted student is the learner who cannot stay focused on the work.

Herzog (2002) defined reluctant learners as students who show no interest in learning or life and said that there were numerous reasons why these students were reluctant to learn. According to Herzog (2002) some of the reasons these learners are so

reluctant to learn are due to cognitive elements or mental skills, some are due to affective correlates or emotions, some are due to physiological factors, and some are due to environmental effects. Even though some of these factors are exceedingly relevant to the classroom, most teachers are less interested in why these learners are reluctant and would rather spend their time finding instructional practices that address the individual needs of these learners. Evans (1999) found that teachers can attend to the individual needs of these learners by using a few practical teaching ideas that connect motivation to the presentation of the academic tasks.

Students who suffer academically due to a lack of motivation have two major characteristics which are not completing tasks in a timely manner and an excessive need for teacher attention. In other words, these students struggle to begin a task in a realistic amount of time or they stop working before the task is finished. Evan's (1999) research revealed a direct correlation between levels of motivation and a student's perception of time coupled with a student's ability to finish tasks within a specified amount of time. For example if the student perceives that the time allotment for the task is unrealistic or that the task is not manageable, the student's level of motivation will decrease and the student may not even begin the task; whereas, if the student perceives that the time allotment for the task is realistic and that the task is manageable, the student's level of motivation will increase along with the probability that the task will be completed.

Evans (1999) further noted that teachers who want to be successful with reluctant learners must understand three basic principles about student participation. First, teachers must understand the student's ability and be able to choose a task that is not only appropriate for the student but also appropriate for the student's ability. Second, teachers

have to understand how a student's self-confidence impacts performance and how performance impacts self-confidence. Third, teachers must also understand how important it is for students to have some control over what they are being asked to do.

Teachers must recognize the extreme importance of matching the student's ability, whether high ability or low ability, to the assigned task. Students with low abilities, who are not matched to appropriate tasks, are often frustrated because the tasks are too long or too difficult. As a result, these students respond negatively when they are given new tasks. They might not specifically say that the task is too difficult, but their continuous delays and disruptions are indicative of such. Students with high ability typically look over the work quickly. If they see the work as too easy or irrelevant, they immediately feel bored and show their low motivation by wasting an excessive amount of time before they even start the task (Evans, 1999).

Evans (1999) also found that teachers have to understand the essential part self-confidence plays in a reluctant learner's performance. Some students may suffer from a lack of confidence in a certain content area, whereas others may suffer from low self-esteem in general. It does not matter if the low self-esteem issue is particular to one area, or if it is in general, students with low self-esteem are not able to follow directions and begin teacher-assigned tasks within a reasonable time frame. In order to help these students overcome their reluctance, the teacher must plan and implement individualized and differentiated types of activities in the classroom. These activities should offer students a variety of choices, and the order in which the activities are completed should be flexible. The goal of these activities is to help the students get started; therefore, the activities should not carry a penalty (Evans, 1999).

Teachers must understand that giving reluctant learners some control over what they are being asked to do often results in these learners demonstrating higher levels of classroom participation (Evans, 1999). Examples of teacher strategies that provide students with a sense of control are allowing students to complete even or odd numbers, giving students the option to turn assignments in daily or weekly, and allowing students who make a certain grade on pretests to be exempted from the posttest. In addition, teachers can allow students to exhibit mastery in a variety of ways such as by taking a test, completing a project, writing a paper, or making a presentation. When reluctant learners feel they have some control in the classroom environment, they often become more engaged in the learning process (Evans, 1999).

Evans' research was supported by Protheroe (2004) who found that reluctant learners see themselves as poor students and often feel frustrated, inadequate, confused, and ashamed. While many of these learners have received the message that they are poor students directly from their teachers, parents, and others with whom they are in contact; others have experienced the message of failure indirectly through body language, tone of voice, and/or being ignored. Such feelings of inadequacy become a self-fulfilling prophecy because the more negative feedback these learners receive from teachers and parents, the less motivated they become. According to Protheroe (2004) this becomes the recipe for failure for many of these students.

Protheroe (2004), like Evans, found a direct correlation between students' self-efficacy and motivation to learn. According to Protheroe (2004), students with high self-efficacy approach learning willingly, put forth effort, persevere in the face of challenges,

and use strategies effectively; whereas, students with low self-efficacy spend their time avoiding challenges, spending as little effort as possible, and giving up.

Protheroe (2004) found that there are several reasons why students experience low self-efficacy. One reason is students are unable to see the relevance between what they are being asked to do and their own interests. These students often feel school work is meaningless and has nothing to do with their lives or interests. Because these students fear failure, they would rather not try than to try and experience failure or embarrassment. Another reason is these reluctant learners are often very concerned with how they appear to their peers, thus they try to save face by acting like they do not want to learn. Some reluctant learners with learning problems struggle to keep pace with peers and unfortunately, such constant struggling all too frequently results in these students just giving up (Protheroe, 2004).

Barkley (2007) identified several beliefs that reluctant learners have about themselves. These learners expect to fail and avoid situations where learning might lead to failure. They are convinced that success is out of their realm of possibility because everyone is born with a certain level of ability that never changes. Even though some of these struggling learners may try to learn, they do not believe they can learn as much as their more successful peers because they see no relationship between effort and ability. Their previous failures have confirmed their beliefs that ability is fixed and no matter how much effort they apply, they cannot change their level of ability. Thus, these learners see themselves as either incompetent or as failures (Barkley, 2007).

Protheroe (2004) and Evans (1999) found that all reluctant learners do not have low ability levels and that some actually have high ability levels. These students who

have high ability levels are reluctant learners because they feel there is no challenge in the tasks and their indifference toward schoolwork may be the result of assignments that are below their ability. These students may appear helpless in order to get attention from the teacher.

Protheroe (2004) also found that some reluctant learners may be experiencing emotional distress. These students' lack of interest in schoolwork or ability to stay on task may be a sign of anxiety, distress, or depression. Other reluctant learners may be expressing anger through their poor performance in school and may be using poor achievement as a form of rebellion against parental demands to excel.

Reluctant learners usually lack effective learning strategies. Many have no idea how to study effectively; and unfortunately, little classroom time is devoted to helping these learners develop these critical study skills. Tumposky (2003) suggested that teachers should spend time teaching a few basic strategies such as time management and how to summarize reading materials. In addition to teaching the strategies, teachers should also help students apply these strategies by having the students talk about the strategies they used, the amount of time they spent on the tasks, and what they learned.

According to Barkley (2007) teachers cannot only teach strategies but also must help students realize the importance of effort and its impact on ability. He discussed the relationship among ability, effort, and a manageable task in his book *Tapping Student Effort ~ Increasing Student Achievement*. Barkley (2007) noted that when students have a manageable task and believe success is within reach, the students will apply effort which in turn causes their abilities to increase and as their abilities increase they apply

more effort which continues to increase their abilities. The result of the increased abilities and continued effort is success.

In order for the students to have success with the task, it is the teacher's responsibility to first match the task to the students' abilities. The students must be willing to approach the task willingly and to apply the necessary effort. Barkley (2007), like Protheroe (2004), found that when students determine a task is either too difficult or too easy; they lose motivation and no longer wish to succeed. These students do not realize their potential because they shut down as a result of perceiving the tasks as too difficult. If the students see the task as manageable and believe they can succeed; then they are willing to apply the necessary effort which increases their ability and eventually leads to success (Barkley, 2007).

It is important for teachers and students to realize that merely increasing effort does not always guarantee student success; but, increasing effort does lead to increased ability. When students continuously apply effort, their abilities increase incrementally which results in improved performance. If students believe that increased effort leads to immediate success, they are likely to quit when success is not immediately realized. If students clearly understand that increased effort is a way to increase their abilities, they will continue to apply effort which will increase their abilities which will allow them to enjoy success (Barkley, 2007).

Second Language Learners

Anytime students attempt language they are taking a risk and whenever they express themselves orally, they expose themselves to the reactions and opinions of others. Thus, if risk taking is too uncomfortable, it can inhibit the use of language. Even though this phenomenon holds true for first and second language learners, students who are learning English as a second language may experience a higher degree of this phenomenon because of their inexperience and fragile knowledge of the language. These students may experience a substantial delay in their language growth and may also avoid becoming involved in content learning (The New England Equity Assistance Center, 2002).

Students who are learning English as a second language must be provided an environment that reduces anxiety because a low-risk environment encourages the students and increases motivation for learning. It is imperative for young second language learners to have an environment that is nurturing and safe so these students will experiment with natural language. Older learners need a risk-free environment in order to connect complex thinking and appropriate use of language which occurs most often when students are free from intimidation and are not made to feel inadequate ((The New England Equity Assistance Center, 2002).

Teachers must be able to recognize the language acquisition stage of each second language learner in the classroom. All second language learners move through the stages of preproduction, early production, speech emergence, intermediate fluency, and advanced fluency. Knowing and understanding the five stages and their characteristics is

essential before a teacher can effectively differentiate instruction for these students (Hill & Flynn, 2006).

According to Stephen Krashen and Tracy Terrell (1983) there are five stages of language acquisition. The first stage is the Preproduction stage which usually last approximately 0 – 6 months. During this stage the students have very little understanding, do not speak, nod yes and no, and use pictures and pointing to communicate. Examples of appropriate prompts for teachers to use during this stage are “show me..., circle the..., where is..., and who has...” (Krashen & Terrell, 1983).

The second stage of language acquisition (Krashen & Terrell, 1983) usually lasts from 6 months to 1 year and is referred to as the Early Production stage. During this stage students have some degree of understanding, can generate responses of one to two words, join in by using key words and well-known phrases, and use present-tense verbs. Teacher prompts that are suitable for this stage are yes/no questions, either/or questions, lists and labels. Questions posed by the teacher during this stage should only require the student to respond by giving a one or two word answer.

Krashen and Terrell (1983) identified the third stage of language acquisition as the Speech Emergence stage. This stage usually lasts for 1 to 3 years. The students typically have good comprehension and are able to produce simple sentences, but make grammar and pronunciation errors and often do not understand jokes. Effective teacher prompts during this stage are “why...?, how...? and explain...” The teacher can also ask questions that require a phrase or short sentence as a response (Krashen & Terrell, 1983).

As students progress to the fourth stage, they have a good grasp on the language. This stage is known as Intermediate Fluency and lasts approximately 3 to 5 years.

During this stage the students exhibit strong comprehension and grammatical errors are few. Examples of appropriate teacher prompts are “what would happen if ...?” and “why do you think ...?” (Krashen & Terrell, 1983). This stage is followed by the Advanced Fluency stage which is the final stage of language acquisition. During this 5 to 7 year stage the students sound almost like a native in the language. Effective teacher prompts during this stage are “decide if ...” and “retell ...” (Krashen & Terrell, 1983).

When teachers know the stages of second language acquisition, they can ask the appropriate types of questions and use appropriate prompts to engage and motivate second language learners. The teachers’ understanding of the levels of language proficiency for all of their students helps them provide the best instruction and support for each student. When students receive individualized instruction and appropriate support, they become proficient in their use of language and successful in their academic accomplishments. This success leads to more participation which leads to more success. In other words success breeds success (Hill & Flynn, 2006).

According to Hill and Flynn (2006) the two things that second language learners want to know are will the teacher like me and will I be able to do the work. If the teacher only provides negative feedback through verbal responses and body language, the students may feel that the teacher does not like them. Naturally, the students will make errors as they acquire a second language and the best way for teachers to deal with the errors is to model correct structures by gently restating what the students said. When teachers constantly correct grammar and pronunciation errors, the students often

experience anxiety which can deter their acquisition of the language (Hill & Flynn, 2006).

It is impossible to eliminate all anxiety from the classroom for second language learners and in fact, there is one specific type of anxiety that can be helpful to these students. This anxiety is referred to as facilitating anxiety because it keeps learners attentive to learning and excited about engaging in learning activities that help them grow and improve in their use of the language and their knowledge of the content (The New England Equity Assistance Center, 2002).

Debilitating anxiety does not facilitate learning and generates unnecessary worry and self-doubt. The result is the students participate less in the classroom and avoid situations that require using language. When students experience debilitating anxiety, it often leads to performance anxiety which is similar to stage fright. When these students are asked to give an oral report, participate in a skit, or perform a role-play; they are essentially paralyzed and are unable to complete the task. This leads to more debilitating anxiety, even less participation, and a complete avoidance of language activities (The New England Equity Assistance Center, 2002).

Debilitating anxiety can also be brought on by frustrating assignments. When assignments are too difficult for the learner to understand, the learner will avoid the assignment and lose motivation. This is a common occurrence in traditional classrooms where the teacher is the authority and dispenser of information. Students in these classrooms are constantly reminded of their own mistakes and are expected to respond to questions immediately without wait time. This presents a huge obstacle for second language learners because they are not given any time to process the information they are

receiving or to process their own learning. Oftentimes, these classrooms are filled with learning activities that have no relevance for the students. This environment makes it impossible for the second language learner to be successful (The New England Equity Assistance Center, 2002).

Finally, debilitating anxiety can be brought about by culture shock as learners start their transition into American schools and classroom environments. Typically, these occurrences are short-lived; however, they can still have a major impact on the learner. During the time learners are experiencing culture shock; they can show signs of panic, self-pity, sadness, alienation, and even physical illness. These symptoms should be recognized and dealt with rather than being ignored (The New England Equity Assistance Center, 2002).

It is important to note that although second language learners may appear to be as fluent in conversation and in daily routines as native speakers of the language; their academic language is the last to develop and may not be at the same level. These students may experience high levels of anxiety as they try to maintain the same pace as their peers in academic subject areas. Teachers must be aware of this and provide a low-risk classroom environment where these second language learners are accepted and successful (The New England Equity Assistance Center, 2002).

Social-Emotional Development

Elias, Zins, Graczyk, and Weissberg (2003) concluded that social skills have a positive relationship with academic achievement and a negative relationship with problem behaviors; changes in social skills usually precede changes in academic

achievement; and as social skills improve, students find the school environment more supportive. In other words, as students learn to make friends and have better relationships with their peers, they have fewer incidents of misconduct and inappropriate behavior; whereas, students who consistently model inappropriate behavior tend to have more problems with their peers. Students who demonstrated growth in their social skills and were more successful with their peers also demonstrated improvement in their academic achievement. As students develop better social skills, they tend to feel that the school environment is more supportive of their social activities. In other words, as the students improved their social skills, they were more successful in the school environment and had a more positive outlook on school and society.

The results from the research by Elias, Zins, Graczyk, and Weissberg (2003) are supported by the research of Malecki and Elliott (2002), as well as, the research of Caprara, Barbaranelli, Pastorelli, Bandura, and Zimbardo (2000). This research strongly supports that teaching social skills is imperative and reaps both social and academic dividends for students and the schools they attend (Elias, Zins, Graczyk, & Weissberg, 2003).

During the past 25 years there have been major changes in the culture of the United States such as what constitutes a family and how a family interacts with itself and the community. Burke (2002) reported that there were at least 20 different family structures in existence and these family and community features have major implications for teachers at every grade level.

The most common examples of these family structures are the millions of children from divorce situations. The impact of divorce on a child's life was originally thought to

be short-lived and easily resolved. However, Burke (2002) found through extensive longitudinal research that divorce for many children was a life-changing event that caused considerable problems that lasted for decades. Taking this into consideration, teachers must be constantly aware that every life experience will have some degree of positive or negative impact on a child. Positive experiences create positive feelings and increase self-confidence whereas negative experiences can damage a student's development and achievement in school. Even though most of these occurrences happen outside the school, they still have major implications for classroom interactions and teachers (Burke, 2002).

The changes in family dynamics and community interactions have resulted in some positive and some negative changes in students' social skills and emotional needs. Students in public schools today often seem to be more competent and more sophisticated than the generations of students who came before them; but, upon closer inspection the current students are often missing basic academic, social, and emotional skills that were taken for granted in earlier generations (Burke, 2002). The absence of these skills can be detrimental to a student's success.

Richburg and Fletcher (2002) tried to find out why some people are successful and others are unsuccessful. Common sense would lead one to believe that people who have great ability and natural talent should be the most successful, the happiest, and the wealthiest. However, Richburg and Fletcher (2002) found that emotional intelligence was probably the most important factor in determining life success.

Emotional intelligence is typically referred to as a form of social intelligence and involves a person's ability to examine his own emotions and the emotions of others, to

discriminate among personal emotions and the emotions of others, and to use this information to guide his thinking and actions (Salovey & Mayer, 1990). Even though the concept of emotional intelligence was introduced by Salovey and Mayer in the early 1990s, the idea of emotional intelligence was first popularized by Howard Gardner's (1983) development of the Theory of Multiple Intelligences almost ten years earlier. Gardner referred to interpersonal and intrapersonal intelligences in his theory. In 1995 Daniel Goleman heightened the popularization of emotional intelligence with the publication of his book, *Emotional Intelligence: Why It Can Matter More than IQ*.

Richburg and Fletcher (2002) divided emotional intelligence into five different areas. The first area involves knowing one's emotions or being able to identify a feeling as it occurs. Shapiro (1998) called this the self-awareness stage and often referred to this stage as the foundation of emotional intelligence. When a person can recognize and monitor his own feelings, he increases his self-awareness and his ability to control his life which leads him to make conscious choices about his life decisions.

When a child is able to express his emotions verbally, he is taking a major step toward meeting his basic needs. When a child can identify and express emotions, he is able to communicate which is essential to gaining emotional control and to building fulfilling and nurturing relationships (Richburg & Fletcher, 2002).

The second area in emotional intelligence is managing emotions or the ability to reflect on thoughts, feelings, and actions. Richburg and Fletcher (2002) referred to this as an awakening and compared it to psychoanalysis. When a person understands how to explore conscious and unconscious thought, he has acquired an emotional competence of

the self. In other words, a person is emotionally competent when he has the ability to discuss his conscious and unconscious thoughts.

The third area of emotional intelligence involves motivation. According to Zirkel (2000), motivation is the level to which a person acts upon a given idea, thought or goal and each person carries out the idea, thought, or goal according to his own potential. Other factors such as need, fulfillment, concern, and benefits can have an impact on motivation and may control the level of self-motivation (Richburg & Fletcher, 2002).

Students who are self-motivated have the capacity to understand the results of following through with a task. According to Goleman (1995), motivation is connected to flow which is a state of self-forgetfulness and a situation where emotions are controlled which makes it possible for the person to have the best performance. When a person experiences a state of flow, his emotions are positive and his feelings are harmonious which leads to success because the motivation comes from within the person rather than from the action itself.

Students who are self-motivated are typically successful in school and they need very little if any prompting from teachers or parents to perform in school. These students see the relevance of education to their future and find creative ways to stay involved. They work for desired outcomes and do not need constant reinforcement to stay on task because the desired goal is their motivation to keep going. Shapiro (1998) stated that self-motivated children expect to succeed and set high goals for themselves, whereas unmotivated children have low expectations and are satisfied with mediocrity (Richburg & Fletcher, 2002).

The fourth area of emotional intelligence involves recognizing emotions in others. As one continues to gain a high level of self-awareness, it is important to take into consideration the emotions and needs of other individuals. This sensitivity can shape a person's social skills, improve his outlook on life and increase his social competence (Richburg & Fletcher, 2002).

The fifth and final area of emotional intelligence involves handling relationships (Richburg & Fletcher, 2002). Gardner (1983) stated that the heart of personal intelligence as it relates to others is being able to see how moods, temperaments, and motivations vary in different people. He also related interpersonal intelligence in its most basic form as the capacity of the young child to differentiate and perceive the moods of other individuals.

Building relationships is a complicated and intricate process because every relationship is different and involves connecting with others, nurturing those connections, and maintaining connections with different levels of intimacy. A person's level of self-awareness and social competence impacts each of these relationships. When the complexity of emotions is taken into consideration with how emotions effect interactions with others, it is obvious that the process of building relationships is complex and presents challenges in the classroom (Richburg & Fletcher, 2002).

Richburg and Fletcher (2002) promoted exposing students to a variety of social situations because every time a student is exposed to a social situation the probability of having successful relationships increases along with the student's emotional intelligence. When students engage in activities that broaden their views of the world and improve their socialization skills, they develop a more realistic balance between emotional

expressions and social competence. They have the opportunity to experience the relationship as a give and take situation and to share emotions and interactions in a mutual and respected environment (Richburg & Fletcher, 2002).

Emotional intelligence can be used to understand children and how their emotions affect behavior, relationships and overall success. When teachers understand emotional intelligence, they are more equipped to build positive relationships with their students and they can help their students build positive relationships among themselves. Teachers can use these relationships and appropriate interventions to meet the individual needs of their students and to help their students experience success socially, emotionally and academically (Richburg & Fletcher, 2002).

Reading Instruction

The numerous reasons why some children struggle to read cannot be addressed by any single approach or program. Today's teachers are under great pressure to improve student performance and meet state and national standards of achievement. At the same time, schools face serious challenges brought on by changes in our societies such as stress on families, a more diverse school-age population, teacher shortages, and poverty (International Reading Association, 2000).

According to the International Reading Association (2000) there is no single, simple solution to the problem of teaching all children to read proficiently. Policies that benefit some children while ignoring the needs of others fall short of the goal of helping all children to become competent readers. Programs that only teach one part of a balanced literacy equation train readers who may be unable to understand or enjoy what

they read. If educators and policymakers truly want to make a difference, they must consider the entire problem rather than focusing on one or two aspects (International Reading Association, 2000).

Teaching children to read is a complex task that involves teachers, school administrators, parents, and communities. Teachers must be well-trained and must have the necessary resources to meet the individual needs of the students in their classrooms. School administrators must be knowledgeable of reading instruction strategies, must provide appropriate resources, and must support teachers in their efforts. Parents and community members must offer their support by encouraging literacy for all children. Although it is essential for all of these stakeholders to work together so everyone can win, each stakeholder can provide support in a unique way (International Reading Association, 2000).

Teachers have the most critical role in preventing reading failure. Every child has the right to appropriate early reading instruction based on their individual needs and the right to be taught by a well-prepared teacher (International Reading Association, 2000). Teachers must be the chief learners in the classroom and spend a considerable amount of time modeling their own learning and showing students how to learn. Teachers must be readers first, must continue their own learning through professional development, and must stay abreast of new information in the fields of child development and literacy (Harvey & Goudvis, 2000). They must be well trained and have a thorough understanding of reading development in order to help children develop the skills and understandings they need to become proficient readers (International Reading Association, 2000).

Students learn differently so teachers must have a wide range of proven methods for helping students internalize reading skills. Teachers must know each student as an individual and provide the appropriate balance of strategies and instruction needed to meet the individual needs of each student in their classrooms. Teachers must find ways to help students develop a motivation to read and use active strategies to construct meaning from text. Teachers must also ensure that students have sufficient background information and vocabulary to nurture reading comprehension so the students can read fluently and understand how speech sounds are connected to print (International Reading Association, 2000).

Teachers must be able to distinguish between students who cannot read and students who will not read (West-Christy, 2003). They should look for students in the classroom who do not understand the task and do not know how to manage their literacy materials. Teachers also need to identify students who do not understand the uses of reading and writing and cannot see how reading and writing are relevant to their lives (Graves, 1991). Students with reading difficulties are stuck in a cycle that hinders reading growth; thus teachers must help them break this cycle and make the move from dependent to independent readers (Dayton-Sakari, 1997).

