Animal-Assisted Therapy to Increase Independent Reading for Children with Autism Spectrum Disorder

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Animal-Assisted Therapy to Increase Independent Reading for Children with Autism Spectrum Disorder

by

Taylor L. Butts

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts in Applied Behavior Analysis Department of Child and Family Studies College of Behavioral and Community Sciences University of South Florida

Major Professor: Kimberly Crosland, Ph.D., BCBA-D

Date of Approval: March 11, 2019

Keywords: autism, animal-assisted therapy, therapy dogs, applied behavior analysis

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ABSTRACT

Animal Assisted Therapy (AAT) has become a popular intervention for the health and behavioral community as evidenced by media attention. The research that has been done on AAT has been mostly qualitative and anecdotal. The current study adds to the literature on AAT by collecting quantitative data on AAT. A multiple baseline design across three participants was used to evaluate the independent reading duration under a baseline condition (no dog present) and a non-contingent access to dog condition (which simulated how dog therapy is typically conducted). If reading did not increase during the non-contingent dog condition, a contingent access to the dog condition was implemented to determine if the participants would engage in increased reading duration to earn access to the dog. In this study, noncontingent access to the therapy dog resulted in increased reading duration for two of the participants. One participant showed variable results in the noncontingent phase and required the introduction of the contingent dog phase, which resulted in increases in reading duration.

Keywords: autism, animal-assisted therapy, therapy dogs, applied behavior analysis
CHAPTER ONE:

INTRODUCTION

Animal Assisted Therapy (AAT) as a strategy for impacting a child’s behavior is a relatively new intervention that has been given a lot of media attention. Specifically, families with children with intellectual disabilities look to AAT as a treatment to improve behaviors, social skills, and academic ability of their children. The Centers for Disease Control and Prevention recently reported that 1 in 68 children are now being diagnosed with Autism Spectrum Disorder (ASD) (Centers for Disease Control and Prevention, 2014). There has been some research on the benefits of AAT for children with ASD but with very little quantitative data. Most research is limited and has very anecdotal evidence. AAT has been described as a goal oriented intervention provided by an animal/human team that has met specific training requirements. This form of therapy is designed to improve and promote human physical, social, emotional, or cognitive function. AAT can take place in many different settings such as a school classroom, group homes, or hospitals (American Veterinary Medical Association, 2014).

The first documented case of AAT was at the York Retreat in England, an asylum founded by William Tuke. At the retreat Tuke used farm animals, who would roam the grounds freely, as an intervention to “enhance the humanity of the emotionally ill.” This research found that the incorporation of farm animals at the institute resulted in a suspected decrease in the need for drugs and restraints (Beck & Katcher, 1996, p. 132; Macauley, 2006; Urichuk & Anderson, 2003). Animals were actually a common sight in mental institutions for the greater part of the 19th century in Europe; it was not until 1919 when animals were incorporated in therapy in the
United States. Dogs were brought in to be companions for hospitalized patients in the psychiatric wards of St. Elizabeth’s Hospital in Washington, D.C. (Allderidge, 1991; Fine, 2000; Urichuk & Anderson, 2003). In the late 1960’s Boris Levinson a child psychotherapist, who is credited as being a pioneer for AAT, started bringing his dog into therapy sessions with his clients. Levinson stated that being in the presence of the dog allowed the children to find emotional security and affection with the pet and that the animal assisted in the ego development and overall development of the child (Levinson, 1969). Thanks to the increase in media coverage, the topic of AAT has peaked the curiosity of people on the bond between animals and humans (Fine, 2000).

The most common animals used in AAT are dogs, cats, and horses although other animals have also been used. In classroom settings, therapists and teachers often use small animals such as guinea pigs and rabbits as they are easy to manage and take care of (The Chimo Animal Assisted Therapy Project, 2011). The type of animal is typically tailored to the type of intervention or program that is implemented. Depending on the type of therapy that is being given, the animal should be picked based on skill, strength and temperament for the job. Dogs are most commonly used in urban settings as they can be brought into offices, hospitals and schools easily. They can be used as both an active or passive participant in the therapy and provide patients with a common ground, experience wise, if they have had contact with dogs in their past. Cats can be used to comfort clients and to teach boundaries since they can be highly reactive. Patients can work on fine motor skills with cats such as petting and brushing since they are smaller than dogs and could be less intimidating for the clients (The Chimo Animal Assisted Therapy Project, 2011). There are a few prominent AAT programs, two of which are The Delta Society/Pet Partners and Therapy Dog International. The delta society was founded in 1977 in
Bellevue, Washington. Its mission is to “help lead the word in advancing human health and well-being through positive interactions with animals.” Delta Society, which later changed names to Pet Partners, has a rigorous training and testing procedure for animal and human volunteers. After this training is complete the animal and owner team are registered with the society (Baldwin, 2011). Therapy Dogs international was founded in 1976 in New Jersey. It is a non-profit, volunteer organization that regulates, tests and registers therapy dogs and their handlers. There are no breed restrictions within this program, the dogs need to be at least one year old, and have a good temperament. The dogs need to pass rigorous temperament tests where their temperament is evaluated for suitability to be around people that use different types of service equipment (Therapy Dogs International, 2013).

According to the delta society, dogs provide very similar social supports to people as humans do, such as companionship, love, and support. There have been many claims and benefits pertaining to these interactions between animals and humans such as; lower blood pressure, decreased stress and anxiety, and minimizing behavioral issues (Baldwin, 2011). As shown by Redefer and Goodman in 1989, there were improvements in social interactions and there was a reduction in stereotypical behaviors in children with autism after they had been exposed to a therapy dog for 18, 20 min therapy sessions. One limitation that arose in this study was that it was not possible to determine whether or not there were extenuating variables involving the role of the human therapist. Especially with children and younger adults who may be resistant to treatment or therapy, interaction or even the presence of an animal may help them interact, participate or open up in a therapy session. AAT is said to help improve physical, mental, and educational abilities. Specifically, it is said to improve fine and gross motor skills, improve focus and task attention, reduce anxiety, increase motivation to participate, reduce blood
pressure, depression and grief, and improve social skills (CRC Health Group, 2011). Although AAT has made these claims, most published articles are not based on quantitative research; the data collected that claims that animal assisted therapy works is anecdotal at best. Having children perform activities such as reading, choosing between objects, or interacting with the therapist have received high positive results in post interviews and ratings. It is said that having a dog present during these different training sessions is a motivator for children and increases their focus and attention on the therapist. Studies showed that there was an increase in positive behaviors (paying attention, smiling, social interactions) and a decrease in negative behaviors (aggression, hyperactivity, social withdrawal) with the presence of the animals (Gee, Gould, Swanson & Wagner, 2012; Jalongo, 2005; Kotrschal & Ortbauer, 2003; Sams, Fortney & Willenbring, 2006; Silva, Correia, Lima, Magalhaes, & de Sousa, 2011).

Dimitrijevic (2009) found that during a pilot program at St. Mary’s Hospital for Children, therapy sessions that involved children interacting with dogs resulted in the children meeting the goals of their treatment faster and easier. It was also found that incorporating a dog into therapy can also be beneficial for the therapist’s wellbeing. The article states that the pet is seen as a “safe haven” or “secure base” for the therapist; helping the therapist through harder situations at work such as challenging behaviors of the client or complicated meetings. The pet may also help the therapist in handling situations where the client needs comfort or feels anxious (Zilcha-Mano