Teachers cannot do the work for readers but they can help struggling readers break out of their passive cycle by treating them as they treat good readers. Struggling readers must do the reading and they must take control of the materials, the interactions, and the content. When teachers can force themselves to let go and push struggling readers to begin taking physical charge of their own reading, the struggling readers begin practicing the outer control that leads to inner control (Dayton-Sakari, 1997).

During all interactions with struggling readers, teachers have to know who is in control at every moment since the goal is for the reader to be in control rather than the teacher. The students, not the teachers, must be physically, mentally, and emotionally involved with their reading. Teachers must be willing to step back and wait until these passive readers begin to show signs of becoming active readers. Wait time can be very difficult because teachers typically feel pressured to get the content across, the lesson done, and the task accomplished. With struggling readers, teachers must force themselves to use wait time no matter how difficult it may seem because these readers have learned how to sit back and wait for the teacher to take control. Changing this habit of passivity may be slow at first, but habits can change if teachers are consistent and only accept the desired behavior (Dayton-Sakari, 1997).

As teachers work with struggling readers, they must perform ongoing assessments to monitor individual progress and relate reading instruction to the students' previous experiences. Assessments should be regular extensions of instruction, provide meaningful feedback, and create a partnership between the teacher and student in evaluating progress and setting goals (International Reading Association, 2000).

Every teacher who is going to make a difference with struggling readers must not only possess a variety of strategies for teaching reading but also must know when to use each strategy and how to combine the strategies into an effective instructional program (International Reading Association, 2000). Strategies for beginning readers may focus on phonological awareness, visual perception of letters, word recognition, and decoding skills (Fountas & Pinnell, 1996); whereas, strategies for comprehension include making connections between prior knowledge and the text, asking questions, visualizing, drawing

inferences, determining important ideas, synthesizing information, and repairing understanding. These strategies require higher level thinking which is often overlooked when working with struggling readers (Harvey & Goudvis, 2000).

Asking appropriate questions is an excellent but often a difficult strategy for teachers to implement. Benjamin Bloom (1980) and a group of educational psychologists created a taxonomy for classifying levels of questions that are often used in educational settings. The six levels in the taxonomy are knowledge, understanding, application, analysis, synthesis, and evaluation. Knowledge level questions only require simple recall, understanding level questions require comprehension, and application level questions require the learner to apply the information to a new situation. Analysis level questions require the learner to see patterns and to recognize hidden meanings; synthesis level questions require the learner to generalize, predict, and draw conclusions; and evaluation level questions require the learner to compare and discriminate between ideas, as well as, to assess the value of theories and make choices based on a reasonable argument.

Unfortunately, when teachers are working with struggling readers they often rely on knowledge level questions and only expect the reader to simply repeat the information from the text. Teachers rarely challenge these struggling readers to think and are often content with the students' low level responses. Mary Ellen Vogt (2002) found that teachers working with struggling readers asked fewer questions and rewarded students for their efforts rather than for their thinking.

Teachers must go beyond questioning and use other strategies teachers to encourage struggling readers to take control, take risks, and begin to feel as if they are

readers. Teachers can offer the readers every opportunity to take charge and make decisions, no matter how insignificant the decision may seem. The readers must be offered decisions about the pencil, the paper, the book, the game scorecard, even the place to sit. Every move must become open for opinion and choice by the reader. Teachers must take advantage of every opportunity whether obvious or subtle to force the students to take control of their reading (Dayton-Sakari, 1997).

As struggling readers begin to take more control of the reading process, teachers must use strategies that involve physical actions and require active thinking responses. Drama necessitates action, gestures, and facial expression to get meaning across and active thought on the part of students to understand the meaning intended. Writing combines physical action with active thought about what word or letter needs to be written next. By using visual representation, teachers can get the reader to diagram information from the text, create a story map, create a chart of characteristics, or draw a Venn diagram. Teachers can also encourage the reader to make a list of activities, keep score for games, begin a file of key sight words, or manipulate magnetic letters (Dayton-Sakari, 1997).

Effective teachers use strategies that require a great deal of discussion and that make possible situations where the reader is able to remember more than the teacher. Asking the reader to predict what will happen and then checking their guesses through discussion is an effective strategy (Dayton-Sakari, 1997). Encouraging struggling readers to research a content area of interest often draws the reader into the library and encourages the reader to search through books, write notes, and organize topics. After researching the topic, the reader can design a poster, make a game, or write a report. Any

game can be recreated by a struggling reader simply by making a new board, writing new rules, writing new directions, and making new game cards. All of these activities require active thought, discussion, decision, reading, writing, and teaching others (Dayton-Sakari, 1997).

All reading, writing, or talking instruction done with struggling readers is best when it is based on the reader's interests. For a struggling reader, the process being taught is more important than the content so the teachers should let the reader choose the topic and select the books and other resources needed for the project. Readers' interests are directly connected to their curiosity and if they want to know, they will usually put forth the necessary effort, and often forget they are struggling to read and write. In other words, these readers are taking control without even realizing it. Finally, teachers should allow the readers to direct or teach the teacher this topic of interest which gives the reader ownership. Effective teachers are aware that teaching anything requires more effort and understanding than learning about it, thus people often learn new things by teaching them to someone else. Teaching provides the opportunity to work the concept out in detail before making it understandable for others. Any good strategy can be reversed to put the reader in the teacher's place. Reading buddies and peer teaching are examples of strategies that offer more opportunities for a struggling reader to teach (Dayton-Sakari, 1997).

As teachers work with struggling readers, the teachers must become passive partners, just like they are for excellent readers. The struggling reader must accept the ownership and responsibility for the work and become more involved as teachers become

less involved. Teachers must constantly strive to arrive at the place where the reader reads and the teacher sits back and smiles (Dayton-Sakari, 1997).

Teachers must know and be able to use many different types of reading materials and texts. The more students read the better readers they become and students who have access to many sources of print materials in their classrooms, libraries, and homes read more for pleasure and for information (International Reading Association, 2000).

Teachers need to be able to browse children's literature and select books that match each and every student in their classes. They need to know how to organize classroom libraries so that all students know how to find the books that will best support their growth (Taberski, 2000). Teachers must act on students' interests and design meaningful inquiry projects to promote the desire to read (International Reading Association, 2000).

Teachers must be able to use flexible grouping strategies to provide instruction that will meet the individual needs of the students. Flexible grouping can be clustering students with similar strengths and needs or clustering students with similar interests. Teachers need to monitor students on a regular basis, redefine groups when needed (Taberski, 2000) and know when to help and how to help each student (International Reading Association, 2000).

One approach to reading that incorporates the majority of the strategies mentioned in this section is guided reading (Fountas & Pinnell, 1996). According to Irene Fountas and Gay Su Pinnell (1996) all students possess the basic traits they need to become literate and some have already developed quite a bit of expertise in written language before they enter first grade. However, most students need to be taught to read and by the end of second grade most students will become good readers and writers. These

students will learn at different rates, some will like reading more than others and some will be more successful with reading skills. However, the key to all students becoming successful readers is good first teaching (Fountas & Pinnell, 1996).

Good first teaching according to Fountas and Pinnell (1996) is guided reading which gives every student the opportunity to develop as an individual reader while engaging in a socially supported activity. The basis of guided reading is for students to engage in new texts and read them with a small amount of support from the teacher. After this initial reading the students read the texts again and again to develop independence and fluency. The definitive goal is for students to learn how to use independent reading strategies successfully, to read for meaning at all times and to enjoy reading even when the text is somewhat challenging (Fountas & Pinnell, 1996).

Guided reading consists of a teacher working with a small group of students who have similar needs in the reading process and are able to read the same level of text. The teacher introduces the story and helps the students in ways that develop independent reading strategies before each student reads his own copy of the complete text. The goal is for students to read independently and silently and the emphasis is on reading increasingly more challenging books over time. Grouping is flexible and changes to meet the needs of each student (Fountas & Pinnell, 1996).

Teachers and students have responsibilities during guided reading. The most critical responsibility for the teacher is to match each student in the classroom to an appropriate text (Fountas & Pinnell, 1996). This idea is supported by Richard Allington (1999) who emphasizes that 80% of everything a student reads should be easy, 20% should be somewhat challenging, and 0% should be frustrational.

Allington (1999) defined easy, challenging, and frustrational text according to the student's accuracy in reading. If a student is reading with 95% or higher accuracy, the text is considered to be easy which means the text is an appropriate choice for independent reading. If the student is reading with 90% to 94% accuracy, the text is considered to be somewhat challenging which requires direct support from the teacher. If a student is reading with less than 90% accuracy, the text is deemed frustrational and should be discontinued. When students are matched to text that is too difficult, they are not able to use their problem-solving strategies and if all of their energy goes into decoding the words, they have no energy left to expend on understanding what they are reading. This leads to frustration, the feeling that reading is too hard, and sometimes a complete shutdown. Therefore, it is absolutely critical that the teacher select an appropriate text for the guided reading session (Fountas & Pinnell, 1996).

After the teacher selects the text that is supportive but presents one or two problem solving opportunities, the teacher introduces the story keeping in mind the meaning, language, and visual information presented in the text. The teacher must know the knowledge, experience and skills of the reader and intentionally pose some questions that can only be answered through reading the text. During this pre-reading time, students should be participating in dialogue about the story, they should be asking questions, they should be constructing expectations, and they should be observing information presented in the text (Fountas & Pinnell, 1996).

During reading the teacher should be listening and looking for verification of strategies the students are using, validating the students' attempts and successes at problem-solving, and assisting the students when their problem-solving strategies

breakdown. Additionally, the teacher makes anecdotal notes concerning which strategies each student is using. The students are responsible for reading the complete text quietly or silently and asking for assistance when their problem-solving strategies are not working (Fountas & Pinnell, 1996).

After reading the teacher discusses the story with the students and encourages them to make personal responses. The teacher goes back to the text in order to address one or two teaching opportunities and then assesses the students' comprehension of the story. Occasionally, the teacher may involve the students in an extension activity such as drama, writing, drawing, or more reading. During this time the students should be talking about the story, checking their predictions and connecting personally to the text. They go back to the story to address points of problem solving as directed by the teacher and they may read the story again to a partner or to themselves (Fountas & Pinnell, 1996).

According to Fountas and Pinnell (1996) students who are learning to read need to enjoy reading and experience success with easy and challenging texts. Students need to have opportunities to problem-solve during their reading and to have their problem-solving strategies confirmed. Students have to read for meaning at all times and learn strategies they can apply to other reading situations so they can use what they do know in order to get to what they do not know. Additionally, students who are learning to read need to use their strengths and talk about what they read. These beginning readers have to use reading to expand their knowledge and understanding and make connections between texts they have read and their own experiences. In order for these needs to be met, students need to be enthusiastically supported by an interaction of text reading and

good teaching from teachers, students, parents, and school administrators (Fountas & Pinnell, 1996).

School administrators are responsible for ensuring that teachers are using the best instructional practices and have access to an effective professional development program that keeps them up to date on the latest information in reading instruction. As teachers are trained and reading specialists are hired, the school administrators must trust the teachers and reading specialists who are familiar with a wide range of methodologies and who are closest to the students to make the decisions about what reading methods and materials to use. The administrator must give these professionals the flexibility to modify those methods when they determine that particular students are not learning so each student can be provided with instruction that meets his/her individual needs (International Reading Association, 2000).

Another way school administrators can support literacy for every student is to have a reading specialist in every school. School administrators who hire reading specialists provide extra support for struggling readers and realize it is impossible for a school to provide adequate reading instruction for all students without the specific expertise in reading offered by specialists. A reading specialist can be an invaluable resource to teachers, students, and parents. The specialist can design a tutoring program in reading that is part of a comprehensive program involving content, teachers, parents, and the community; can provide challenging and meaningful instruction that allows students to succeed and become independent learners; and is available to support learners immediately when they start to fall behind and to support teachers by answering questions and providing strategies. The specialist can teach decoding, vocabulary,

fluency, comprehension, and study strategies tailored to individual needs. Additionally, a reading specialist can offer reading programs that accommodate outside influences like work schedules, family responsibilities, and peer pressure (International Reading Association, 2000).

Animal Assisted Therapy

Pets have been part of human history in primitive societies, in ancient societies, in medieval worlds and in modern times. Even though the domestication of animals for food and labor most likely occurred at the same time that animals were adopted as pets, the two roles are very distinct and must not be confused or equated. The domesticated animal was man's servant whereas the animal pet soon became man's master. The two distinctly different roles obviously developed to please different human needs (Levinson, 1997).

The use of animals in therapy programs dates back to the ninth century in Gheel, Belgium. The early Greeks used hippotherapy with terminally ill patients (Miller, 2004) and later during the mid 1800's the English used animals to handle the mentally ill. The York Retreat, a new kind of mental hospital using new and revolutionary techniques with the mentally ill, was established in England in the 1850s. One of the unusual techniques was the carefully planned introduction of the care of pets by the patients which was believed to help the patients develop self-control because weaker creatures were dependent upon them for food and water (Levinson, 1997).

Even though reports indicated that The York Retreat had some success with this revolutionary method, almost a hundred years passed before there was evidence that pets

were once again used in therapy. In 1944-45 the American Red Cross used dogs primarily as outlets for recreation in a convalescent center in Pawling, New York. The dogs proved to be therapeutic for some patients by diverting the patient's attention from himself to the care and training for the dog which resulted in some of the patients being able to rejoin society and socialize appropriately in a group (Levinson, 1997).

During this same time period, Boris Levinson, an American child psychologist, was introduced to pet therapy quite by accident when his dog Jingles happened to be in his office when a patient arrived. Typically Levinson did not allow his dog to be in his office when patients were present; however, when a very troubled mother and her son arrived several hours early for an appointment, Jingles ran to the child and started to lick him. The child did not display any fear toward the dog but instead began to cuddle up next to the dog and pet him. When it was time for the child to leave, he agreed to come back to see the dog rather than Levinson. Eventually Levinson was able to establish a rapport with the child through the dog which led to the child's rehabilitation (Levinson, 1997).

According to Levinson (1997) the use of pets in the treatment of children's emotional difficulties was based on two premises which were it was easier for a child to project his unacceptable feelings on a pet and the pet provided some of a child's need for cuddling, companionship, and unconditional acceptance. When the pet was added to the therapy setting, the child had an opportunity to feel like he was in control during the session (Levinson, 1997).

Levinson (1997) found that pets in psychotherapy were invaluable aides with all children and especially in therapy sessions with culturally disadvantaged children.

Levinson found these children were often intimidated when working with therapists and the therapists' attempts to remain neutral during therapy sessions were very threatening to these children who were crying out for love and acceptance (Levinson, 1997).

Pets, on the other hand, offer unconditional acceptance (Levinson, 1997) because they do not react to skin color, personal hygiene, academic success, or speech. They have no regard for societal values but have great regard for love and kindness which results in an instant bond between child and pet. Even a child, who is frustrated and hurting, will usually be very gentle toward the pet who simply wants to be a friend (Levinson, 1997).

According to Levinson (1997) when the child played with the dog, he established the boundaries for his own world. The child felt safe in this world and the therapist participated in a common adventure with the child by entering into a corner of the child's world where the therapist and the child were on equal ground. Levinson (1997) found this was a very successful technique to open the doors of communication between the child and the therapist.

Levinson (1997) found that pet therapy had a positive impact on a variety of severely disturbed children. Pet therapy provided limits for children who struggled with impulse control since working with the pet and accepting certain rules helped these children organize their thinking and behavior. On the other hand, children who were submissive, withdrawn, and fearful found the courage to relax and venture into new experiences through the association with a pet who accepted everything they did. Children who experienced difficulty expressing their feelings about dreams and

relationships to therapists were usually very comfortable discussing the issues with the dog (Levinson, 1997).

Levinson (1997) found that pets were helpful in psychological assessments with children by providing the therapists with an almost perfect way to observe the child in action. The presence of a pet was particularly helpful when the child was not cooperative either because he was afraid of the interviewer or because he was carrying out a behavior pattern learned at home. When a child was playing with a pet, he temporarily forgot his fears and relaxed which gave the therapist a truer picture of the child's feelings (Levinson, 1997).

Using pets in the clinical assessment of young children was another technique used by Levinson (1997). He found young children enjoyed being interviewed by a dog and would share information they may not share in other situations. Levinson (1997) found that the more passive the examiner, the easier it was for the children to respond in a natural manner.

Levinson's (1997) technique for using a dog as an interviewing "tool" was fairly simple. The clinician, the child, and the dog sat around a table; the dog shook hands with the child; then the dog "whispered" in the clinician's ear that most children shared their secrets with him. According to Levinson (1997), this averted any guilty feelings over sharing family secrets during the visit. The clinician then told the child that the dog wanted to know his secrets and the child provided the requested information; thus, the therapist was simply an agent who relayed the message to the dog or the child and always stated that "Jingle says" or "Johnny says" (Levinson, 1997).

As the need for the pet as the third member of the therapeutic threesome decreased, Levinson (1997) found there was almost always an improvement in the child's behavior at school and at home. Typically, the child was more successful in playing with other children, was more trusting of adults at home and in school, and was better able to concentrate on school work.

Levinson (1997) found that a child's reaction when he saw a pet and his response to a pet's friendly approach was an early indication of the child's recoverability and the probability of success in treatment. A child was typically a better therapy risk if he could identify with the dog, even though he may be afraid of him. A child who approached the dog readily and was not afraid to pet the dog was an even more promising therapy subject, whereas, a child who withdrew from an obviously friendly dog typically needed long, involved therapeutic care (Levinson, 1997).

Levinson (1997) saw the use of pets in psychotherapy as a completely new field that needed to be developed and had the potential to have a major impact on the mental health field. Furthermore, he felt using a pet during therapy could be a way to reduce the length and cost of treatment for some patients. Levinson found that pets provided clues and insights into personality disorders and an even greater discovery was how the changes in a patient's relationship to a pet generally coincided with an increasing ability by the patient to handle his other problems (Levinson, 1997).

Levinson's work in animal assisted therapy had a huge impact on the mental health field and served as the impetus for the current revival in animal facilitated therapy. As a result of this revival, many studies have been conducted which have demonstrated

the value of pets in supporting the social and psychological welfare of people (Miller, 2004).

The Delta Society is an international, non-profit organization that was founded in 1977 by two brothers. This organization is extremely involved in AAT and its mission is to connect animals with humans in hopes that the humans will be healthier, more independent and will enjoy an enhanced quality of life. The four major goals of the Delta Society are to increase public awareness of the benefits of animals for family health and human development, to reduce the obstacles that prevent animals from being involved in everyday life, to provide animal-assisted therapy to more people, and to increase the number of well-trained service dogs available to people with disabilities (Miller, 2004).

The purpose of Animal Assisted Therapy (AAT) is to improve the physical, social, emotional, and/or cognitive functioning of humans. AAT can be provided in a variety of settings to an individual or to a group. It differs from Animal Assisted Activities (AAA) in that AAT has specific goals and objectives for each individual and the activities used to reach those goals are documented along with the individual's progress. The goals for AAT are broken down into physical goals, mental health goals, educational goals, and motivational goals. Physical goals include the improvement of fine motor skills, wheelchair skills, and standing balance; whereas, mental health goals include increasing verbal interactions between group members, increasing attention skills, developing leisure/recreation skills, increasing self-esteem, reducing anxiety, and reducing loneliness. Educational goals are increasing vocabulary, aiding in long or short term memory, and improving knowledge of concepts such as size and color. Motivational goals revolve around improving willingness to be involved in a group

activity, improving interactions with others, improving interactions with staff, and increasing exercise (Delta Society, 2001).

AAT is an intervention with a specific goal and involves two important elements which are a professional and an animal. The professional must have a specialized expertise within the parameters of his profession and could include but are not limited to doctors, therapists, teachers, nurses or social workers. The animal must meet the specific criteria as a therapy animal and is included as an integral part of the therapy program. The animal's handler might be the professional or it might be a volunteer who is working under the direction of the professional (Delta Society, 2001).

AAT has a specific goal such as improving social skills, range of motion, verbal skills, and attention span. As the sessions are planned, they are directed toward the accomplishment of that goal and each and every visit with an animal can result in the achievement of one or more of the goals. Each AAT session is documented in the person's record and includes the activities used during the session and any progress made by the person receiving therapy (Delta Society, 2005).

Although dogs may be the best-known animals used in AAT, they are not the only animal that can provide AAT. Dr. David Nathanson started pilot studies using dolphin assisted therapy in 1978 in Fort Lauderdale, Florida. From 1988 to 1994 he developed a dolphin therapy program at the Dolphin Research Center in Grassy Key, Florida and during 1995 and 1996 he became involved full time in a dolphin human therapy (DHT) program in Key Largo, Florida. More than 15,000 therapy sessions have been conducted since 1988 involving over 800 children from 39 countries (Graham, 1999).

Most of the children participating in Nathanson's program had multiple diagnoses with the most common being cerebral palsy, Down's syndrome and autism. The theory behind DHT is children will increase attention if they can earn a meaningful reward with the reward being the interaction with the dolphins. Each child is asked to complete or perform specific tasks according to his ability; and when the child gives an appropriate response, he receives his reward which is interacting with the dolphins (Graham, 1999).

Dr. Nathanson and his team administered therapy in a 15 foot deep swimming area with crystal clear water and a sandy bottom. Each child was dressed in a wet suit and taken to one of four floating platforms located in the swimming area for his therapy session. The child was accompanied by a dolphin therapist and a dolphin trainer who was responsible for supervising the dolphin during the session. A senior trainer carefully watched the dolphins before and after interactions with the child, served as the dolphin traffic controller, monitored the dolphins' moods, and matched the dolphin to the individual needs of the child (Graham, 1999).

Each child had an individual program designed to meet his needs and was encouraged to master tasks that were appropriate to his developmental needs and abilities. Tasks included saying individual words, putting words together in sentences, making specified movements, raising a hand or touching a ball. When the child achieved a task, he was rewarded by interacting with a dolphin. Interactions were closely supervised by the therapists and trainers and included such things as stroking the dolphin, touching the dolphin's dorsal fin and taking belly rides in the water (Graham, 1999).

Dr. Nathanson and his colleagues understood that long term dolphin therapy was not practical in most cases but they were confident that the dolphins acted as motivators

for these children and gave them a jump start on therapy. The thought behind this was if the children were motivated enough by the interaction with the dolphin, they would focus long enough to give a correct response which could result in an increase in their attention spans. When the children went back to their more traditional therapy, they would be able to focus longer and thus process more information (Graham, 1999).

According to Nathanson's research, DHT had the potential to considerably increase attention and motivation, which could significantly reduce the amount of time the children may need to improve mentally, physically or behaviorally. His research also indicated that two weeks of DHT could achieve the same or better results than six months of conventional physical or speech therapy, which could be a significant financial savings. Furthermore, his research indicated that about 50 percent of the children who made gains during two weeks of DHT maintained or improved those gains after one year away from the program (Graham, 1999).

Supportive Experience with the Aid of Dolphins is another DHT program and is located at Dolphin Reef in Eilat, Israel. The program serves children with a variety of disabilities such as learning disabilities, attention deficits, communication deficits, and hyperactivity along with children who suffer from post-traumatic stress, depression, and anorexia. The program has also served children with Down's syndrome and autism, as well as, children who have been sexually abused, children who are deaf, and children who are blind (Graham, 1999).

Children participating in the Supportive Experience with the Aid of Dolphins must be seven years old and the program is limited to a very few children each year. The program last for one year and allows children to participate in a series of therapeutic

interactions with the dolphins, which consists of seven courses with each course lasting four days. Interactions are daily and can last up to one hour (Graham, 1999)

Deena Hoagland, a clinical social worker with a background in psychology, created a DHT program after seeing her son recover from a stroke through DHT. Her son had not responded well to conventional therapy but enjoyed practicing his physical and occupational therapies when supported by the dolphins. Deena felt if dolphins could motivate Joe, then they could motivate others. She has worked with children with a range of educational, emotional, and physical needs over the past years and has witnessed the positive interactions between the children and the dolphins carry over into school, the home and the community (Graham, 1999).

Hippotherapy is AAT with horses and was used by the early Greeks as a way to treat terminally ill patients (Miller, 2004). Hippotherapy received a huge boost in popularity when Liz Harwell, a polio victim whose legs were nearly paralyzed, won the Silver Medal in dressage, a horse riding event, at the 1952 Helsinki Olympics. Harwell's victory so inspired Elsbeth Bodtker, a Norwegian physical therapist, that Bodtker established riding groups for disabled children. The movement of the horses was used to stimulate the muscle control and coordination of the rider (Becker, 2002).

Physical therapists define riding a horse as a three-dimensional movement which occurs each time the horse takes a step. With each step the rider's pelvis tilts slightly higher, a bit sideways and forward, then back. The horse emulates the cycle and the feeling of these movements for people with physical or neurological handicaps. These movements of the horse reintroduce the people to how their own muscles are supposed to move. The pressure of the horse's hooves hitting the ground is another multidimensional

movement that stimulates riders' knees, hips, and spines and goes way beyond what physical therapist can re-create with machines (Becker, 2002). Riding a horse can produce up to one thousand random body movements in as little as ten minutes whereas a similar workout in normal physiotherapy would take up to three months (Graham, 1999). The advantage of physical therapy on horseback is that the movement is rhythmic but is not a perfect repetition which constantly challenges the riders' balance, stimulates the rider's brain and directly impacts the rider's nervous system (Becker, 2002).

Physical therapists working with children with cerebral palsy and Down's syndrome walk alongside the horse and adjust the rider's position and movements. These children are not actually riding the horse because they are not controlling it; however, they do benefit because the rhythmic movement of a specially trained horse transfers motor coordination and balance to the rider (Becker, 2002).

Therapeutic riding is extremely beneficial to people with speech and language difficulties because of the unique way the horse stimulates the whole nervous system. Ruth Dismuke-Blakely, a New Mexico speech therapist who has used hippotherapy since 1981, stated that traditional speech and language therapy programs work on the mouth and the brain but do not connect them to the rest of the body. Speech and language are dependent upon all of the other systems and in children with speech and language difficulties there is a breakdown in one or more of the systems. The horse is a highly organized neurological system and can shoo away a horsefly by twitching the tiniest bit of a specific patch of skin. During hippotherapy the horse actually lends his organized system to the rider in place of the rider's unorganized one (Becker, 2002).

Dismuke-Blakely conducted a study with thirty children between the ages of six and ten who were diagnosed as moderately to severely language impaired. Each child was matched to another child who was the same age and had the same type and degree of language impairment. The children were randomly assigned to an experimental or control group and received one hour of language therapy three times a week for 12 weeks. The control group received their therapy in a traditional school therapy setting whereas the experimental group received their therapy in a structured horsemanship program, which involved speech and language specialists who were also professional riding instructors. The children were assessed through tape recorded conversations by independent testers who did not know the child's group placement. Even though both groups were able to produce more complex sentence structures after the therapy, the experimental group demonstrated that they were able to use their language more efficiently and properly which led to the conclusion that the use of riding appeared to have facilitated an increase in the development of language skills. Furthermore, it was also noted that significant gains were made in muscle strength, coordination, and self-confidence (Graham, 1999).

There have been numerous research projects investigating the impact of hippotherapy and in 1969 a study conducted at Queen Mary's Hospital in London investigated the effects of hippotherapy on three physically disabled and three learning disabled patients. At the end of a few weeks every member of the group showed significant improvements in behavior, language, communication and physical functioning (Graham, 1999).

An American study by Natalie Bieber evaluated the impact of a five-week hippotherapy program on 42 children between the ages of 6 and 17 who suffered from various disabilities including spina bifida and cerebral palsy. The program lasted three days with one day being spent with the children riding on horses or in pony carts and the other two days were spent in a classroom where horses and horse-related materials were used as motivators for learning. At the end of the program, 38 of the 42 children showed significant gains in communication and motivation and appeared to be more stimulated physically, socially, and intellectually (Graham, 1999).

One hundred and two children with physical disabilities participated in therapeutic riding centers in England, Ireland, Wales, Canada and the United States in 1975. The results showed the children experienced increased mobility, motivation and courage, as well as, an increase in self-confidence (Graham, 1999).

As a result of these studies and an increase in interest in AAT, organizations are continuing to form and establish programs. Freedom Ride is a nonprofit organization in Orlando, Florida established in 1998 with a mission “to enrich the lives of individuals with disabilities through therapeutic horse-back riding and related activities” (Freedom Ride, Inc., 2005). Freedom Ride began with one rider and one borrowed horse but has grown to include 16 donated horses and more than 200 trained volunteers who offer services to more than 70 people each week. Riders are able to leave their wheelchairs and walkers and walk and move by themselves with the help of a half-ton horse. Freedom Ride is nationally accredited by the North American Riding for the Handicapped Association and they offer programs to adults and children 4 years and

older with spina bifida, autism, Down syndrome, cerebral palsy, brain damage and learning disabilities (Freedom Ride, Inc., 2005).

Horses are helping injured American soldiers return to everyday life. According to Tapper (2006), some of the soldiers who have lost limbs in the Iraq war are participating in therapeutic horseback riding at Fort Myer Army Base in Virginia. The horses, which are typically used for military funerals at Arlington National Cemetery, are now providing therapy for servicemen and women. The benefits of the program have ranged from the opportunity to exercise dormant muscles to recreating the motions of walking. The horses have also appeared to help the soldiers deal with their psychological and physical pain (Tapper, 2006).

Horses are the largest and most powerful companion animal, which often magnifies the sense of achievement and feelings of increased self-esteem. People who have very little control over their lives due to disabilities and/or special needs can often experience the feeling of a huge accomplishment when riding a horse (Graham, 1999).

The Elisabeth Svendsen Trust for Children and Donkeys uses the donkey's small size and placid nature to develop an alternative to the more traditional horse riding therapy. The Trust was established in 1989 and seeks to provide children with various special needs and disabilities the opportunity to enjoy the pleasure and satisfaction of learning to ride in a supportive and caring environment. As many as 150 children ranging in age from one to young adult, attend the centers each week and are taught by qualified instructors to ride a donkey or drive a cart pulled by a donkey. Sessions are tailored to meet the individual needs of the children. The results of the study showed many of the same benefits as those received from hippotherapy. Staff members found

that setting achievable goals in the riding sessions raised the motivation of the children and enhanced their confidence and self-esteem along with improvements in learning, speech, balance and dexterity (Graham, 1999).

According to Graham (1999), the most widespread provider of animal assisted therapy is the dog. These service dogs or assistance dogs take on a variety of roles such as guide dogs for the blind or visually impaired, hearing dogs for the deaf, dogs for the physically disabled, visiting PAT (pets as therapy) dogs and even dogs who are capable of predicting epileptic seizures (Graham, 1999).

Guide dogs for the blind are probably one of the best known service dogs and were first trained by the Germans in order to support soldiers who were blinded during World War I. In 1927 an American woman Dorothy Harrison Eustis heard about the program while she was training police and army dogs in Switzerland. The manager of her kennel studied the German methods and spent the next year training a guide dog for Morris Frank. Frank traveled to Switzerland for training with the dog and became the first American to have a guide dog. This was the birth of Seeing Eye Dogs (Graham, 1999).

The benefits of Seeing Eye Dogs go beyond the practical support for the blind. An American study conducted in the 1980s surveyed 44 guide dog owners and the results indicated that the benefits of owning a guide dog went beyond increased mobility for the people to the dogs making it easier for the people to cope with their blindness, to accept life, and to take risks. Additionally, the dogs helped the people feel secure, relax, express their feelings, and have self-control (Graham, 1999).

In 1982 Hearing Dogs for Deaf People was established and dogs were trained to help severely or profoundly deaf people. The dogs alerted their owners by touch. The dog used its paw to gain attention and then lead the person to the source of the sound, which could be an alarm clock, doorbell, telephone, smoke alarm, timer, or baby alarm. If the sound signaled an emergency, the dog touched the person and then laid down (Graham, 1999).

Hearing dog recipients reported benefits similar to those reported by people with Seeing Eye Dogs. Claire Guest, operations director for Hearing Dogs for Deaf People, surveyed 50 recipients of hearing dogs before and after they received the dog. Guest used a range of health and psychological test questionnaires and the results indicated that after the recipient received the dog there were significant improvements in levels of despair, anxiety, social functioning, feelings of hostility, weariness and sleeping (Graham, 1999).

After Frances Hay was disabled as a result of bone cancer and found that her dog was able to do tasks that she found extremely difficult to complete, she established Dogs for the Disabled in 1986. When Hay died, her friends and family continued her work and these dogs served people with various disabilities such as cerebral palsy, polio, multiple sclerosis, muscular dystrophy, spina bifida, and arthritis (Graham, 1999).

June McNicholas from the University of Warwick and Dick Lane, Veterinary Surgeon for Dogs for the Disabled, conducted a study involving 95 percent of the recipients of dogs trained by Dogs for the Disabled. The recipients were surveyed and the results indicated that the dogs made a significant contribution to their owner's social, psychological and physical well being. Seventy-five percent of the recipients responded

that they had made new friends since receiving the dog and 90 percent responded they had participated in positive casual conversations with people who stopped to talk to them when they were out with the dog. A third of the recipients felt having the dog had given them a better social life (Graham, 1999).

The survey indicated that over 50 percent of the recipients felt they worried less about their health, almost 70 percent felt more relaxed, and approximately 50 percent of those surveyed felt their physical health had improved since receiving the dog. More than 66 percent of those surveyed valued their dogs as much for their companionship as they did for their services as a working dog, and 93 percent regarded their dog as a valued member of the family (Graham, 1999).

Support Dogs was established in 1992 and was different from Dogs for the Disabled in that Dogs for the Disabled were trained and then matched to a disabled person whereas Support Dogs trained a dog that already belonged to the disabled person. The advantage for Support Dogs was the dog and the owner, who was the disabled person, already had an established relationship. The dog and owner were in training together so they were learning and growing together and the dogs were trained to meet the individual needs of their owners. The tasks they performed were very much like the tasks performed by Dogs for the Disabled (Graham, 1999).

Support Dogs has recently opened a new door in AAT with the potential to change the lives of people who suffer from epilepsy. Tony Brown-Griffin, a woman suffering from epilepsy, noticed that her dog Rupert appeared to be able to predict and warn her when she was going to have an epileptic seizure. Tony contacted Support Dogs

to see if they could possibly develop and train this ability. Support Dogs advised Tony to keep a video diary of the dog's behaviors as they related to her seizures (Graham, 1999).

According to Graham (1999) Tony had two types of seizures and the dog was able to give her a warning of a seizure about 45 minutes before the seizure began and was able to give her a different warning depending on the type of seizure. As a result, Tony was able to leave her home knowing that the dog would warn her of impending seizures early enough for her to move to a safe place (Graham, 1999).

The potential benefits for the thousands of people who experience epilepsy are enormous. Not only can the dog help them find a safe place but also the advance warning may allow the person to take medication that could reduce the severity of the episode or even prevent the seizure completely (Graham, 1999).

A recent study by Kathie M. Cole, R.N., M.N., C.C.R.N. at the UCLA Medical Center in Los Angeles (Gawlinski & Steers, 2005) emphasized the potential benefits of AAT on cardiac patients. The researchers studied 76 hospitalized heart failure patients and their reactions to a 12 minute visit from a human volunteer and dog team, a human volunteer only or no visit. The patients who were visited by the human volunteer and dog team showed more improvement than the patients visited by a volunteer and more improvement than the patients not visited at all. Cole (Gawlinski & Steers, 2005) concluded from the data that AAT has physiological and psychosocial benefits for patients.

Patricia Gonser, PhD, FNP at the University of South Alabama (2000) presented her research to the American Psychiatric Nurses' Association annual conference in 2000 showing that Service Dogs can be trained to assist individuals with invisible disabilities

such as panic attacks, post traumatic stress disorder, bipolar disorders, and dissociative amnesia (Gawlinski & Steers, 2005). Dr. Alan Beck, Director of the Center for the Human-Animal Bond, School of Veterinary Medicine at Purdue University, concluded from his research that pets offer a variety of benefits for children. Beck reported that children who grow up with animals in the home have stronger immune systems, have better social skills, are more compassionate, and may even be smarter than their peers who are not raised with animals (Forman, 2006). Animals encourage empathy and good behavior, they teach children to care for another living being, and they are great stress relievers. Pets also motivate children to be more physically and mentally active (Forman, 2006).

Research presented at the PAWSitive InterAction, Inc. 2002 Summit in Atlanta, Georgia educated participants on the positive effects animals have on the physical, mental, emotional and psychological health of humans. Dr. Alan Beck discussed the health benefits provided by animals such as decreasing loneliness, stimulating conversation, encouraging laughter, and facilitating social contact. Sandra Barker, Professor of Psychiatry and Director of the Center for Human-Animal Interaction in the School of Medicine at Virginia Commonwealth University, discussed the mental health benefits of interacting with companion animals and Dr. Marty Becker, Veterinarian Author, discussed how animals have the ability to make humans happy and healthy (PAWSitive InterAction, 2002),.

Many professionals in the medical field have embraced AAT. However, animals also offer many benefits in educational settings such as stimulating vocabulary development, facilitating long or short term memory, and increasing conceptual

understanding of ideas relating to size and color. Motivationally, animals often improve children's willingness to participate in group activities, to complete their assignments, and to interact with their peers and their teachers. Children will often complete their work and classroom assignments in order to earn opportunities to interact with an animal (Miller, 2004).

Intermountain Therapy Animals is an AAT organization located in Salt Lake City, Utah and designer of the R.E.A.D. (Reading Education Assistance Dogs) program. The focus of this program is to improve the literacy skills of children who suffer from low self-esteem and struggle to learn. When students are reading to a dog, they do not experience the pressure and anxiety they experience when they are reading to a person because the dogs are nonjudgmental which allows the student to relax and focus on reading. The volunteers for this program typically go into schools or public libraries (Intermountain Therapy Animals, 2001).

The mission of the R.E.A.D. program is to use registered Pet Partner therapy teams as mentors to help children improve their literacy skills and to reveal how registered therapy dogs and their handlers can be influential in increasing the literacy skills of struggling children. The children are encouraged to use effective reading strategies in a risk-free environment. Literacy specialists are very familiar with the attributes of children who are struggling to keep up with their peers in reading skills and are often demoralized by reading aloud in a group, often have lower self-esteem, and feel that reading is a chore. These attributes make fluent reading almost impossible for these children in a regular classroom setting whereas when the children are reading to the

therapy animals they are in a safe environment and do not experience these negative feelings about reading (Intermountain Therapy Animals, 2001).

Research with therapy animals conducted by Intermountain Therapy Animals, Inc. (2001) supports the fact that children who suffer from low self-esteem are often more comfortable interacting with an animal than another person. Furthermore, during their interaction with the animals, children are often able to relax and forget about their reading struggles and see reading as something they enjoy rather than something to avoid (Intermountain Therapy Animals, 2001).

R.E.A.D. programs can be implemented in elementary schools, preschools, after-school programs, healthcare facilities, local libraries and even in a child's home. When the R.E.A.D. program is implemented in a school, the first step is for teachers and reading specialists to use their professional judgment to identify the children who will participate. All children are not selected for the same reason so one child might be selected because he is a poor reader whereas another child might be selected because he has low self-esteem and will not read aloud in class (Intermountain Therapy Animals, 2001).

After the children are identified, the reading specialists and teachers decide if the child will work with the pet-partner team for the whole year or just until specific goals are accomplished. The pet-partner team provides appropriate reading materials and the books revolve around animal themes which are motivating to the children, as well as, the trainers. The books are very special in that they are "pawtographed" (Intermountain Therapy Animals, 2001) by the therapy animals and as the children advance to the next

level of reading, the pet-partner team presents each child with his own personal “pawtographed” book for the mastered level (Intermountain Therapy Animals, 2001).

Another reading program involving registered therapy dogs is Reading with Rover (Reading with Rover, 2001), which is community-based in the Puget Sound area of Washington State. The program is loosely based on the R.E.A.D. program from Intermountain Therapy Animals in Salt Lake City, Utah. The volunteers visit schools, libraries, and bookstores to promote reading. Students are selected by their elementary schools and have to meet certain criteria to participate in the program. The students must be between the ages of 7 and 12 and have to be reading below grade level or have been identified as at-risk youth who have self-esteem concerns. The dogs help turn what was once a hostile reading environment into a non-threatening place where children can enjoy reading and improve their skills (Reading with Rover, 2001).

According to the teachers (Reading with Rover, 2001) of the children participating in the Reading with Rover program, the results have included increased reading fluency, decreased absenteeism, and improved self-confidence. The children showed more pride in their work, were more involved in other school activities, and had improved hygiene. Finally, the teachers reported the children enjoyed reading, volunteered to read in class, and checked out books from the library more often (Reading with Rover, 2001).

Children’s literacy programs such as Heaven Can Wait Sanctuary and Paws for Reading are gaining in popularity. Heaven Can Wait Sanctuary located in Las Vegas, Nevada, is the parent organization for Tales to Tails. Teachers recommend students for the program based on shyness, stuttering problems, language barriers or just a lack of

reading skills. The dog provides a safe, risk-free environment where children can practice reading out loud and the handler is there to provide support as needed (Heaven Can Wait Sanctuary, 2006). Paws for Reading is a new program under Support Dogs, Inc. for students from first to eighth grade. The program is based on the concept that having dogs in the classroom will be an incentive for students to read and the participating students have demonstrated increased reading levels, enjoyed their interaction with the dogs, and had more desire to practice reading so they could read to the dog (Support Dogs, Inc., 2006).

According to Maryellen Elcock of the Delta Society (Manning, 2003) recent studies show pet owners had longer lives and were less lonely than their non-pet owner counterparts, children who grew up with pets had higher self-esteem than their non-pet counterparts, and heart patients with pets had lower mortality rates than their non-pet counterparts. Manning (2003) reported additional studies showed that petting or even being around a loved pet relieved stress which caused a decrease in blood pressure and heart rate. According to Dr. Marty Becker (PAWSitive InterAction, 2002), having a pet had the same benefits of an antidepressant drug without any side effects. As more and more research is conducted on the benefits of AAT and the benefits of owning a pet, it is imperative that professionals in the fields of medicine and education continue to explore and implement programs using this valuable resource (PAWSitive InterAction, 2002).

C.A.R.E. To Read

C.A.R.E. (Canine Assisted Reading Education) To Read is an AAT program coordinated by Barbara A. Murray, Ph.D. In December 2001 Dr. Murray introduced the

logistics and concepts of her program to use registered therapy dogs to help children improve their reading skills to Brevard County School District administrators and school principals. A pilot program was authorized and in February 2002 Dr. Murray and her staff of trained therapy dog handlers began the program by providing an hour of service per child every other week for 23 children (Bixby, 2003).

The mission of C.A.R.E. To Read is “to establish a warm, friendly, non-judgmental environment, by way of an animal-student bond, which motivates students to read and augments learning” (Murray, 2001). The program focuses on using registered therapy dogs to stimulate reluctant readers and improve student performance. It is based on the principles of guided reading as defined by Fountas and Pinnell (1996). The program is supported by research from The Animal Care Center in Washington, D.C. and the Center for the Human-Animal Bond at Purdue University School of Veterinary Medicine. Researchers at the Center for the Human-Animal Bond at Purdue University have been involved in researching this bond since 1982 and have concluded that there is a dynamic relationship between people and animals and that each influences the other’s psychological and physiological well-being. Specifically, contact with animals lowers blood pressure, lowers anxiety, and creates feelings of well being (Center for the Human-Animal Bond, 2005).

According to Murray (2001), C.A.R.E. To Read is based on what she refers to as “petagogy.” Petagogy is somewhat like pedagogy in that it encompasses the methods used during the teaching and learning process. The dog, also referred to as the Pet Teacher, is a link during this process used to diminish the fears and reticence the C.A.R.E. To Read student may have concerning reading. The handler steps back and

tries to become “invisible” as the Pet Teacher and the student connect. This experience with the dog hopefully gives the student the opportunity to have a pleasurable experience while learning and to change his attitude concerning reading (Murray, 2003).

Before C.A.R.E. To Read dogs and handlers entered the first school, they had to be certified and trained. “Not just any dog can be a C.A.R.E. To Read Therapy Dog. In order to be a C.A.R.E. Therapy Dog, the dog has to be at least one year old, up to date on all vaccinations, must have annual examinations, and must have experience in therapy work” (Murray, 2001). Every dog has to be certified before it can be involved in therapy sessions.

According to Murray, “The dog must pass a screening by a Tester/Observer (T/O) who observes the dog’s behavior and the handler’s control. Additionally, the T/O studies the dog’s response to a variety of different situations such as a person in a wheelchair, a person bumping into the dog, or a person scratching the dog in sensitive areas. The T/O also watches the dog during a controlled meeting with another dog(s) and then observes the dog during interactions with people to ensure the dog shows interest toward a specified person and there are no signs of aggression. If the dog achieves a passing score, he/she must complete at least three visits to specified locations and must be accompanied by the T/O. At least one of the visits has to be at a location where children are present” (Murray, 2001).

Once the dogs meet the requirements to become a registered therapy dog, they must be actively involved in therapy work. Then the dog is screened again for the appropriate behavior and temperament required for all C.A.R.E. dogs (Murray, 2001).

The reading sessions in the C.A.R.E. To Read program last anywhere from 30 to 50 minutes; thus, the dog has to be able to sit or lye in one position for an extended period of time. During this time the handler can use simple visual cues to correct the dog but verbal corrections must be kept to a minimum so the child will not be disrupted

during reading. The dog must not bark during their visits as it could be disruptive and is often viewed as aggressive (Murray, 2001).

The training is not only required for the dog but also for the handlers. Handlers have to be trained by C.A.R.E. To Read in methods concerned with facilitating reading with children and recording documentation of reading progress. Handlers also have to meet the criteria set by Registered Therapy Dogs, Inc., and have to be actively participating in therapy work before they can become a reading partner. Additionally, the handlers have to agree to follow the rules and procedures of Therapy Dogs, Inc., and C.A.R.E. To Read, Inc. (Murray, 2001).

Handlers are given a copy of the C.A.R.E. To Read *Guidebook for Pet Teachers, Handlers, Classroom Teachers, and School Contacts* (Murray, 2001). This book sets forth the procedures to be used, the expectations for the program, and the responsibilities for each person involved (Murray, 2001).

Handlers participating in C.A.R.E. To Read, Inc. must have their Therapy Dog, Inc. membership card with them on every visit and they must have up to date health records for their dogs on file with C.A.R.E. To Read, Inc. For school site security purposes, the handlers wear the C.A.R.E. uniform. Finally, handlers are required to attend a training class before they can begin the reading program (Murray, 2001).

Before the handlers can go into the schools, they are required to complete a volunteer application form with the school district for the purpose of running a criminal background check on the handler. The handlers must agree to follow the rules and regulations of the selected school district and the individual school site. Handlers schedule their visits through the classroom teacher or school contact and if they are not

able to make the scheduled visit, they are asked to contact the school and reschedule the visit so as not to disappoint the child and disrupt the continuity of the program. In some cases the handler may be able to get a designated substitute dog and handler to make the visit. Handlers are expected to report any occurrence or mishap involving the dog to the director of C.A.R.E. to Read immediately (Murray, 2001).

Handlers attend a training session to learn how to conduct their therapy sessions which last 30 to 50 minutes. Each session is designed to be developmentally appropriate for the child's age and attention span. The session follows an established pattern in order to ensure data accuracy. The first five minutes are spent letting the child get settled and letting the child bond with the dog. After a review of the previous reading materials, the following minutes are spent with the child reading to the dog and discussing the book. An additional 10 minutes of discussion about the book is allowed when deemed appropriate. At the end of the session the handler and Pet teacher take a break of about 10 minutes which includes a short walk and time to prepare for the next student (Murray, 2001).

Handlers receive training on the C.A.R.E. To Read Student Data Sheet, which is based on the guided reading principles as defined by Fountas and Pinnell (1996). Handlers are asked to complete an individual student data sheet during or immediately following each reading session. The data sheet includes student name, date, time, book title, book author, book reading level, and reading performance criteria. One data sheet is used for each book. If the child reads more than one book during the session, the data collected from the highest level book is submitted for that visit. Handlers are encouraged

to record anecdotal notes on noteworthy experiences during their sessions (Murray, 2001).

Each handler receives a set of color coded cue cards which match the reading criteria on the Student Data Sheet. The handler can refer to these cards when asking questions about the book to determine the student's level of comprehension. Each objective requires a higher level of thinking than the previous objective and the cards ensure that the handler is asking the appropriate questions for each objective and leading the student to a higher level of thinking (Murray, 2001).

The questions under each objective are written to assess the child's comprehension of the story. According to Fountas and Pinnell (1996) comprehension is a difficult process to formally assess but can be assessed informally by asking children questions and having children engage in conversations about what they have read. When children answer these questions and talk about what they have read, they reveal the strategies they have developed in order to maintain their reading and expand meaning. The objectives on the Student Data Sheet were written to facilitate this informal assessment of the student's comprehension (Fountas & Pinnell, 1996).

The first objective on the Student Data Sheet focuses on the elements of a story. The handler uses prompts to encourage the student to describe the characters, setting, main idea, and supporting information. When students can describe the information and present it in their own words, they are using what Fountas and Pinnell (2001) refer to as strategic actions for sustaining reading. The students are searching for information, using information, and summarizing information.

The items in the second objective help the handlers assess comprehension at a higher level of thinking. The prompts are written to encourage the students to demonstrate their application skills. The items in this objective include recognizing the plot and the sequence of events along with describing the causes and effects within the story and predicting outcomes. According to Fountas and Pinnell (1996) the students are using their strategies to expand the meaning of the text when they engage in dialogue concerning making judgments about the information, explaining why something is better or worse, discussing whether they agree or disagree with the story, and being able to support their own opinions. They must go beyond retelling the events to explaining how the events occurred and why the characters made certain choices. The students have to be able to predict what may happen next and decide whether an action was good, bad, unfair, etc. Finally, the students are asked to summarize the story in their own words (Fountas & Pinnell, 1996).

The final objective on the C.A.R.E. To Read data sheet focuses more on analytical skills and falls under Fountas and Pinnell's (1996) strategies for expanding meaning. This is the most difficult objective and requires the highest level of thinking (Bloom, 1980). The students have to determine the meaning of new words, tell why the characters acted as they did, generate ideas on what the characters could do better, and differentiate truths from lies and real from pretend. The students have to be able to tell what the characters learned from the experience and then relate that to themselves and tell what they learned (Fountas & Pinnell, 1996).

The students are scored by the handler on how well they respond to the prompts under each objective. The handler looks for success with the first objective before

moving on to the second and third objectives. The program is designed so the student can successfully fulfill the elements for the first objective before the dog-handler team will move to the elements in the second and third objectives (Murray, 2001).

The first C.A.R.E. To Read session is an introduction and is used to lay the groundwork for a positive rapport and a successful bonding between the student and the Pet Teacher. During this session, the Pet Teacher and student have time to relax and get to know each other. The handler talks for the Pet Teacher and lets the student know they are there to help the student become a better reader. During the discussion the student learns about respectful treatment for the dog, frequency of the Pet Teacher visits, and items the child may bring to the next session. If time permits, the team will share a book, which the handler selects or the child selects from the leveled books in the CARE book basket, to determine a baseline for where instruction needs to begin (Murray, 2001).

The second session begins with a review of the first session and the handler encourages the student to tell the Pet Teacher what happened during the previous session. Next the student selects a book from an individual browsing box prepared by the handler from the CARE book basket which is a collection of leveled books selected by reading consultants to monitor student progress. As the student reads, the handler provides assistance as needed. Then the handler uses the color coded cue cards to ask questions under the objectives (Murray, 2001).

Each following session begins with the handler encouraging the student to tell the Pet Teacher what he remembers from the previous session. The student reads one of the leveled books from the individual browsing box as a warm-up activity and continues to read appropriate books to the Pet Teacher. After the student reads a book the handler

uses the color coded cue cards to ask questions from the first objective and as the student shows mastery with those questions the handler moves on to the second and third objectives. The student is encouraged to extend the story by drawing pictures of things from the stories and sharing those drawings with the Pet Teacher (Murray, 2001).

Periodically and especially at the end of the school term the handler and Pet Teacher plan special visits to students' classrooms for group reading. This serves as a reward and bolsters each student's status in the classroom. The handler must be sure to share these plans with the classroom teacher or school contact in order to ensure the visit is within school policy. Handlers are encouraged to invite parents when appropriate. C.A.R.E. To Read, Inc. provides certificates from the dogs for all of the students in the program (Murray, 2001).

The responsibilities for the school contacts and classroom teachers are also outlined in the *C.A.R.E. To Read Guidebook for Pet Teachers, Handlers, Classroom Teachers, and School Contacts* (Murray, 2001). School contacts and classroom teachers have to abide by the local school district's procedures and regulations regarding volunteers, research projects, and using animals in the classroom setting. The school contact or the classroom teacher is responsible for choosing an appropriate setting for the reading sessions. This setting should be fairly quiet and away from the main traffic flow of the building (Murray, 2001).

The first responsibility of the classroom teachers is to identify the students who should participate in the C.A.R.E. To Read program. The criteria for participation are the children must have a significant deficiency in reading (at least one year below grade level), must not be identified as exceptional education students, have minimal class

participation, and appear to lack self-confidence. After the students are identified the teachers send the permission forms which describe the program to the parents and ask the parents or guardians to give signed consent for participation in the program. Signed consent is mandatory before the students are allowed to participate. Teachers ensure that identified children should be comfortable with dogs and should not have a history of allergic reactions to dogs. The teachers are also responsible for preparing the children for the dog visit and giving them directions on how to behave when they are interacting with the dog (Murray, 2001).

The C.A.R.E. To Read program is offered to Brevard, Manatee, Pinellas, Hillsboro, and Seminole county schools at no cost to the school district. The school officials identify students for the program and designate a location for the reading sessions. The teacher and trainer collaborate to collect and maintain data relating to the student's progress and to the progress of the program (Murray, 2001).

C.A.R.E. dogs and their trainers enjoy spending their time in schools, hospitals, hospice facilities, and extended care facilities such as assisted living homes and nursing homes. However, these dedicated teams do not stop there. They are also involved in other facilities which include adult day care and rehabilitation centers (Murray, 2001).

The C.A.R.E. to Read dogs and handlers have been featured in newspapers, journals, and reports. When Cambridge Elementary School in Brevard County went from a school grade of D in 1999 to an A in 2003, the principal named C.A.R.E. to Read as one of the programs that had helped the students improve their scores (Torres, 2004). The Florida Association of School Administrators featured the program in their journal in October 2003 and praised Dr. Murray and the participating principals for their ability to

think outside the box (Murray, 2003). Dr. Tommy Caisango, Child Psychologist, showed his interest in the program by referring to it in his article published in *The Rottweiler Magazine*. Dr. Caisango stressed the importance of always looking for another way to help his clients and expressed interest in the possibility of having his dog trained as a registered therapy dog (Caisango, 2002). The program has also been featured in the *Early Childhood Report* and *Florida Today*.

Conclusion

Reading comprehension is the foundation for all academic learning and strong reading skills enable students to learn and be successful in school (Warford, 2004). Therefore, it is imperative that every child be given every opportunity to learn to read. Educators cannot rest until they have tried every possible strategy to reach those students who do not respond to typical classroom interventions. Animal Assisted Therapy might be the answer for these students and deserves to be researched further. According to Barbara Murray, “The use of therapy dogs in medicine has been proven. The potential impact of therapy dogs in education is immense. They reserve judgment and serve patiently beside children lost in the shuffle of bureaucratic mayhem” (Murray, 2003). It would be extremely negligent on the part of educators and administrators to ignore this possible solution for these very deserving children.

CHAPTER 3 METHODOLOGY

The following procedures were implemented to complete this study and related literature was reviewed to provide the foundation for the study. The following topics were discussed: The Survey Instrument, Population, Research Questions, Procedures, and Summary.

The Survey Instrument

Two survey instruments were used to conduct this study. Dog handlers trained in the facilitation of reading activities collected data from February 2002 through May 2006. These handlers used an instrument designed by Murray (2001) entitled Student Data Sheet for Pet Teacher and Handler (Appendix A). The instrument was based on the principles of Guided Reading as defined by Irene Fountas and Gay Sue Pinnell (1996). The elements of reading were delineated into learning strategies and formatted on a scale to reflect accurate responses by students. In addition anecdotal notes concerned with student behaviors such as shyness, reading processes, sounding out words, general comments, and inappropriate behaviors were recorded. The instrument was piloted in the spring semester of 2002 and screened for improvements toward user friendliness and appropriateness of content identified as improved reading achievement.

The second survey instrument used to complete this study was the C.A.R.E. to Read Program Teacher Questionnaire (Appendix B). The teachers had not been previously surveyed concerning the students in the C.A.R.E. to Read Program; thus, an original questionnaire was developed for use in the present study. The survey instrument

consisted of nine open-ended questions regarding teacher observations of students who participated in the C.A.R.E. to Read program and was validated by expert opinion.

Teachers were asked to complete the grade level taught during each year beginning with the 2002-2003 school year and ending with the 2005-2006 school year. Additionally, the teachers were asked to indicate the number of students in their classrooms who participated in the program during that same time frame. This instrument was used to survey the teachers who taught students while the students participated in the C.A.R.E. to Read program.

The data collected from the survey was analyzed to determine the characteristics teachers used to identify students for the C.A.R.E. to Read program and changes teachers observed regarding student attitudes toward reading, student attitudes toward schoolwork in general, and student attitudes toward homework since the students began participating in the C.A.R.E. to Read program. Additionally, teacher observations regarding changes in student reading skills, student appearance, student attendance, and learning were analyzed to determine the impact of the program on the students.

Population

The population for this study was 136 first through fifth grade students who participated in the C.A.R.E. to Read program and attended one of 29 elementary schools in selected counties in Florida. Students who received fewer than four sessions with the registered therapy dog and handler were excluded from the study. Additionally, the data for some of the students was incomplete or missing as a result of hurricanes, school closures, and the availability of registered therapy dogs due to retirements.

The sample for this study was made up of 98 students who participated in the C.A.R.E. to Read program and were assigned to registered therapy dogs, 19 students who participated in the control group and received one on one instruction from a certified teacher and were not assigned to registered therapy dogs and 46 students of similar characteristics who were identified as struggling readers through data provided by Brevard Public School District and were not assigned to registered therapy dogs. The students were in first through fifth grades between February 2002 and May 2006 as shown in Table 1. All of the students attended one of 29 selected elementary schools in Brevard or Manatee counties.

Table 1

C.A.R.E. to Read Student Sample

Year	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Missing	Subtotal	Total
2002-2003								
Control	10	9	0	0	0	0	19	
Experimental	11	6	19	1	0	0	37	
Total	21	15	19	1	0	0		56
2003-2004	4	9	8	0	2	5		28
2004-2005	6	10	4	0	0	0		20
2005-2006	1	12	0	0	0	0		13
Total	32	46	31	1	2	5		117

Eighty-two classroom teachers who taught students while the students participated in the C.A.R.E. to Read program were surveyed using the C.A.R.E. to Read Teacher questionnaire.

Research Questions

This study investigated the impact of using registered therapy dogs as motivators for reluctant readers. Specifically, the study used data to determine if there was a difference in the reading achievement between children who were assigned to registered therapy dogs and children of similar characteristics who were not assigned to registered therapy dogs. The study was guided by the following research questions:

- 1) What reading skills changed among students assigned to registered therapy dogs?
- 2) What other school related behaviors (attendance, classroom behavior, etc.) changed among students assigned to registered therapy dogs?

The following hypotheses were tested:

H1) Is there a significant difference in achievement growth in reading between students assigned to registered therapy dogs, students not assigned to registered therapy dogs and a reading standard for individual grade levels?

H2) Is there a significant difference between the scores on standardized achievement tests for students assigned to registered therapy dogs and students of similar characteristics who were not assigned to registered therapy dogs?

Procedures

The first step in conducting this study was to level each book that was used in the program. Books were leveled according to the Guided Reading Levels as defined by Fountas and Pinnell (1996) and the letter for each level was converted to a number for statistical purposes. Books that were leveled according to Accelerated Reading levels, Rigby reading levels, and Reading Recovery levels were converted using the Leveled Books Database website (2006). The conversion chart is shown in Table 2.

Books that could not be located on either website were leveled using the Flesh-Kincaid Readability Test (Wikipedia, 2006). This test provided a grade level which was correlated to the appropriate guided reading level. The book levels created the weighting for the books; thus as books became more difficult, they received a higher level which resulted in a higher weight.

Table 2

Conversion Chart for Book Levels

Grade Level	Fountas & Pinnell	Accelerated Reader	Rigby	Number/Value
Kindergarten	A	0.1-0.4	1-2	1
Kindergarten/First	B	0.5-0.9	3-4	2
Kindergarten/First	C	1.0	5	3
First	D	1.1-1.2	6	4
First	E	1.3	7	5
First	F	1.4	8	6
First	G	1.5-1.6	9	7
First/Second	H	1.7-1.8	10	8
First/Second	I	1.9	11	9
Second	J	2.0-2.2	12	10
Second	K	2.3-2.4	13-14	11
Second/Third	L	2.5-2.7	15	12
Second/Third	M	2.8-2.9	16-17	13
Third	N	3.0-3.2	18	14
Third/Fourth	O	3.3-3.6	19	15
Third/Fourth	P	3.7-3.9	20	16
Fourth	Q	4.0-4.2		17
Fourth	R	4.3-4.4		18
Fourth/Fifth	S	4.5-4.7		19
Fourth/Fifth	T	4.8-4.9		20
Fifth	U	5.0-5.2		21
Fifth/Sixth	V	5.3-5.6		22
Fifth/Sixth	W	5.7-5.9		23
Sixth/Seventh/Eighth	X	6.0-6.4		24
Sixth/Seventh/Eighth	Y	6.5-6.9		25
Seventh/Eighth	Z	7.0		26

The C.A.R.E. to Read Student Data Sheet for Pet Teacher and Handler (Appendix A) had to be adjusted in order to enter the data. The first step was to equate a value to each letter that was used to record data; thus each letter was converted to a number which

became the value for the letter. The letters used on the data sheet were A for all, M for most, S for some and N for none. A was converted to 4, M to 3, S to 2 and N to 1 as shown in Table 3 below.

Table 3

C.A.R.E. to Read Student Data Sheet Letter Conversions to Numbers

Conversions	Letter	Value
All	A	4
Most	M	3
Some	S	2
None	N	1

The next step was to analyze the three objectives and weight the items under each objective. The items were weighted according to the first four levels in Bloom's Taxonomy (Appendix C) as displayed in Table 4. Items that fell within the knowledge level received a weighting of 1, items that fell within the comprehension level received a weighting of 2, items that fell within the application level received a weighting of 3, and items that fell within the analysis level received a weighting of 4. Although each of the items on the data sheet could fall into another level of Bloom's Taxonomy, the researcher determined that the items would fall within these first four levels the majority of the time. Furthermore, the researcher felt it would be unusual for any of the items to fall within the last two categories of synthesis and evaluation.

Table 4

Weights for Levels of Bloom's Taxonomy

Bloom's Taxonomy Levels	Weight
Knowledge and Understanding levels	1
Application level	2
Analysis level	3
Synthesis and Evaluation levels	4

Each item under each objective was given a specific weight as shown in Table 5. As items became more difficult, they received higher weights and when two items under the same objective were considered to be equal in difficulty, they received the same weighting.

Each item on the Student Data Sheet for Pet Teacher & Handler became a variable. The variables included student id, year, school, classroom teacher, grade, book title, book level, and session number. These were followed by the variables taken from the items under each objective which are displayed in Table 5.

The variables under objective 1 were name characters, name places, tell when, tell where, tell main idea, and describe whatever. The variables under objective 2 were how it happened; what may happen next; was it good-bad, fair-unfair, etc.; why good-bad, fair-unfair, etc.; agree or disagree; why you agree-disagree; and summarize story. The variables under objective 3 were sounding out new words; the number of new words sounded out; saying the meaning of new words; the number of meanings of new words

said; differentiating between true-false, real-pretend; explaining why characters did whatever; what characters learned; what characters can do differently; and what student learned from story. The mean score for each objective was tabulated.

Table 5

C.A.R.E. to Read Student Data Sheet Item Weights

Data Sheet Items	Weight
Objective 1	
Name characters	1
Name places	1
Tell when	2
Tell where	2
Tell main idea	4
Describe whatever	2
Objective 2	
How it happened	2
What may happen next	2
Was it good-bad, fair-unfair, etc.	1
Why good-bad, fair-unfair, etc.	3
Agree or disagree	1
Why you agree-disagree	3
Summarize story	4
Objective 3	
New word(s): Sounding out	3
New Word(s): Saying the meaning	1
Differentiate: True-False, Real-Pretend	4
Why character(s) did whatever	3
What character(s) learned	2
What character(s) can do differently	2
What student learned from story	2

After the mean score for each objective was tabulated it was weighted by the book level to obtain a new variable which was called the weighted mean for each objective. It was possible for each book to have a weighted mean for objective 1, objective 2, and objective 3. However, all three objectives were not addressed at every session; therefore, the weighted means were calculated for each objective that was addressed at each session. The researcher used the first and last weighted mean for each objective to ascertain reading growth.

The students were broken down into four groups as shown in Table 6. The groups were control group '02-'03, experimental group '02-'03, experimental group '03-'04, experimental group '04-'05, and experimental group '05-'06. The students in the control group received one on one reading instruction from certified teachers who had received the same training on how to administer the Student Data Sheet for the C.A.R.E. to Read program as the dog handlers received. The only difference for the students in the control group was they did not have exposure to a registered therapy dog. All of the students in the experimental groups were assigned to registered therapy dogs and received visits from a registered therapy dog and a dog handler who had received the same training on how to administer the Student Data Sheet for the C.A.R.E. to Read program as the certified teachers working with the students in the control group.

Table 6

Control and Experimental Group Populations

Groups	N
Control Group '02-'03	19
Experimental Group '02-'03	37
Experimental Group '03-'04	28
Experimental Group '04-'05	20
Experimental Group '05-'06	13

SPSS for Windows, Version 12.0, was used for tabulating data. The researcher analyzed the data using repeated measures because the students were measured multiple times with the same instrument and the analysis would reveal if there was a mean change in the reading growth for each group. The achievement growth in reading for students assigned to registered therapy dogs was compared to the achievement growth in reading for students not assigned to registered therapy dogs. The reading growth for each experimental group (groups that utilized registered therapy dogs) was compared to the reading growth for the control group (group that did not utilize registered therapy dogs).

Finally, the reading growth for the control group and the experimental groups was compared to a grade level standard for reading growth as defined by Fountas and Pinnell (2001). These levels are shown in Table 7. According to Fountas and Pinnell, students entering first grade are expected to be reading books that fall between level 2 and level 3. When students leave first grade they are expected to be reading somewhere between a

level 7 and 9. Students entering second grade are expected to be reading at a level 8 or 9 and are expected to leave second grade reading between a level 12 and 13. Students entering third grade are expected to be reading at a level 12 or 13 and are expected to leave third grade reading at a level 15 or 16. Fourth grade expectations at the beginning of the year are level 15 or 16 and expectations at the end of the year are level 18 to 20. Fifth graders are expected to enter at levels 18 or 19 and are expected to leave between a level 22 or 23.

Table 7

Reading Standards for Individual Grade Levels

Standards for Grade Levels According to Fountas and Pinnell	First Book Level	Last Book Level
First Grade	2	9
Second Grade	8	13
Third Grade	12	16
Fourth Grade	15	20
Fifth Grade	19	23

It should be noted that the first book level was the lowest expected level for each grade level and the last book level was the highest expected level for each grade level. A repeated measures analysis was run on the book levels and then the students assigned to registered therapy dogs were compared to the standards for each grade level according to

their grade level when they were participating in the C.A.R.E. to Read Program.

Students who were not assigned to registered therapy dogs were also compared to the reading standard for their respective grade levels.

Brevard County Public School District provided secondary data in the form of Florida Comprehensive Assessment Test scores. The researcher used this data to compare reading scores on standardized tests. SPSS for Windows, Version 12.0, was used to tabulate the data. The researcher compared the individual standardized test scores of students assigned to registered therapy dogs to the individual standardized test scores of students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs and students of similar characteristics who were not assigned to registered therapy dogs using an analysis of variance.

The students of similar characteristics were randomly selected from students who were currently in the fourth grade and had been identified as being in the lowest quartile in reading in their respective schools based on their third grade Florida Comprehensive Assessment Test scores. All of the students in this group were selected from schools that had participated in the C.A.R.E. to Read program.

The C.A.R.E. to Read Program Teacher Questionnaire (Appendix B) was mailed to each classroom teacher who taught students while the students participated in the C.A.R.E. to Read program. The data collected from the questionnaires was analyzed to determine the characteristics teachers used to identify students for the C.A.R.E. to Read program and changes teachers observed regarding student attitudes toward reading, student attitudes toward schoolwork in general, and student attitudes toward homework since the students began participating in the C.A.R.E. to Read program. Additionally,

teacher observations regarding changes in student reading skills, student appearance, student attendance, and learning were analyzed to determine if the registered therapy dogs had an impact on the students. This information was reported using descriptive statistics.

Summary

This chapter described the methodology used to conduct the present study. The design of the study called for secondary data obtained from dog handlers trained by C.A.R.E. to Read and primary data obtained from classroom teachers who had students in their classrooms while the students participated in the C.A.R.E. to Read program. The researcher used data already collected by Brevard County Public Schools and C.A.R.E. to Read, Inc. Both survey instruments used for the study were described and discussed. The statistical methodology used by the researcher was also presented.

CHAPTER 4 ANALYSIS OF THE DATA

The purpose of this study was to investigate the impact of using registered therapy dogs as motivators for reluctant readers. Two research questions and two hypotheses were introduced in Chapter 1. This chapter presented the findings associated with the research questions and hypotheses.

Data for this study were collected from three sources. The first source was the C.A.R.E. to Read program. Dog handlers recorded information regarding student behaviors observed while the student was reading with the registered therapy dog. The second source was a survey instrument developed by the researcher. This instrument was mailed to classroom teachers of students who participated in the C.A.R.E. to Read program. The third source of data was Brevard Public School District which provided test scores and other relevant data needed to ascertain the impact of registered therapy dogs on reluctant readers.

Population and Demographic Characteristics

The population for the teacher questionnaire was 82 classroom teachers in Brevard and Manatee counties. The researcher was very aware and concerned about the mounting paperwork teachers have to complete and the constant pressure they are under for students to perform at high levels on state tests. Therefore, the three survey mailings were strategically planned so they would not interfere with testing dates, report card dates, and holidays. Unfortunately, even with this careful planning less than half of the teachers responded to the survey which was somewhat disappointing.

Data regarding the population are displayed in Table 8. Three mailings of the survey instrument resulted in a return of 39 surveys or 47.6%. Two surveys were returned blank, one survey was returned with a comment that the receiver had not had a student in the C.A.R.E. to Read program, and four surveys were returned with positive general comments about the program but the recipients did not feel they remembered enough specific information to complete the questionnaire. This resulted in a usable return of 33 surveys, or 40.2%. However, it should be noted that the questions on the C.A.R.E. to Read Program Teacher Questionnaire were open ended and the majority of the respondents made multiple responses to each question probably because they had more than one student who participated in the program. Therefore, the number of responses to each question may be more than the number of teachers who responded to the survey. Each table will show N as the number of teachers followed by the number of responses to each question. For example Table 9 reflects the answers to question 2 on the survey and shows (N=33 teachers, 67 responses) which means the 33 teachers who responded to question 2 on the teacher questionnaire made a total of 67 responses.

Table 8

C.A.R.E. to Read Teacher Questionnaire Demographics (N=82)

Demographic criteria	N	%
Questionnaires returned	39	47.6
Questionnaires returned blank	2	2.4
Questionnaires returned because recipient not in program	1	1.2
Questionnaires returned with positive general comments	2	2.4
Usable surveys	33	40.2
Non-respondents	43	52.4
Total mailed surveys	82	100.0

Research Question 1

What reading skills changed among students assigned to registered therapy dogs?

Repeated measures, which made it possible to determine if the difference in score should be attributed to chance or if it should be attributed to the treatment, was used to analyze the data to ascertain changes in reading skills. The C.A.R.E. to Read Student Data Sheet divided reading skills into three objectives. To be successful with the skills under the first objective the student had to be able to identify, describe and explain. The skills under the second objective required the student to predict, apply and summarize. The skills under the third and final objective required the student to differentiate, analyze, and infer.

The mean scores for each objective were multiplied by the book level to calculate the weighted mean score for each objective. This calculation was completed for each book for each student. The first weighted mean score for the first objective was compared to the last weighted mean score for the first objective in order to ascertain reading growth. The same procedure was followed for objective 2 and objective 3. It should be noted that the first reading session was often an introductory session and therefore the first scores did not necessarily correlate to the first session. Likewise, the final session was often a celebration so the last scores were taken from the final instructional session. It should also be noted that all objectives were not addressed at every session. Therefore, the last weighted mean for the objective was taken from the last session that addressed that objective.

According to the results of the repeated measures analysis, there was a statistically significant difference between the first objective 1 (\underline{M} =47.67, s =30.10) and the last objective 1 (\underline{M} =83.67, s =33.52) scores ($F_{1,110}=13.38$, $p<.001$). Almost 11% of the variance in score could be attributed to the time between the scores.

Of specific interest to this study was the fact that there was a statistically significant difference among the groups ($F_{4,110}=3.03$, $p<.05$). Almost 10% of the variance in score could be accounted for by group. The control group was made up of students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs. The experimental groups were made up of students who were assigned to registered therapy dogs. The first and last weighted mean scores for objective 1 are shown in Figure 1 below. The distance between the first and last

weighted mean scores for each group represents the group's growth for the reading skills in objective 1 which were identifying, describing, and explaining.

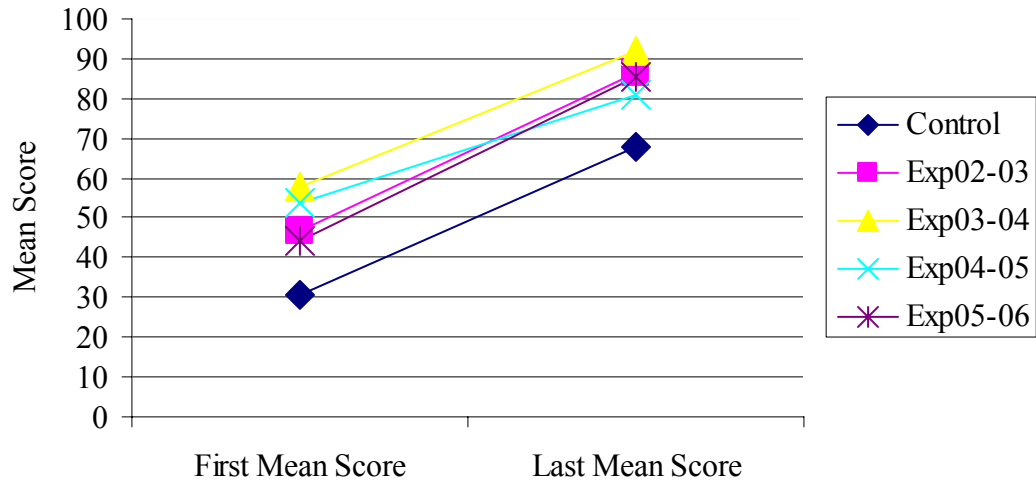


Figure 1: First and Last Weighted Mean Group Scores for Objective 1 - Ability to Identify, Describe, and Explain

Figure 2 shows the weighted mean score for each group's growth in the skills under objective 1. Once again, the control group was made up of students who received one on one instruction with a certified teacher and were not assigned to registered therapy dogs whereas the experimental groups were made up of students who were assigned to registered therapy dogs. Pair wise comparisons showed a statistically significant difference between the control group '02-'03 ($\underline{M}=47.40$, $SE=6.29$), and experimental group '02-'03 ($\underline{M}=66.16$, $SE=4.26$), experimental group '03-'04 ($\underline{M}=75.14$, $SE=4.89$), and experimental group '04-'05 ($\underline{M}=68.15$, $SE=5.86$). There was not a statistical significance between the control group '02-'03 and the experimental group '05-'06 ($\underline{M}=66.85$, $SE=7.80$) scores. However, it should be noted that the experimental group '05-'06 had a higher mean score than the control group '02-'03. It is important to note that

the data for the experimental groups in '04-'05 and '05-06 may not have been as significant due to the hurricanes that occurred during those years and some dog handlers taking on additional schools and students because there were fewer handlers and dogs available.

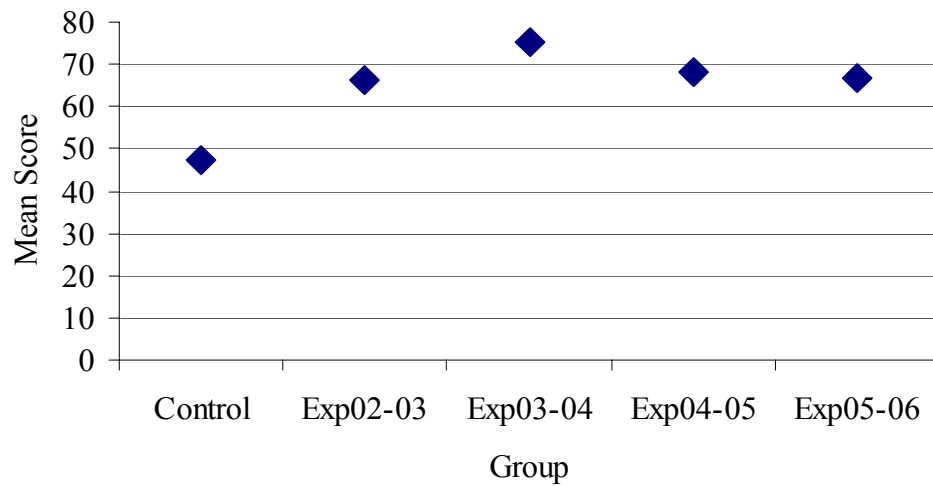


Figure 2: Group Weighted Mean Scores for Objective 1 - Ability to Identify, Describe, and Explain

The objective 2 scores also showed a statistical significance in the difference between the first objective 2 (\underline{M} =67.90, s =46.68) and the last objective 2 (\underline{M} =107.86, s =51.47) scores ($F_{1,105}=12.75$, $p<.01$). Approximately 11% of the variance could be explained by the time period between the first and last objective 2 scores. The distance between the first and last weighted mean scores for each group represents the group's growth for the reading skills in objective 2 which were predicting, applying, and summarizing. These scores are reflected in Figure 3.

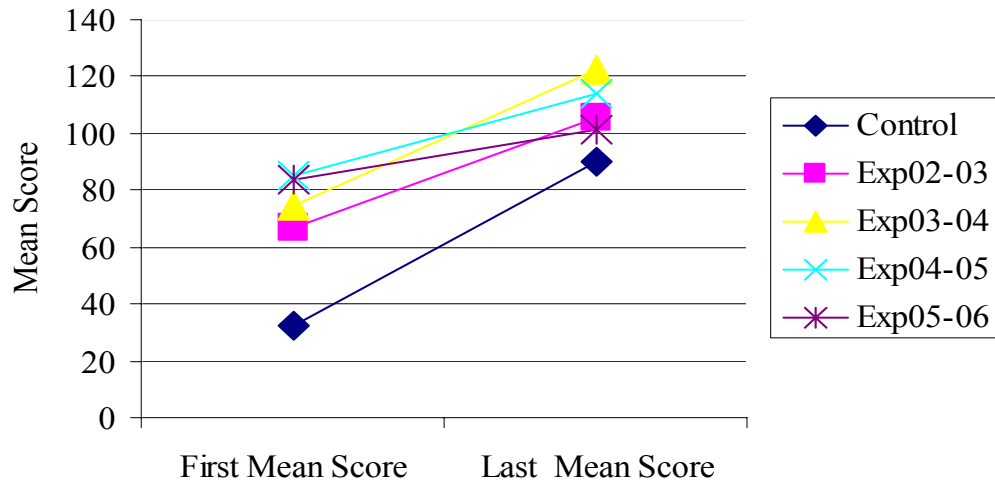


Figure 3: First and Last Weighted Mean Group Scores for Objective 2 - Ability to Predict, Apply, and Summarize

Figure 4 shows the weighted mean score for each group's growth in the skills under objective 2. There was a statistically significant difference among the groups ($F_{4,105}=3.09, p<.05$). About 11% of the variance in scores could be accounted for by group. Pair wise comparisons showed a statistically significant difference between the control group '02-'03 ($\underline{M}=57.39, SE = 10.15$) and experimental group '02-'03 ($\underline{M}=85.61, SE = 7.16$), experimental group '03-'04 ($\underline{M}=98.72, SE = 8.16$), experimental group '04-'05 ($\underline{M}=101.38, SE = 9.43$) and experimental group '05-'06 ($\underline{M}=96.63, SE = 12.57$).

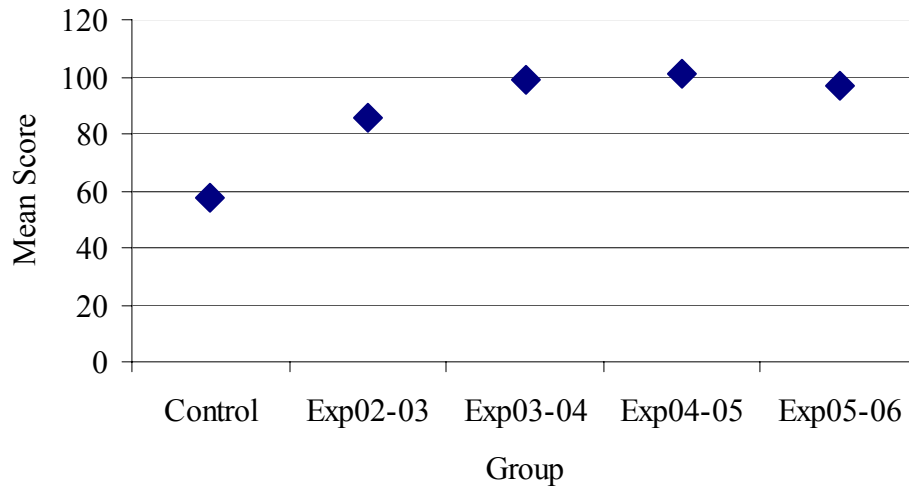


Figure 4: Group Weighted Mean Scores for Objective 2 - Ability to Predict, Apply, and Summarize

There was a statistically significant difference between the first objective 3 (\underline{M} =56.51, s =37.20) and the last objective 3 (\underline{M} =92.31, s =45.24) scores ($F_{1,109}=7.01, p<.01$). Approximately 6% of the variance in score could be attributed to the time between the first and last objective 3 scores.

There was not a statistically significant difference in group for objective 3 scores. The first and last weighted mean scores for each group are displayed in Figure 5. The distance between the first and last weighted mean scores for each group represents the group's growth for the reading skills in objective 3 which were differentiating, analyzing, and inferring. Figure 6 shows the weighted mean score for each group's growth in the skills under objective 3. As previously stated, the data for the '04-'05 and '05-'06 groups may not have been as significant due to hurricanes and circumstances placed on dog handlers and their dogs.

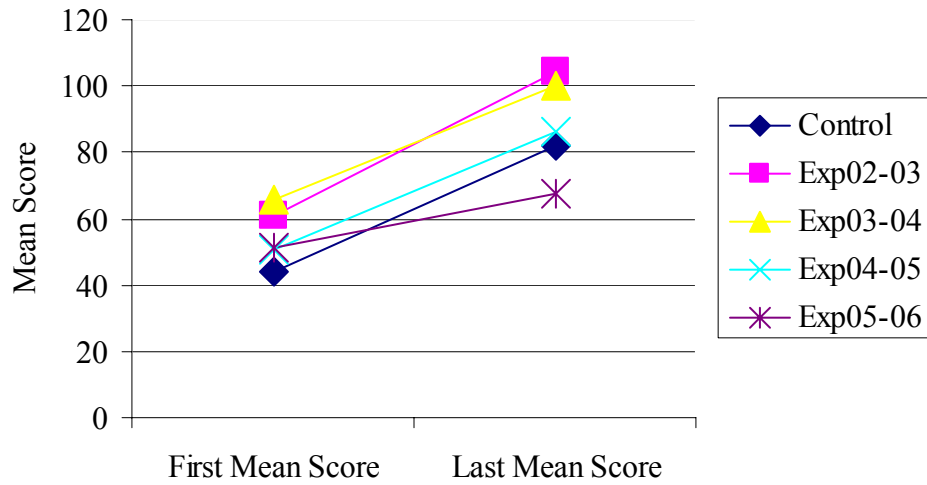


Figure 5: First and Last Weighted Mean Group Scores for Objective 3 - Ability to Differentiate, Analyze, and Infer

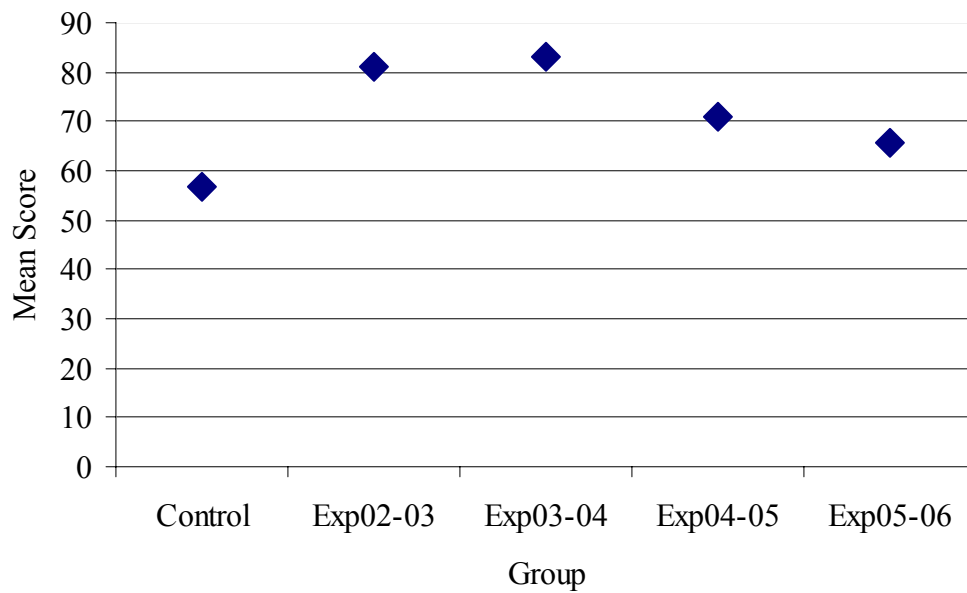


Figure 6: Group Weighted Mean Scores for Objective 3 - Ability to Differentiate, Analyze, and Infer

Reading growth was also addressed by two questions on the C.A.R.E. to Read Program Teacher Questionnaire. Question 2 addressed changes in student attitudes toward reading and Question 5 addressed changes in specific reading skills.

Question 2 asked the teachers to describe any general changes they had observed in student attitudes toward reading since the students began the C.A.R.E. to Read program. The results from Question 2 are listed in Table 9 below. There were 65 responses to this question from the 33 surveys returned. Sixty-four (98.5%) of the 65 responses reflected positive changes in student attitudes toward reading. One (1.5%) response stated there was no change in student attitude.

Nine (13.4%) of the responses to Question 2 reflected an increase in self-confidence/self-esteem. Twenty-three (34.3%) of the responses declared the student had a more positive attitude toward reading and showed more interest in books since starting the program. Fifteen (22.4%) of the responses said the student was excited about reading with the dog and 13 (19.4%) acknowledged improvement in reading skills such as fluency, comprehension, vocabulary, and decoding. An increase in motivation and social skills was confirmed by 5 (7.5%) of the responses and an increase in test scores was reflected by 1 (1.5%) response. One (1.5%) response stated there was no change in attitude toward reading.

Table 9

C.A.R.E. to Read Teacher Questionnaire Question 2 (N=33 teachers, 67 responses)

Improvement in Student Attitude toward Reading	N	%
Increase in self confidence/self esteem	9	13.4
More positive attitude toward reading/more interest in books	23	34.3
Excited about reading with the dog	15	22.4
Improved reading skills i.e. fluency, comprehension, vocabulary, decoding	13	19.4
Increase in motivation and social skills	5	7.5
Increase in test scores	1	1.5
No change	1	1.5

Question 5 on the C.A.R.E. to Read Program Teacher Questionnaire asked the teachers to describe any general changes they observed in student reading skills since the students began the program. The question generated 48 responses. Twenty-six comments were made addressing specific reading skills and 22 comments were made addressing general improvements in reading. As seen in Table 10, all of the comments made by the teachers who responded to the questionnaire were positive and indicated that the students had made improvements in reading while in the program.

Table 10

C.A.R.E. to Read Teacher Questionnaire Question 5 (N=32 teachers, 48 responses)

Improvement in Reading Skills		N	%
Specific comments			
Decoding skills/phonetic skills		5	10.4
Comprehension skills		5	10.4
Vocabulary skills		3	6.3
Fluency rate		12	25.0
Self-esteem		1	2.1
General comments			
Skills improved/developed faster		14	29.1
Applied skills more easily		1	2.1
Positive attitude toward reading/tries harder		5	10.4
Test scores improved		2	4.2

Of the responses that addressed specific reading skills, five or 10.4% reflected improvement in decoding skills/phonetic skills. Five (10.4%) responses specifically addressed improvement in comprehension skills and three (6.3%) addressed increases in vocabulary skills. Twelve responses (25.0%) reflected an increase in fluency rates for the students in the program and one response (2.1%) stated a student had an increase in skills due to improved self-esteem.

The responses made up of general comments also addressed improvements in reading skills. Fourteen responses or 29.1% reflected that reading skills improved and developed much faster. One (2.1%) response stated that the students were able to apply

their reading skills more easily and five (10.4%) responses stated students had a more positive attitude toward reading and tried harder. Two (4.2%) responses declared that students had shown improved test scores in the area of reading.

Research Question 2

What other school related behaviors (attendance, classroom behavior, etc.) changed among students assigned to registered therapy dogs?

Five questions on the C.A.R.E. to Read Program Teacher Questionnaire addressed changes in school related behaviors such as attendance, classroom behavior, and appearance. Question 3 asked the teachers to describe general changes in student attitude toward schoolwork. The thirty-four responses to this question are shown in Table 11.

Ten (29.4%) of the responses reflected that the students were more enthusiastic and eager to complete their work. Six (17.7%) of the responses revealed there was an increase in the quality of work produced by the students and the students were more motivated to do their work. Five (14.7%) responses declared that the students showed more participation in school and classroom activities and four (11.8%) referred to an increase in self-confidence and/or self-esteem. Three (8.8%) of the responses showed a more positive attitude toward schoolwork, one (2.9%) showed an increase in reading level, and one (2.9%) showed a decline in discipline problems. Finally, four (11.8%) of the responses reflected there was no change noted in student attitude toward schoolwork.

Table 11

C.A.R.E. to Read Teacher Questionnaire Question 3 (N=31 teachers, 34 responses)

Changes in Student Attitude toward Schoolwork	N	%
More enthusiastic/eager to complete work	10	29.4
Increase in quality of work/more motivated	6	17.7
More participation in school/class activities	5	14.7
Increase in self-confidence/self-esteem	4	11.8
More positive attitude	3	8.8
Increase in reading level	1	2.9
Decline in discipline problems	1	2.9
No changes noted	4	11.8

The fourth question on the C.A.R.E. to Read Program Teacher Questionnaire asked the teachers to describe general changes in student attitude toward homework. There were 37 responses to this question and the majority of the responses reflected no observable changes in student attitude toward homework. The results for this question are shown in Table 12.

Table 12

C.A.R.E. to Read Teacher Questionnaire Question 4 (N=31 teachers, 37 responses)

Changes in Student Attitude toward Homework	N	%
More likely to complete homework	8	21.6
Eager to read and share books for homework	4	10.8
Increase in writing skills	5	13.5
Improvement in responsibility/more independent	3	8.1
Generally no changes in attitude toward homework	17	46.0

Eight (21.6%) of the responses reflected the students were more likely to complete their homework after their experience in the C.A.R.E. to Read program. Four (10.8%) of the responses reflected the students were more eager to read and share books with their families for homework. Five (13.5%) of the responses revealed that the students increased their writing skills and three (8.1%) revealed the students were more responsible and more independent with their homework and schoolwork. Seventeen (46.0%) of the responses reflected that there were generally no changes in attitude toward homework.

Question 6 of the Teacher Questionnaire addressed general changes in student self-esteem or self-confidence. There were 51 responses to this question and the results are shown in Table 13. Twenty-three (45.1%) responses showed that the students were more confident and six (11.8%) responses reflected that students were more willing to

participate in class and offered to read to the class. Five (9.8%) responses declared that the students smiled more and cried less. Six (11.8%) responses reflected that the students were more willing to take a risk while learning and eight (15.7%) reflected that the students felt very special when the dog came to visit the classroom. Two (3.9%) responses showed that the students had improvements in attitude and were more positive about themselves. One (1.9%) response stated that the student was more independent.

Table 13

C.A.R.E. to Read Teacher Questionnaire Question 6 (N=32 teachers, 51 responses)

Changes in Student Self-esteem or Self-confidence	N	%
More confident/better sense of self	23	45.1
More willing to participate in class/offers to read to class	6	11.8
Smiles more/cries less	5	9.8
More willing to take a risk when learning	6	11.8
Felt special when dog visited class	8	15.7
Big improvement in attitude - very positive	2	3.9
Big improvement in independence	1	1.9

Question 7 of the Teacher Questionnaire asked for general comments teachers had heard from parents regarding changes in student behaviors or attitudes toward school and learning. There were 34 responses to this question. The results for this question are displayed in Table 14.

Table 14

C.A.R.E. to Read Teacher Questionnaire Question 7 (N=30 teachers, 34 responses)

Parent Comments about Changes in Student Behaviors or Attitudes toward School and Learning	N	%
Student chooses to read at home and on their own	1	2.9
Parents and student experience less stress at homework time	1	2.9
Student loved the program/parent very supportive of program	7	20.6
Student had improved attitude toward school	2	5.9
Student excited about sharing the experience with parents	2	5.9
N/A	4	11.8
Item was left blank	3	8.8
None	14	41.2

One (2.9%) of the responses to this question reflected that the student chose to read at home and to read on his own. Another response (2.9%) reflected that the parents and student experienced less stress at homework time and seven (20.6%) of the responses stated that the student loved the C.A.R.E. program and the parents were very supportive of the program. Two (5.9%) of the responses declared the student had an improved attitude toward school and two (5.9%) others declared the student was excited about sharing the experience of the C.A.R.E. program with parents. Four (11.8%) of the responses were N/A, three (8.8%) of the responses were left blank, and fourteen (41.2%)

of the responses reflected that the teacher had not received any feedback from parents on changes in student behaviors or attitudes toward school and learning.

The final question from the C.A.R.E. to Read Program Teacher Questionnaire that addressed changes in other school related behaviors such as attendance, classroom behavior, and appearance was question 8. This question asked the teacher to describe any general observed changes in student appearance or attendance as a result of participating in the C.A.R.E. to Read program. There were 33 responses to this question and the results are displayed in Table 15.

One (3.0%) of the responses stated that the student always dressed appropriately and had good attendance, one (3.0%) of the responses stated that the student's facial expressions were more positive and the student expressed less fear, and one (3.0%) of the responses stated that the students were reluctant to miss school because they might miss a visit from the dog. One (3.0%) response reflected the student took more pride in his clothes, personal items, and school supplies; one (3.0%) response reflected that student attendance became steady; one (3.0%) response reflected the student started enjoying school; one (3.0%) response reflected the student started coming to school and to class prepared to do work; and one (3.0%) response reflected the student was more willing to participate in class. Five (15.3%) of the responses were N/A and three (9.2%) responses were blank. Over half of the responses to this question (17 or 51.5%) reflected no changes noted in student appearance or attendance.

Table 15

C.A.R.E. to Read Teacher Questionnaire Question 8 (N=30 teachers, 33 responses)

General Observed Changes in Student Appearance or Attendance	N	%
Always looks good and has good attendance	1	3.0
Appearance was better in facial expressions/more smiles less fear	1	3.0
Students were reluctant to miss school because they miss the dog	1	3.0
Students took more pride in clothes, personal items, and school supplies	1	3.0
Attendance became steady	1	3.0
Student started enjoying school	1	3.0
Student came prepared	1	3.0
Student participated more	1	3.0
N/A	5	15.3
Item left blank	3	9.2
No changes noted	17	51.5

Hypothesis #1

Is there a significant difference in achievement growth in reading between students assigned to registered therapy dogs, students not assigned to registered therapy dogs, and a reading standard for individual grade levels?

Repeated measures was used to analyze the data to determine the likelihood that the change in mean score for reading achievement growth for each group was due to chance or to the use of registered therapy dogs. The first book level for each student was compared to the last book level for each student in this analysis. It should be noted that the first book level score was determined by the book level recorded during the first instructional session. Likewise, the last book level score was determined by the book level recorded during the last instructional session. The first and last book scores for the students assigned to registered therapy dogs are displayed in Appendix D and the first and last book scores for the students not assigned to registered therapy dogs are displayed in Appendix E.

According to the results of the repeated measures analysis, there was a statistically significant difference between the first book level (\underline{M} =7.21, s =3.84) and the last book level (\underline{M} =13.15, s =3.89) scores ($F_{1,111}$ =29.61, p <.001). A little over 21% of the variance in score could be attributed to the reading growth that occurred between the session for the first book level score and the session for the last book level score. That is to say that the change in mean score was more than just random chance.

There was a statistically significant difference among the groups ($F_{4,111}$ =4.06, p <.05). Approximately 13% of the variance in score could be attributed to the group membership. Students in the control group received one on one instruction from a certified teacher and were not assigned to registered therapy dogs whereas students in the experimental groups were assigned to registered therapy dogs. Pair wise comparisons showed a statistically significant difference between control group '02-'03 (\underline{M} =7.525,

SE =.78) and experimental group '02-'03 (\underline{M} =10.36, SE =.53), experimental group '03-'04 (\underline{M} =11.04, SE =.61), and experimental group '04-'05 (\underline{M} =11.37, SE =.73). There was not a statistically significant difference between control group '02-'03 and experimental group '05-'06 (\underline{M} =9.87, SE =.93). In other words, the differences between the control group and the experimental groups in '02-'03, '03-'04, and '04-'05 were more than just chance and could be attributed to the difference between the groups which was the registered therapy dogs. It should be noted that the data for the '04-'05 experimental group and the '05-'06 experimental group may not have been as significant due to hurricanes and outside factors placed on dog handlers and dogs. The mean scores for each group are shown in Figure 7 below.

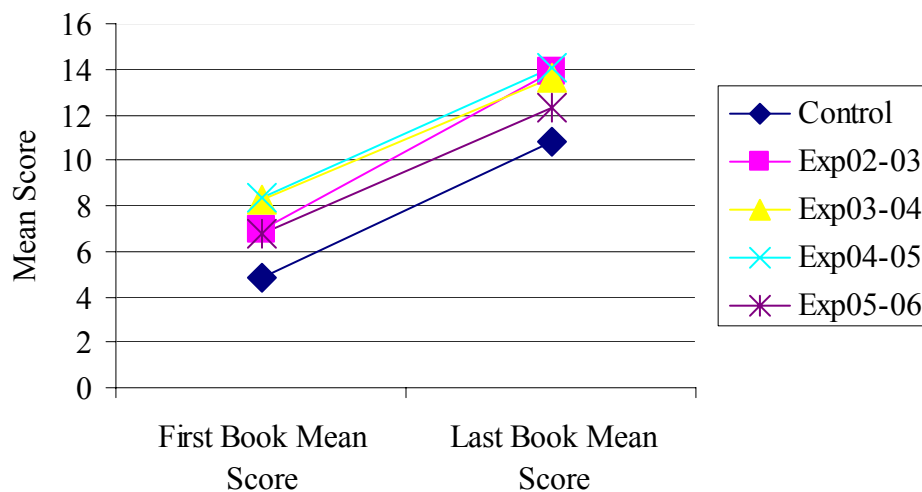


Figure 7: Group Mean Scores for First and Last Book Levels

Another repeated measures analysis was run to compare the students in the control group who had one on one instruction from a certified teacher and were not assigned to registered therapy dogs and the students in the experimental groups who were

assigned to registered therapy dogs to a grade level standard for reading at their respective grade levels. The beginning and ending book levels as determined by Fountas and Pinnell (2001) for each grade level were recorded as the first and last book scores for each grade level standard. The first and last book scores for each student were recorded to determine reading growth. The growth for the students in the control group who were not assigned to registered therapy dogs was compared to the standard; then the growth for the students in the experimental groups who were assigned to registered therapy dogs was compared to the standard.

There was not a statistically significant difference among the three groups. The growth for the control group, students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs, was not significantly different from the growth as defined by the grade level standard for reading; nor was the growth for the control group significantly different from the growth for the experimental groups, students who were assigned to registered therapy dogs. The mean scores for the students in the control group and the standard are reflected in Figure 8.

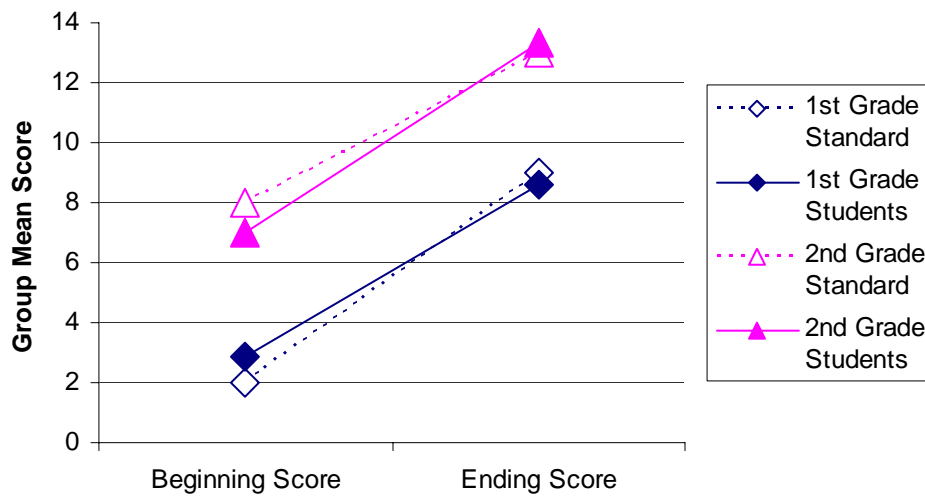


Figure 8: Beginning and Ending Student Scores for the Control Group Broken Down by Grade Level Compared to Grade Level Standard for Reading Scores

The mean scores for the experimental groups which consisted of students who were assigned to registered therapy dogs and the grade level standard are reflected in Figure 9. Beginning scores for the standard were the expected scores for the students when they entered the grade level and ending scores for the standard were the expected scores for the students when they exited the grade level. Beginning scores for the students were the actual scores for those students when they began the C.A.R.E. to Read program and ending scores for the students were the last recorded scores for the students at the end of the program. It should be noted that there were only two fifth grade students in the experimental groups. One of the fifth graders entered the program reading on a second grade level and the other entered the program reading on a third grade level. Even though both students made reading gains, they were still significantly different from the standard. It should also be noted that the students in first, second, third and fourth grades entered the program significantly below grade level but their performance was not

significantly different from the expected performance for their respective grade levels by the time the last scores were recorded.

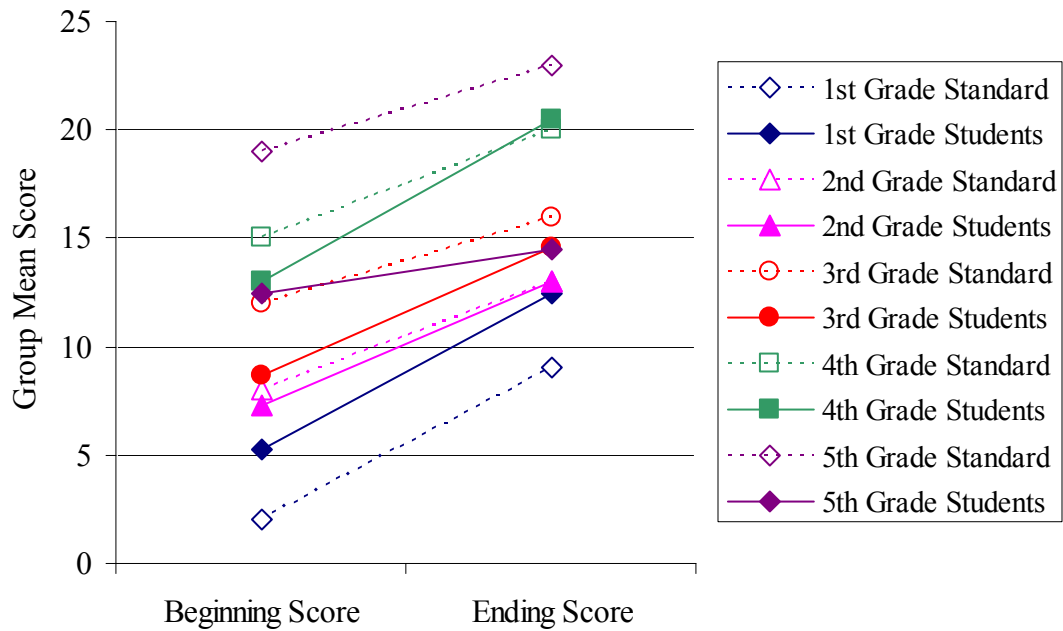


Figure 9: Beginning and Ending Student Scores for the Experimental Groups Broken Down by Grade Level Compared to Grade Level Standard for Reading Scores

Hypothesis #2

Is there a significant difference between the scores on standardized achievement tests for students assigned to registered therapy dogs and students of similar characteristics not assigned to registered therapy dogs?

The standardized achievement tests scores used for this analysis were provided by Brevard Public School District. Scores were not available for all of the students who had participated in the control group or in the experimental groups because some of them had

moved out of Brevard County and others had not reached the third grade which is the first grade where students take the Florida Comprehensive Assessment Test (FCAT). Scores were collected for 46 of the 98 students who were assigned to registered therapy dogs through the C.A.R.E. to Read program, 15 of the 19 students who participated in the control group and were not assigned to registered therapy dogs, and 46 students of similar characteristics. The 46 students of similar characteristics were randomly selected from students who were identified as being in the lowest quartile in reading in their respective schools and were not assigned to registered therapy dogs. Even though every school had a lowest quartile, the 46 students randomly selected for this study were in the lowest quartiles in schools that had participated in the C.A.R.E. to Read program. The scores used were developmental scale scores achieved on the FCAT which was Florida's state assessment and was used to measure student achievement based on the Sunshine State Standards. The passing score on the FCAT was 1198 which was considered a Level 3 score. Third grade students who scored below 1046 or Level 1 had to be retained in the third grade according to state law unless they met specific criteria for an exemption. Examples of exemptions were the student had already been retained twice in grades kindergarten through three, student was identified as exceptional education and had already been retained once in grades kindergarten through three, or student had participated in an English for Speakers of Other Languages program for less than two years. An analysis of variance was run to check for statistical significance among the groups.

There was a statistically significant difference ($F_{2,104} = 3.43, p < .05$) in group. The control group which was made up of the students who were not assigned to

registered therapy dogs (\underline{M} =1328.6, s =539.75) was significantly different from the lowest quartile group who were not assigned to registered therapy dogs (\underline{M} =1030.20, s =283.57). However, the control group was not significantly different from the students assigned to registered therapy dogs (\underline{M} =1098.33, s =410.55). The lowest quartile group was not significantly different from the students assigned to registered therapy dogs. About 6% of the variance in score could be attributed to group. The mean scores are reflected in Figure 10.

Figure 10 also shows that the mean score for the students in the control group was higher than the FCAT score needed for a level 3. The mean score for the students in the experimental groups was higher than the FCAT score needed for a Level 2 whereas the mean score for the students in the lowest quartile group was just below the score needed for a Level 2.

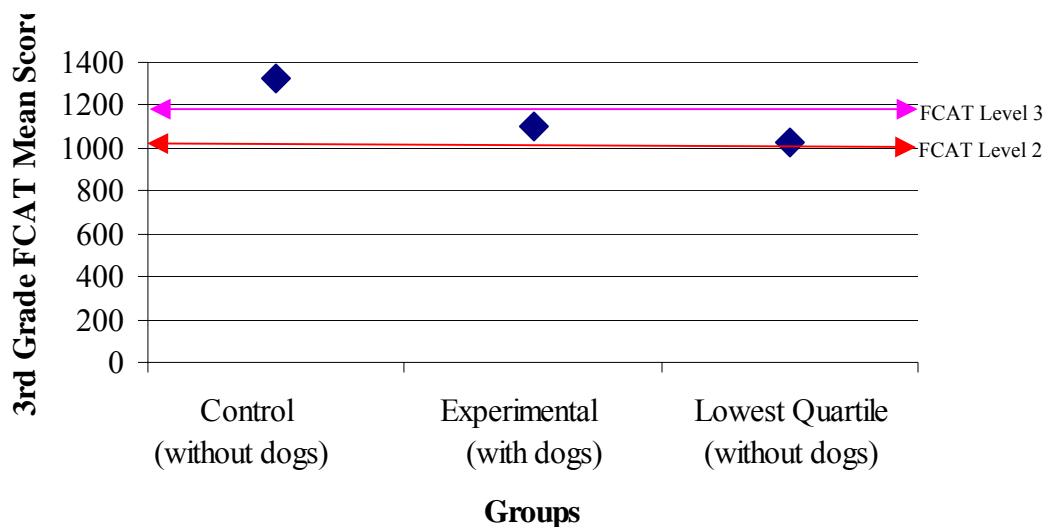


Figure 10: Comparison of 3rd Grade FCAT Mean Scores for 15 Students in the Control Group, 46 Students in the Experimental Groups, and 46 Students in the Lowest Quartile Group to the Level 3 Score for the 3rd Grade FCAT

To further analyze the FCAT data two independent t tests were run. The first independent t test compared third grade FCAT scores between the 23 students who were assigned to registered therapy dogs during their third grade year in school and a randomly selected group of 23 students who were identified as being in the lowest quartile for reading and were not assigned to registered therapy dogs. The students assigned to registered therapy dogs took the third grade FCAT during 2003, 2004, 2005 and 2006. The lowest quartile students who were not assigned to registered therapy dogs took the third grade FCAT during 2006.

The independent t test did not show a statistically significant difference in FCAT scores between the students who were assigned to registered therapy dogs and the students in the lowest quartile who were not assigned to registered therapy dogs ($t=1.27$, $df=44$, $p>.05$). The students assigned to registered therapy dogs ($M=1159.52$, $s=387.78$) had a slightly higher mean score than the students in the lowest quartile who were not assigned to registered therapy dogs ($M=1045.48$, $s=187.16$). The mean score for the students assigned to registered therapy dogs fell within the Level 2 scores and the mean score for the students in the lowest quartile was approximately 3 points below the cutoff for Level 2. The scores are displayed in Figure 11.

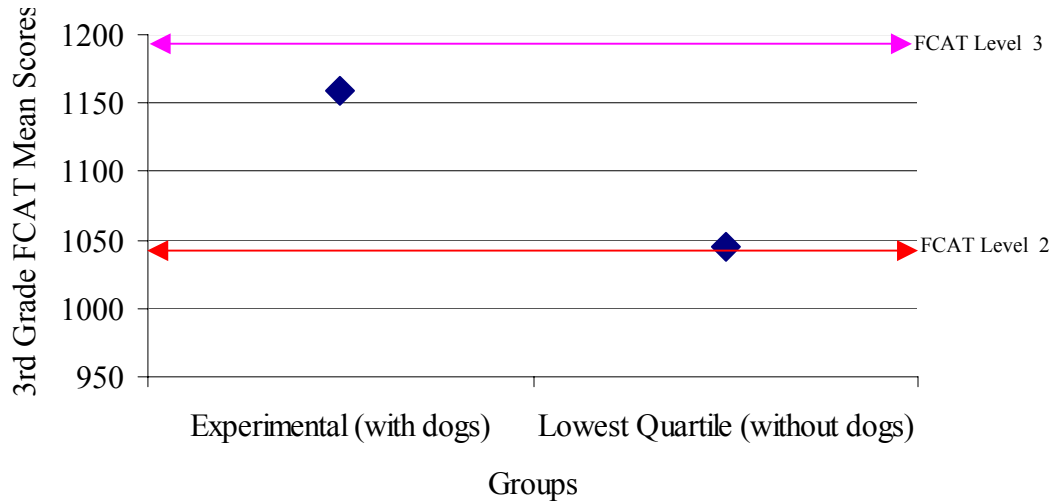


Figure 11: Comparison of 3rd Grade FCAT Group Mean Scores for 23 Students in the Experimental Groups Who Took the 3rd Grade FCAT from 2003 to 2006 and 23 Students in the Lowest Quartile Who Took the FCAT in 2006 to the Level 3 Score for the 3rd Grade FCAT

A second independent t test was run to compare the third grade FCAT scores for the 10 third graders who were assigned to registered therapy dogs and took the 3rd grade FCAT during 2006 to 10 randomly selected third grade students who were in the lowest quartile in reading and were not assigned to registered therapy dogs. All of these students took the third grade FCAT in 2006.

The independent t test did not reveal a statistical significance between the scores for the two groups ($t=1.21$, $df=18$, $p>.05$). The students assigned to registered therapy dogs ($M=1126.40$, $s=312.41$) had a slightly higher mean score than the lowest quartile students who were not assigned to registered therapy dogs ($M=909.00$, $s=472.36$); however, the difference in the means was not enough to show a statistically significant difference between the scores of the two groups. The mean score for the students

assigned to registered therapy dogs fell within Level 2 whereas the mean score for the students in the lowest quartile fell within Level 1. The scores are reflected in Figure 12.

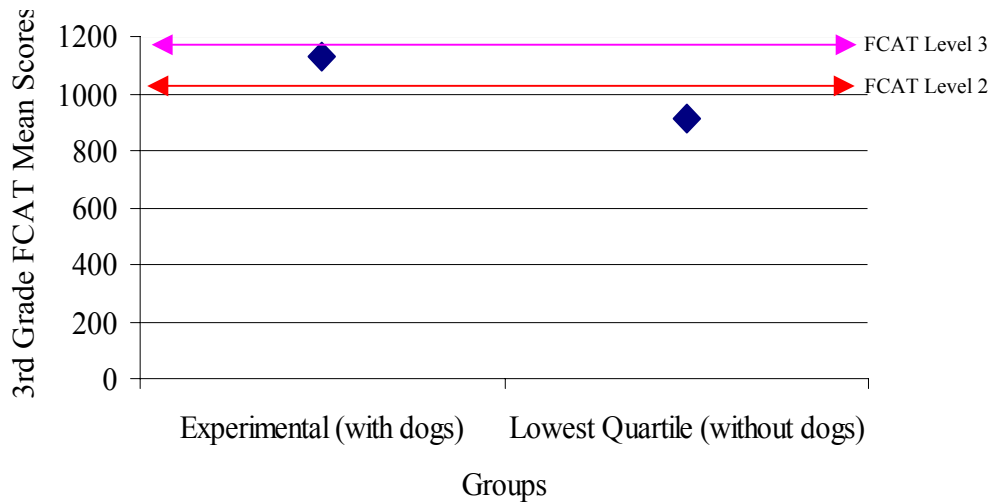


Figure 12: Comparison of 3rd Grade FCAT Group Mean Scores for ten 3rd Grade Students in the Experimental Groups and ten 3rd Grade Students in the Lowest Quartile Group Who All Took the 3rd Grade FCAT in 2006 to the Level 3 Score for the 3rd Grade FCAT

Summary

This chapter presented an analysis of the data from the C.A.R.E. to Read program, the responses of 34 classroom teachers who taught students participating in the C.A.R.E. to Read program, and Florida Comprehensive Assessment Test scores provided by the Brevard Public School District. The data were used to describe changes in attitudes toward reading, changes in reading skills, changes in schoolwork, changes in attitudes toward homework, changes in self-esteem or self-confidence, and changes in appearance or attendance. Furthermore, the data were used to define the reading growth for students

assigned to registered therapy dogs and to compare their growth to students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs and then to a grade level standard for reading. Finally, standardized test score data were used to compare students who were assigned to registered therapy dogs to students of similar characteristics who were in the lowest quartile in reading in their respective schools and were not assigned to registered therapy dogs.

Chapter 5 provides a summary, discussion, and conclusions of the study. Recommendations for future research are also presented.

CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to ascertain if students assigned to registered therapy dogs improved significantly in reading achievement and related school performance such as attendance and discipline when compared to students of similar characteristics who were not assigned to registered therapy dogs. The study investigated whether students assigned to registered therapy dogs improved their reading skills and if these students demonstrated more or less growth than students of similar characteristics not assigned to registered therapy dogs.

Data for this study were collected from three sources. The sources were the C.A.R.E. to Read Data Sheets for Pet Teacher and Handler, the C.A.R.E. to Read Teacher Questionnaires, and Brevard Public School District.

Summary and Discussion of Findings

To date little formal research has occurred to measure the impact of registered therapy dogs assigned to students in order to improve reading skills. The present study added to this limited body of knowledge with its findings concerning changes in reading skills and achievement growth for students assigned to registered therapy dogs. Two research questions and two hypotheses directed the focus of the study. Each question and hypothesis will be presented in this chapter along with conclusions and recommendations.

Research Question 1

What reading skills changed among students assigned to registered therapy dogs?

Changes in reading skills were analyzed using the data taken from the C.A.R.E. to Read Data Sheets for Pet Teacher and Handler and two questions on the C.A.R.E. to Read Program Teacher Questionnaire.

According to the repeated measures analysis there was a statistically significant difference for all of the groups between their first and last scores for all three of the objectives used to measure changes in reading skills. Objective 1 addressed identifying, describing, and explaining; objective 2 addressed predicting, applying, and summarizing; and objective 3 addressed differentiating, analyzing, and inferring. In other words all of the students whether they were assigned to a registered therapy dog or not showed a significant growth in reading between the time their first and last scores were recorded for all three objectives. This was an expected outcome because all of the students were receiving reading instruction in a regular classroom setting. Thus, all of the students were expected to show gains in their reading performance.

Of utmost importance to this study was the statistically significant difference among the groups for objective 1 and objective 2. Approximately 10% of the variance in score for objective 1 could be attributed to group membership. Three of the four experimental groups, which were made up of students assigned to registered therapy dogs, were significantly different from the control group, which was made up of students who had one on one instruction from a certified teacher and were not assigned to registered therapy dogs. That is to say that the students who were assigned to the registered therapy

dogs had higher mean scores for the skills under objective 1; which included identifying, describing and explaining; than students who had one on one instruction with a certified teacher but were not assigned to the registered therapy dogs.

It is important to note that the certified teachers had the same training as the dog handlers and used the same criteria to record their observations on a standardized data sheet as the dog handlers. The training was based on proven teaching methodology that was developmentally appropriate for each child's age and attention span. The guided reading sessions and data collection were the same for students assigned to registered therapy dogs and students receiving one on one instruction from a certified teacher but not assigned to registered therapy dogs. All of the students were chosen for the program because they were behind in reading.

The objective 2 data also reflected a statistically significant difference among the groups and approximately 11% of the variance could be attributed to group membership. All of the groups with students who were assigned to registered therapy dogs outperformed the group with students who had one on one instruction from a certified teacher but were not assigned to registered therapy dogs in terms of predicting, applying, and summarizing information from what the students had read.

Even though there was not a statistically significant difference in overall group for objective 3 skills; which included differentiating, analyzing, and inferring; the mean scores for the groups with students assigned to registered therapy dogs were higher than the mean score for the group with students who had one on one instruction with a certified teacher but were not assigned to registered therapy dogs. Therefore, the groups with students assigned to registered therapy dogs outperformed the group with students

who had one on one instruction from a certified teacher but were not assigned to registered therapy dogs in all three objectives.

It is interesting that the mean scores for all of the students whether they were or were not assigned to registered therapy dogs were higher for objective 2 than for objective 1. This is noteworthy because the items under objective 2 such as “how it happened” and “what may happen next” required higher level thinking than the items under objective 1 such as “name characters” and “name places.” In other words the data showed that these students who entered the program behind in reading were capable of using higher level thinking skills and had higher mean scores for items requiring higher level thinking than for items requiring lower level thinking.

According to Harvey and Goudvis (2000) teachers often overlook higher level thinking skills when working with struggling readers. Unfortunately when teachers are working with struggling readers they often rely on lower level questions and expect the reader to parrot the information from the text. Teachers rarely challenge these struggling readers to think and are content with the students’ low level responses. Mary Ellen Vogt (2002) found that teachers working with struggling readers asked fewer questions and rewarded students for their efforts rather than for their thinking.

It is important to note that the mean scores for the students assigned to registered therapy dogs were higher than the mean scores for the students who had one on one instruction from a certified teacher and were not assigned to registered therapy dogs. Even though the dog handlers and the certified teachers used the same criteria to record their observations on a standardized data sheet, the certified teachers may have inadvertently focused on the lower level items and spent less time on the higher level

items because of preconceived ideas about struggling readers. The dogs and their handlers had no prior experience with the students nor any preconceived notions about those students recommended for the program; thus the students received unconditional acceptance from the dogs and their handlers.

Teachers must exercise caution when dealing with students who are struggling to read and not underestimate their ability to use higher level thinking skills. Teachers cannot afford to continue to be content with low level responses and to reward students for their efforts rather than their thinking. It is imperative that teachers provide opportunities for all students to engage in activities that require them to move into the higher levels of thinking as defined in Bloom's Taxonomy (Appendix C). The more opportunities these students are given to move into higher level thinking, the more successful they will be. All students are capable of using higher level thinking when they are matched to appropriate tasks. These students proved that below grade level readers can use higher level thinking to answer questions and discuss what they have read.

Changes in reading skills were also addressed by two questions on the C.A.R.E. to Read Program Teacher Questionnaire. Question 2 addressed changes in student attitudes toward reading and Question 5 addressed changes in specific reading skills.

Barkley (2007) addressed the need for students to understand that effort is critical if they want to improve their skills. Approximately 88% of the responses to Question 2 addressed positive changes in student attitude toward reading, more interest in books, excitement about reading with the dog, and increased self-confidence. When students have a positive attitude, are excited about what they were doing, have more self-confidence, and are more motivated; they are eager to put more effort into their learning.

More effort leads to higher skill levels and the higher skill levels eventually lead to success. Students enjoy doing things that they are excited about so they are eager to read and thus read more. The more they read the better readers they become (Barkley, 2007). According to the responses to Question 2, the students assigned to registered therapy dogs demonstrated positive changes in their attitude toward reading and were on their way to becoming proficient readers.

Even though Question 2 addressed changes in student attitude toward reading, twenty percent of the responses addressed improvement in fluency, comprehension, vocabulary, and decoding. When this was paired with Question 5, which asked the teachers to describe changes in reading skills; the results were extremely impressive. Over half of the responses to Question 5 addressed improvements in decoding skills, comprehension skills, vocabulary skills, and fluency. Almost a third of the remaining responses said the students improved in their skills and their skills developed more quickly than their peers' skills.

The results from the data for this question were overwhelmingly positive for the students assigned to registered therapy dogs. The groups of students assigned to registered therapy dogs outperformed the group of students who had one on one instruction from a certified teacher but were not assigned to registered therapy dogs in all three of the objectives as measured by the established criteria and recorded on the standardized data sheets. This positive growth was also supported by the teacher observations as recorded on the C.A.R.E. to Read Program Teacher Questionnaire. The students assigned to registered therapy dogs demonstrated higher levels of comprehension by identifying, describing, explaining, predicting, applying, summarizing,

differentiating, analyzing, and inferring. They demonstrated the highest performance in predicting, applying and summarizing which required the use of higher level thinking skills. In other words, the students assigned to registered therapy dogs demonstrated improved reading performance in a variety of skills and the ability to use higher level thinking to answer questions about what they had read.

Research Question 2

What other school related behaviors (attendance, classroom behavior, etc.) changed among students assigned to registered therapy dogs?

Five questions on the teacher questionnaire addressed changes in school related behaviors. Question 3 asked the teachers to describe general changes in student attitude toward schoolwork, question 4 addressed changes in student attitude toward homework, and question 6 asked about changes in self-esteem or self-confidence. Question 7 asked teachers to relay parent comments about changes in student behaviors or attitudes toward school and learning; and question 8 addressed general observed changes in student appearance or attendance.

Almost 88% of the responses to Question 3 were positive and revealed that the students were more enthusiastic, more eager to complete work, had increased motivation, had more self-confidence, had a more positive attitude, and were more willing to participate in school and class activities. A little over half of the responses to Question 4 addressed a positive change in student attitude toward homework. Students were more likely to complete homework, were more eager to read and share books for homework,

and were more likely to produce quality homework. Seventy-eight percent of the responses to Question 6 reflected positive changes in student self-esteem or self-confidence. Responses included students were more confident, smiled more often, were more willing to participate in class, were more willing to take a risk, and felt special when the dog visited the class.

Most of the responses to Question 7 were left blank or marked N/A. It should be noted that some of the schools where the C.A.R.E. to Read Program was implemented were high needs schools and a few of the students that were identified turned out to be from homes where a second language was frequently spoken. It is not uncommon for high needs schools to have minimal parent support. Therefore, the lack of responses to this question could be due to the language barrier or lack of involvement.

The majority of the responses to Question 8 indicated no changes or the item was left blank. Changes noted were improved facial expressions, more pride in personal care, regular attendance, and being prepared upon arrival at school.

When these five questions were addressed collectively, the results were extremely encouraging. Over half of the responses addressed positive changes for students in attitude toward schoolwork, attitude toward homework, and student self-esteem or self-confidence. The questions concerning parent comments about the program and changes in appearance or attendance had fewer responses. However, it was interesting to note that all of the comments made addressing the two questions were positive. Practitioners are likely to agree that parents are typically very vocal if they are not satisfied with a program and tend to be quiet when they are satisfied. The fact that there were no negative comments from parents was noteworthy.

The other school related behaviors that not only changed but improved among students assigned to registered therapy dogs were attitude toward schoolwork, attitude toward homework, self-esteem or self-confidence, attitude toward school and learning, and appearance and attendance. The responses indicated that the areas of most improvement were student attitude toward schoolwork, student attitude toward homework, and increased self-esteem or self-confidence. Educators cannot afford to ignore these results and must ask themselves why students who were assigned to registered therapy dogs had such positive results compared to students who did not get to enjoy this opportunity.

Hypothesis #1

Is there a significant difference in achievement growth in reading between students assigned to registered therapy dogs, students not assigned to registered therapy dogs, and a reading standard for individual grade levels?

Two comparisons were made to address this question. The reading growth for students assigned to registered therapy dogs was compared to the reading growth of students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs. Then the reading growth for students assigned to registered therapy dogs and the reading growth for students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs were each compared to a grade level standard for reading.

A repeated measures analysis was used to ascertain the reading growth for each group of students who were assigned to registered therapy dogs and for the group of students who had one on one instruction from a certified teacher and were not assigned to registered therapy dogs. The first book level for each student was compared to the last book level for each student. It is important to note that the first book level score was determined by the book level that was recorded during the first instructional session. Likewise, the last book level score was determined by the book level recorded during the last instructional session.

As was expected, there was a statistically significant difference between the first book level and the last book level scores. All of the students were receiving reading instruction in the regular classroom; therefore, all of them were expected to show reading growth. All of the students assigned to registered therapy dogs and those not assigned to registered therapy dogs demonstrated reading growth during this time.

Of particular interest to this study was the statistically significant difference among the groups. Three of the four groups of students who were assigned to registered therapy dogs outperformed the group of students who had one on one instruction from a certified teacher and were not assigned to registered therapy dogs. The one group of students who were assigned to registered therapy dogs but did not outperform the students receiving one on one instruction from a certified teacher and were not assigned to registered therapy dogs was the experimental group in 2005-2006. The data for this group may not have been as significant due to the hurricanes that ravaged Central Florida the previous year which resulted in fewer dog handlers and dogs being available to work

with students. The 2005-2006 group included only 12 members and this small sample size could help to explain why there was no statistical significance.

The students assigned to registered therapy dogs and those who were not assigned to registered therapy dogs were placed in groups according to grade level. Another repeated measures analysis was run to compare the students who were assigned to registered therapy dogs in each grade level to a standard for that grade level. The standard was based on the beginning and ending book levels for each grade level as defined by Fountas and Pinnell (2001). The mean scores for the beginning and ending book levels for each grade level were recorded as the first and last book scores for each grade level standard. The mean scores for each grade level was compared to the mean scores for each grade level group to determine if there was a statistical significance between the students and the standard.

There was not a statistical difference in the scores for the first through fourth grade students assigned to registered therapy dogs and the scores for the standard; nor was there a statistical difference in the scores for the students who had one on one instruction from a certified teacher and were not assigned to registered therapy dogs and the scores for the standard. This was noteworthy in that the experimental groups with the dogs and the control group without the dogs performed within their respective grade level expectations for reading. These students were identified for this program because they were struggling readers; yet, at the end of the year their reading performance was within the range of performance expectations for all students at a given grade level.

There was a statistically significant difference between the scores for the fifth grade students assigned to registered therapy dogs and the standard. These fifth grade

students scored much lower than the standard. However, it is important to note that there were only two fifth grade students who were assigned to registered therapy dogs. One of these students entered the program on a second grade level and had five sessions with the registered therapy dog. The other student entered the program on a third grade level and had seven sessions with the registered therapy dog. Even though both students made progress, they were still significantly below grade level in reading.

On the other hand; it is important to note that the first, second, third, and fourth grade students who were assigned to registered therapy dogs and those who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs were not statistically different from the standard. It is noteworthy that the mean scores for the students assigned to registered therapy dogs were slightly higher than the mean scores for the students who were not assigned to registered therapy dogs.

In other words, the mean scores for the students assigned to registered therapy dogs were slightly higher than the mean scores for the students not assigned to registered therapy dogs but none of the mean scores were statistically significant from the standard. It could be further stated that the first through fourth grade students who were assigned to registered therapy dogs and those who were not assigned to registered therapy dogs made such reading gains that their mean scores for reading growth at the end of the year fell within the norms of the grade level reading standard. Again, these students were identified for the program because they were below grade level in reading; however, by the end of the year they were reading within the parameters of a grade level reading standard. This was quite an accomplishment.

The answer to this hypothesis is yes there is a significant difference in reading growth between students assigned to registered therapy dogs and students of similar characteristics not assigned to registered therapy dogs. The students assigned to registered therapy dogs performed significantly better than the students who were not assigned to registered therapy dogs. There was not a significant difference in reading growth when students assigned to registered therapy dogs were compared to a grade level standard for reading growth. In other words, the students who were identified for the program because they were at least one grade level behind in reading and were assigned to registered therapy dogs finished the year performing within the norms of a grade level standard for reading growth.

Hypothesis #2

Is there a significant difference between the scores on standardized achievement tests of students assigned to registered therapy dogs and students of similar characteristics not assigned to registered therapy dogs?

The standardized achievement tests scores used for this analysis were provided by Brevard Public School District. Scores were available for 46 of the 98 students who were in the experimental groups and 15 of the 19 students who were in the control group. The students in the experimental groups were assigned to registered therapy dogs and the students in the control group had one on one instruction from a certified teacher but were not assigned to registered therapy dogs. Scores were unavailable for students who had moved out of Brevard County or had not reached third grade, which is the first time

students take the Florida Comprehensive Assessment Test (FCAT). The scores for the 46 students who were assigned to registered therapy dogs were collected along with the scores for the 15 students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs. Additionally, scores were collected for 46 students who had similar characteristics to the students who had participated in the program. The 46 students of similar characteristics were randomly selected from students who were identified as being in the lowest quartile in reading in their respective schools and were not assigned to registered therapy dogs. Even though every school had a lowest quartile, the 46 students randomly selected for this study were in the lowest quartiles in schools that had participated in the C.A.R.E. to Read program. It is important to note, that in high performing schools some of the students in the lowest quartile may be on grade level. However, in low performing schools most of the students are below grade level.

Florida Comprehensive Assessment Tests (FCAT) developmental scale scores were used instead of FCAT levels. The developmental scale scores were more specific and were used to determine student growth in reading. The FCAT, Florida's state assessment, is a criterion referenced test used to measure student achievement based on the Sunshine State Standards. Third grade students who score Level 1, below 1046 developmental scale score points, have to be retained in accordance with state law unless they meet the criteria for an exemption. Third grade students who score Level 3, 1198 - 1488 developmental scale score points, are considered on grade level. Obviously, the goal is for every student to score a Level 3 and be on grade level; however, students who score Level 2, 1046 - 1197 developmental scale score points, are not subject to

mandatory retention. An analysis of variance was run to check for statistical significance among the groups.

There was a statistically significant difference in score between two of the three groups which included the experimental groups, the control group, and the lowest quartile group. However, the students assigned to registered therapy dogs were not statistically significant from the students receiving one on one instruction from a certified teacher and not assigned to registered therapy dogs or from the students randomly selected from the lowest quartile in reading in their respective schools. The statistical significance was between the students who received one on one instruction from a certified teacher and were not assigned to registered therapy dogs and the students who were randomly selected from the lowest quartile in reading.

The mean score for the students in the control group who were not assigned to registered therapy dogs fell within FCAT Level 3, the mean score for the students in the experimental groups who were assigned to registered therapy dogs fell within FCAT Level 2, and the mean score for the students in the lowest quartile who were not assigned to registered therapy dogs fell within FCAT Level 1. In other words, the mean score for the students in the control group was on grade level, the mean score for the students assigned to registered therapy dogs was below grade level but would not require retention, and the mean score for the students in the lowest quartile was below grade level and would require retention.

Two independent t tests were run to further compare the students in the groups. The first independent t test compared third grade FCAT scores between 23 students who were assigned to registered therapy dogs during their third grade year in school and a

randomly selected group of 23 students who were identified as being in the lowest quartile for reading in their school in Brevard County. The students assigned to registered therapy dogs took the third grade FCAT during 2003, 2004, 2005 or 2006. Their scores were compared to the lowest quartile students who took the third grade FCAT during 2006.

There was not a statistically significant difference in FCAT scores between the two groups of students. The students assigned to registered therapy dogs had a slightly higher mean score than the students in the lowest quartile. The mean score for the students assigned to registered therapy dogs fell in the FCAT Level 2 range whereas the mean score for the students in the lowest quartile fell in the FCAT Level 1 range but only 3 points short of Level 2. This was interesting because the students assigned to registered therapy dogs were identified for the program because they were below grade level in reading. The students in the lowest quartile may or may not have been below grade level depending on their school scores. Therefore, the students assigned to registered therapy dogs were performing better on the FCAT than the students in the lowest quartile.

Another independent t test was run to compare the third grade FCAT scores for the 10 third graders assigned to registered therapy dogs during 2006 to 10 randomly selected third grade students from the students in the lowest quartile in reading attending schools that had participated in the C.A.R.E. to Read program. All of these students took the third grade FCAT in 2006.

The independent t test did not reveal a statistical significance between the scores for the two groups. Once again, the students assigned to registered therapy dogs had a slightly higher mean than the lowest quartile students. The mean score for the students

assigned to registered therapy dogs fell within the FCAT Level 2 range whereas the mean score for the students in the lowest quartile fell within the FCAT Level 1 range.

Therefore, the students assigned to registered therapy dogs were outperforming the lowest quartile students. It should be noted that this was a very small sample size and that could have had an impact on the results.

It was interesting to note that FCAT scores were the only scores where the students not assigned to registered therapy dogs had a higher mean score than the students assigned to registered therapy dogs. Even though the students assigned to registered therapy dogs had higher mean scores on all three objectives and in reading growth than the students not assigned to registered therapy dogs, the data reflected that they might not have been able to transfer their higher level thinking and improved reading skills to the testing environment.

Conclusions

It was conclusive that the students assigned to the registered therapy dogs demonstrated more reading growth than the students who had one on one instruction with a certified teacher but were not assigned to registered therapy dogs. In other words, one on one instruction was not as effective as being assigned to a registered therapy dog.

In light of the data showing this improvement in performance, one could argue that the difference must be environmental. Obviously, the dogs were not doing the teaching but they were providing an environment that was different from the traditional classroom environment. The students who had one on one instruction with the certified

teachers and were not assigned to registered therapy dogs had a more traditional classroom environment because they did not have the benefit of the dog.

According to the Center for the Human-Animal Bond (2005) contact with animals lowers blood pressure, lowers anxiety, and creates feelings of well being. Protheroe (2004), Barkley (2007), Fountas and Pinnell (1996) have all stressed the importance of low-risk environments to support student learning. Low-risk environments that reduce anxiety encourage students and increase their motivation for learning. When students were free from intimidation and were not made to feel inadequate, they could make connections and spend all of their intellectual energy on the task at hand rather than on worrying about failing or being embarrassed.

It was likely that the registered therapy dogs produced this low-risk environment for the students who were assigned to them. The children who were assigned to registered therapy dogs were in an environment where they did not have to worry about failure or embarrassment; therefore, these students were able to demonstrate higher levels of achievement and outperformed their peers who had one on one instruction with a certified teacher but were not assigned to registered therapy dogs. The students who were not assigned to registered therapy dogs did not have the advantage of the low-risk environment provided by the dog.

According to Dayton-Sakari (1997) struggling readers must be in an environment where they have to do the reading. The goal is for the reader to be in control rather than the teacher. Dayton-Sakari further noted that teachers are typically in a hurry to teach the content and complete the task. This makes it difficult for them to always provide the appropriate amount of wait time. Struggling readers have learned how to take advantage

of this situation and often out wait teachers. This could have been an influencing factor for the students who were working with certified teachers but were not assigned to registered therapy dogs. Possibly these teachers inadvertently took control of the reading session and did not provide the appropriate amount of wait time. However, the students assigned to the registered therapy dogs were in a low-risk environment, they were in control during the reading session, and the dog provided the appropriate wait time for each student.

The classroom environment has a direct impact on the success of reluctant learners. Many of these learners fear failure and would rather not try than to try and risk failure or even worse embarrassment. John Atkinson (Marzano, 2003) stated that motivation is based on two competing drives which are striving for success and fearing failure. Both drives are working at the same time. Life experiences guide students toward one drive or the other. If students are always trying to avoid failure, they lack the motivation to tackle new tasks because they have experienced so many negative feelings in the past when they have failed. They have no desire to experience this pain again.

The classroom environment can determine whether these reluctant learners see themselves as successful or as failures. According to Protheroe (2004) many of these learners have received the message from their teachers and parents that they are failures. Some have received the message directly and others have received it indirectly through negative comments, low expectations, and body language. This message can become a self-fulfilling prophecy because the more negative feedback these learners receive from teachers and parents, the less motivated they become. If this message is not changed, it becomes a recipe for failure.

It was possible that the students who participated in this study had received a message of failure from adults in their environments. These adults may have been in their home environments, social environments or school environments. Some of these students may have had experiences with adults that were threatening or extremely negative. These students may have brought this perception to the classroom and may have transferred their negative feelings to the teacher. These students could become resistant to the teacher because of these past experiences. Some of these students may have come from cultures where they had been raised not to question adults. These students may have been hesitant to ask questions in the classroom because in their minds that would have been disrespectful and/or disobedient.

If the students who received one on one instruction from the certified teachers and were not assigned to registered therapy dogs had received a message of failure from adults in their lives, it was also possible that the certified teachers working with these students inadvertently confirmed this message through their expectations, their tone of voice, and/or their body language. Additionally, these students could have entered their sessions with the certified teacher with preconceived ideas about adults and/or teachers. Both of these factors could have influenced student performance and achievement.

Performance by the students who were assigned to registered therapy dogs indicated they did not get this message during their sessions. These students may have received a message of failure in the classroom or from other adults, but they did not receive a message of failure from the dog. According to Levinson (1997) dogs offer unconditional acceptance. They have no prejudices and are not influenced by skin color, personal hygiene, academic success, or speech. Dogs have no interest in societal values

but they are extremely receptive to love and kindness. These factors make the bond between the child and pet instantaneous.

Teachers have to analyze how they see the learners in their classrooms and how they build relationships with these students. Farris's (2002) definition for reluctant learners leaned toward a hesitant learner but Herzog's (2002) definition leaned toward a resistant learner. Teachers have to analyze the students in their classrooms and determine whether they see reluctant learners as hesitant or as resistant. The teacher's perception of these students determines how these students are treated in the classroom.

Whether teachers view reluctant learners as hesitant or resistant, it is imperative that the teachers use appropriate strategies with these learners. Hesitant and resistant learners need to be matched to appropriate texts and appropriate tasks. They need to have some control over the tasks they are being asked to do and how the tasks are to be completed. Teachers can provide this control by offering the students choices, options, and opportunities to delete items or tasks. Furthermore, the teacher can provide a variety of ways for the students to demonstrate mastery of concepts and skills (Evans, 1999).

If appropriate strategies are not used with hesitant learners, these learners will continue to retreat and eventually shutdown. Likewise, if appropriate strategies are not used with resistant learners, they will continue to resist and lose interest in the learning process. Both of these types of learners need to know that the teacher cares about them and their success. They need to have a positive relationship with the teacher if they are going to be successful in the classroom and beyond.

Building positive relationships with students is the first step teachers must take to ensure the success of all students. While anecdotal information was not addressed, it was

noted that bonding was the first activity required in the C.A.R.E. to Read Handbook lesson plan and bonding was the initial step taken by the dog. When students are in a low-risk environment and they know that the teacher in the classroom truly cares about the students' successes and failures, the students are able to perform at their highest level.

Maslow (Gordon, 2002) stated that students performing at their highest potential have their basic level needs met thus they can move up the hierarchy to higher level needs. Jensen (1995) supported this with brain research by stating that the students were in a low-risk environment and were able to upshift in their brain functioning. In other words because these students were in a low-risk environment they could move from the lower level of the brain through the emotional level of the brain and into the frontal lobe where higher level thinking occurs. Students functioning in their frontal lobes are engaged in higher level thinking and are able to perform at their potential. Such was reflected in the data for the groups when they had higher mean scores for the objective 2 skills, which required higher level thinking, than for the objective 1 skills, which required lower level thinking.

As teachers strive to meet the individual needs of the students in their classrooms, it is crucial that they build relationships with these students so they can use the most effective strategies to motivate the students and help them learn. When teachers truly understand the students in their classrooms, they can address the perceptions and abilities of these students as they seek to provide the most positive environment for everyone.

Giving consideration to the data a couple of questions are raised. What are these registered therapy dogs providing that is different from the traditional classroom setting?

Why are these students able to perform at higher levels in reading when they are with the registered therapy dog than when they are in the classroom or in testing situations such as FCAT? Evidence strongly supports factors related to the classroom environment.

Teachers must realize the importance of the classroom environment and its impact on student learning. Researchers must explore means to identify and replicate the environment that was provided by the registered therapy dog. Educators must analyze this environment and decide what it looks like, sounds like, and feels like. They have to determine how this environment can be accomplished in every classroom. Classroom teachers must find ways to create the most appropriate low-risk environment in every classroom and show unconditional acceptance for every student in every classroom.

The students who were assigned to registered therapy dogs were selected because they were significantly below grade level in reading. These students enjoyed significant success toward becoming proficient readers. The students' teachers observed each student's growth as a reader and the data supported the teacher observations. Data supported that the registered therapy dogs motivated these students and helped them to see themselves as successful readers.

According to the data from this study, it was clear that registered therapy dogs do motivate reluctant readers to improve their reading skills, their attitude toward reading, their attitude toward school, and their self-confidence. The registered therapy dogs and the handlers provided a safe environment where these students could relax and take risks without fear of consequences. Registered therapy dogs accepted the students unconditionally and allowed these students to experience the wonderful opportunities that are available to proficient readers.

Recommendations

The following recommendations for practice include:

- 1) All students are capable of using higher level thinking skills. These skills are essential for students as they encounter problem solving situations in the classroom and in life. Teachers have to provide opportunities for students at all levels to experience and engage in higher level thinking and problem solving. These skills can be the difference in whether a student is successful or not in the classroom and on district and state assessments. When students are given multiple opportunities to develop these skills, they have a better chance of meeting the high expectations that are placed upon them by the testing demands of our educational system.
- 2) Measures should be taken along with training to help teachers investigate and implement low-risk environments for the students in their classrooms. Teachers must learn to build relationships with their students in order to address the individual needs of each student.
- 3) Training is needed to help teachers understand the differences and apply the appropriate strategies for resistant and hesitant learners. If these learners do not receive the appropriate strategies, resistant learners will continue to resist and hesitant learners will shutdown.
- 4) Administrators must recognize the importance of the classroom environment and how it can be the deciding factor between a student being successful or failing. Teachers have to be provided time to build positive relationships with their students so they can provide the most appropriate environment for their

students to reach their full potential. Administrators and educators have to be creative in finding ways to reduce the overwhelming demands placed on teachers so the teachers have more time to build relationships and meet the needs of the students in their classrooms.

The analysis of the data and the related literature support the continued use of registered therapy dogs in the educational setting. The following recommendations for future research are proposed:

- 1) Whereas the present study found huge implications for the classroom environment, it is recommended that a study be performed to investigate how teachers can replicate the unconditional acceptance provided by the registered therapy dogs. What does this environment look like, sound like, feel like? How do different learners respond to the environment and how can teachers provide the most appropriate environment for all learners? It is unrealistic to think that teachers can create an environment that is risk free and without anxiety. However, classroom teachers can create a low-risk environment in which appropriate levels of anxiety are differentiated from levels that become a hindrance to learning.
- 2) According to Levinson the unconditional acceptance the dog has for the child leads to an instant bonding between them. A future investigation should explore this bonding element and measure bonding in relation to student achievement and teacher attitudes toward students.
- 3) The research by Harvey and Goudvis revealed that higher level thinking is often overlooked by teachers when working with struggling readers and the data

from the present study supported that struggling readers can be successful with higher level thinking skills. Therefore, an investigation on the use of higher level thinking skills and their implications for all learners is recommended. The investigation should research how teachers use higher level thinking skills in their classrooms and how they can incorporate these skills into all aspects of the curriculum.

4) Teachers' perceptions of the learners in their classrooms have a huge impact on how the learners are treated in the classroom. If students are perceived as reluctant learners whether they are or not, they are treated in certain ways. If the teacher defines reluctant learners as hesitant learners, the teacher must have the right strategies to encourage these students to engage in learning activities.

Likewise, if reluctant learners are perceived as resistant learners, the teacher must have the right strategies to engage these students in appropriate tasks. If either of these types of learners is mislabeled as a behavior problem and teachers treat them as such, the hesitant learner will continue to retreat and the resistant learner will continue to resist. It is recommended that a study be completed to determine how teachers can successfully identify the learners in their classrooms and the appropriate strategies to use with those learners in order for them to reach their full potential.

5) The research by Protheroe (2004) stated that reluctant learners see themselves as poor students and have often received this message directly from their teachers and/or parents. These students come to school with preconceived ideas about adults and often transfer these ideas to the teacher in the classroom. If these

preconceived ideas are negative, the student may respond negatively to the teacher. In light of this information these students may respond more positively to peers than they do to adults. Reading buddies has been a successful program whereby older students read with younger students in order to promote the joy of reading. Perhaps this concept could be taken a step further and high performing readers could be trained utilizing methods similar to the registered therapy dog teams to work with struggling readers in lower grade levels. The struggling reader may respond more positively to another child than to the adult.

6) In light of the significance of the present study, it is recommended that a future study explore other uses for registered therapy dogs in the educational setting. Examples include but are not limited to using registered therapy dogs to reduce test anxiety, to reduce separation anxiety for kindergarteners, to serve as behavior interventions, and to serve as interventions after a major crisis such as they were utilized in New York City after the events of 911.

7) Whereas the present study analyzed the reading skills as recorded on the C.A.R.E. to Read Student Data Sheet, it did not address the plethora of anecdotal notes recorded and collected by the dog handlers. These notes included comments from the dog handlers, drawings made by the students, notes from the students to the dogs, notes from the students to the dog handlers, and stories written by the students about the dog. Two recurring comments by the dog handlers were noted. The first comment addressed how quickly the students bonded with the dog and the second comment dealt with children who spoke at a

whispering level. It is recommended that a future study analyze these notes to discover trends and/or patterns relevant to these learners.

APPENDIX A
STUDENT DATA SHEET

C.A.R.E. To Read[©]

PROVIDE & PRINT THIS INFORMATION FOR EACH SESSION

Actual Date/Time of CARE Session: _____

Book Title/Author/Level (if available): _____

Session #: _____ Dog & Handler: _____

Student: _____

School: _____

School's CARE Contact: _____

Contact's Phone and/or E-mail: _____

Student's Classroom Teacher: _____

INSTRUCTIONS FOR USING DATA SHEET

1st COLUMN: "Prompted Response"

- (1) These are from questions the Handler asks in Objectives 1-2-3.
- (2) Handler marks the level of response the student gives by using 1 of 4 letters.
- (3) A = ALL, M = MOST, S = SOME, N = NONE

2nd COLUMN: "Total Possible"

- (1) White boxes—Handler records a number.
- (2) Gray boxes—Handler records a number if it's reasonable or easy to do so.
- (3) Black boxes—Handler does not record anything.

3rd COLUMN: "Unprompted Response"

- (1) If student says something that's unsolicited, check the corresponding box.
- (2) Pursue what the student said.
- (3) Now, in the "Prompted" column, mark his/her response as A-M-S (All-Most-Some).



Student Name _____

C.A.R.E. To Read®
Student Data Sheet for Highest Level Book Per Visit

	Prompted Response	Total Possible	Unprompted Response
OBJECTIVE #1	A-M-S-N	#	✓
Name Characters			
Name Places			
Tell When			
Tell Where			
Tell Main Idea			
Describe Whatever			
OBJECTIVE #2	A-M-S-N	#	✓
How It Happened			
What May Happen Next			
Was It Good-Bad, Fair-Unfair, etc.?			
Why Good-Bad, Fair-Unfair, etc.?			
Agree or Disagree?			
Why You Agree-Disagree			
Summarize Story			
OBJECTIVE #3	A-M-S-N	#	✓
New Word(s): Sounding Out *			
New Word(s): Saying the Meaning *			
Differentiate: True-False, Real-Pretend			
Why Character(s) Did Whatever			
What Character(s) Learned			
What Character(s) Can Do Differently			
What Student Learned from Story			

A = All ■ M = Most ■ S = Some ■ N = None * Very Important

APPENDIX B
TEACHER QUESTIONNAIRE

**C.A.R.E. to Read Program
Teacher Questionnaire**

Start here:

Please indicate the number of your students who participated in the C.A.R.E. to Read Program by grade level and by year:

Grade Level Taught: _____ 2002-2003 _____ 2003-2004 _____ 2004-2005 _____ 2005-2006
Number of Students: _____ 2002-2003 _____ 2003-2004 _____ 2004-2005 _____ 2005-2006


Instructions: Please write your responses to the statements listed below. If you did not observe any changes, please write “none” in the response area.

1. Please list any characteristics you used to identify students to participate in the C.A.R.E. to Read Program.

2. Please describe any **general changes** you observed in student attitudes toward **reading** since the students began the C.A.R.E. to Read program.

3. Please describe any **general changes** you observed in student attitudes toward **schoolwork** in general since the students began the C.A.R.E. to Read program.

4. Please describe any **general changes** you observed in student attitudes toward **homework** since the students began the C.A.R.E. to Read program.

Over 

5. Please describe any **general changes** you observed in student **reading skills** since the students began the C.A.R.E. to Read program.

6. Please describe any **general changes** you observed in **student self-esteem or self-confidence** since the students began the C.A.R.E. to Read program.

7. Please share any **general comments** from **parents** regarding observable changes in **student behaviors or attitudes toward school and learning** since the students began the C.A.R.E. to Read program.

8. Please describe any **general observed changes** in student **appearance or attendance** as a result of participating in the C.A.R.E. to Read program.

9. Please comment on any other **significant observations** you have made concerning students since their participation in the C.A.R.E. to Read program.

Thank you for taking your time to complete this questionnaire.

Please return your completed questionnaire to:
Julie L. Paradise, Doctoral Student
4014 Sunnybrook Court
Orlando, Florida 32820

APPENDIX C
BLOOM'S TAXONOMY

Category	Definition	Key Words
Knowledge Level	Recall data or information	Defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states
Comprehension	Understand the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words.	Comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates
Application	Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place.	Applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses
Analysis	Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences.	Analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates
Synthesis	Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.	Categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes
Evaluation	Make judgments about the value of ideas or materials	Appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports

Adapted from Learning Domains or Bloom's Taxonomy

Downloaded from <http://www.nwlink.com/~donclark/hrd/bloom.html> on 1/15/2007

APPENDIX D
BOOK LEVELS - STUDENTS ASSIGNED
TO REGISTERED THERAPY DOGS

Student ID	First Book Level	Last Book Level	Gain/Loss
58	1	9	8
93	1	7	6
19	2	16	14
21	2	8	6
27	2	14	12
30	2	17	15
35	2	14	12
54	2	7	5
75	2	12	10
79	2	12	10
95	2	9	7
118	2	18	16
23	3	9	6
59	3	10	7
86	3	15	12
11	4	8	4
12	4	13	9
17	4	11	7
26	4	10	6
28	4	17	13
33	4	14	10
65	4	15	11
96	4	11	7
2	5	7	2
4	5	14	9
24	5	15	10
32	5	11	6
50	5	21	16
77	5	12	7
89	5	11	6
91	5	16	11
1	6	14	8
15	6	10	4
52	6	9	3
56	6	9	3
66	6	12	6

Student ID	First Book Level	Last Book Level	Gain/Loss
67	6	12	6
73	6	10	4
80	6	8	2
81	6	6	0
82	6	15	9
98	6	9	3
3	7	14	7
7	7	15	8
16	7	13	6
18	7	14	7
31	7	14	7
44	7	15	8
57	7	9	2
85	7	15	8
97	7	13	6
34	8	19	11
38	8	17	9
42	8	16	8
46	8	9	1
51	8	11	3
84	8	20	12
90	8	12	4
94	8	12	4
9	9	14	5
36	9	14	5
41	9	11	2
49	9	9	0
60	9	18	9
61	9	15	6
62	9	24	15
63	9	12	3
72	9	14	5
92	9	13	4
6	10	13	3
10	10	21	11

Student ID	First Book Level	Last Book Level	Gain/Loss
29	10	11	1
48	10	21	11
53	10	11	1
64	10	15	5
69	10	12	2
76	10	13	3
78	10	13	3
13	11	13	2
20	11	18	7
25	11	11	0
37	11	17	6
40	11	14	3
8	12	15	3
14	12	21	9
39	12	14	2
45	12	16	4
70	12	18	6
71	12	18	6
74	13	15	2
5	14	14	0
43	14	15	1
47	14	15	1
87	14	16	2
83	15	22	7
22	16	20	4
68	16	23	7
88	16	16	0
55	18	11	-7

APPENDIX E
BOOK LEVELS - STUDENTS
NOT ASSIGNED TO REGISTERED THERAPY DOGS

Student ID	First Book Level	Last Book Level	Gain/Loss
2	2	12	10
7	2	12	10
16	2	12	10
1	3	5	2
3	3	4	1
4	3	4	1
6	3	9	6
8	3	13	10
14	3	8	5
17	3	11	8
18	3	11	8
13	4	8	4
12	6	15	9
5	8	15	7
9	8	14	6
11	8	14	6
19	8	13	5
10	9	11	2
15	11	15	4

APPENDIX F
INSTITUTIONAL REVIEW BOARD APPROVAL LETTER



THE UNIVERSITY OF CENTRAL FLORIDA
INSTITUTIONAL REVIEW BOARD (IRB)

IRB Committee Approval Form

#06-3674

PRINCIPAL INVESTIGATOR(S): Julie Paradise
(Supervisor – Barbara Murray, Ph.D.)

PROJECT TITLE: An Analysis of Improving Student Performance Through the Use of Registered Therapy Dogs Serving as Motivators for Reluctant Readers

- New project submission
- Continuing review of lapsed project
- Study expires
- Initial submission was approved by full board review but continuing review can be expedited
- Suspension of enrollment email sent to PI, entered on spreadsheet, administration notified _____
- Resubmission of lapsed project
- Continuing review of # _____
- Initial submission was approved by expedited review

Chair

Expedited Approval

Dated: 8/21/06
Cite how qualifies for expedited review: minimal risk and 15

Exempt

Dated: _____
Cite how qualifies for exempt status: minimal risk and _____

Expiration
Date: 8/20/07

IRB Reviewers:

Signed: _____
Dr. Sophia Dziegielewski, Vice-Chair

Signed: _____
Dr. Jacqueline Byers, Chair

Signed: *Tracy Dietz*
Dr. Tracy Dietz, Vice-Chair

Complete reverse side of expedited or exempt form

- Waiver of documentation of consent approved
- Waiver of consent approved
- Waiver of HIPAA Authorization approved

NOTES FROM IRB CHAIR (IF APPLICABLE):

Waiver of consent approved for work dealing w/ children

APPENDIX G
ALPHABETICAL LISTING OF TITLES

ABC
Afraid of the Dark
African Dancing
African Safari
Afternoon on the Amazon
Alexander and the Bad Day
Alexander Who is Not moving
Alexander Who Used To Be Rich Last Sunday
All About You
All By Myself
All Join In
All of Me
All Together Now
Allie's Plan
Along Came Greedy Cat
Along the Amazon
Alphabetics
Amazing Animals
Amazing Grace
Ana's Gift
And the Teacher Got Mad
Andrew's Loose Tooth
Animal Babies
Animal Pets
Animal Rescue Club, The
Animals in Winter
Animals Under the Ground
Anna's Game
Antarctic Penguins
Any Kind of Dog
Apple Pie Family

Are You Grumpy, Santa?
Are You My Daddy?
Are You My Mother?
Are You Still Mad?
Arguments
Art Fair, The
Art Show, The
Arthur and the Cootie Catcher
Arthur Makes the Team
Arthur Meets the President
Arthur's Baby
Arthur's Chicken Pox
Arthur's Computer Disaster
Arthur's Halloween Costume
Arthur's Mystery Envelope
Arthur's Perfect Christmas
Arthur's Pet Business
Arthur's Teacher Moves In
Arthur's Thanksgiving
Arthur's Tooth
Arthur's Underwear
At The Zoo
Atlantic
Austers Academy, The
Baby Animals
Baby Bear Goes Fishing
Baby Beebee Bird, The
Baby Hippo
Baby Sister Says No
Bad Dog
Balto

Bark George
Barney's Horse
Barry The Bravest St. Bernard
Basketball
Bathtime for Biscuit
Batman Beyond
Bats
Be There
Beagles
Beans to Chocolate
Bear and Bunny Grow Tomatoes
Bear Wants More
Bear's Diet
Bears on Wheels
Bears, Bears Everywhere
Beast from the East
Beauty and the Beast
Beep Beep
Beethoven's Fifth Symphony
Beetle Alphabet Book, The
Ben the Bold
Benji's Pup
Ben's Pets
Ben's Teddy Bear
Berenstain Bears and The Hiccup Cure
Berenstain Bears Trouble with Pets
Best Baseball Players, The
Best Dog in the World, The
Best Nest
Best Place of All, The
Best Teacher in the World, The

Best Vacation Ever, The
Bicycle, The
Big and Small Homes for All
Big Hand Off, The
Big Hill, The
Big Hit, The
Big Kick, The
Big Mammals
Billy Goats Gruff
Birthday Joy
Birthday Lady, The
Birthdays
Biscuit Finds a Friend
Biscuit Treasury, The
Biscuit's New Trick
Boats Afloat
Boots for Toots
Born to be a Butterfly
Bossy Bettina
Box for Bobo, A
Boxes
Boy Who Cried Wolf
Bragging Ben
Brave Irene
Brave Norman
Bravest Dog Ever, The
Bring Back My Gerbil
Buddy, The First Seeing Eye Dog
Buffy's Tricks
Bug Watching
Bugs!

Bugs! Bugs! Bugs!
Bugs, Beetles and Butterflies
Builder, The
Bully Trouble
Bumble Bee, The
Bumbles
Bunnymoney
Buster
Buzz Said the Bee
Cam Jansen and the Barking Treasure Mystery
Camp Run-A-Muck
Caps for Sale
Captain Cat
Car Washing Street, The
Caribbean Dream
Carrot Seed, The
Carving a Totem Pole
Case of the Cat's Meow, The
Case of the Hungry Stranger
Castles
Cat Heaven
Cat in the Hat
Catch That Frog
CATS - A Feline Potpourri
Changes in Me
Charlie Anderson
Chicka Chicka Boom Boom
Chicken Little
Chomp - A Book About Sharks
Christmas Humbugs, The
Christmas in Camelot

Christmas Magic
Christmas Surprise, A
City Fun
Class Picture Day
Click Clack Moo Cows that Type
Clifford Loves Autumn
Clifford the Big Red Dog
Clifford the Firehouse Dog
Clifford to the Rescue
Clifford's Birthday Party
Clifford's Family
Clifford's First Autumn
Clifford's First Snow Day
Clifford's First Valentine
Clifford's Good Deeds
Clifford's Halloween
Clifford's Pals
Clifford's Puppy Days
Clifford's Thanksgiving Visit
Clifford's Valentine
Climbing
Cloudy Days
Cloudy with a Chance of Meatballs
Cold Days
Collecting
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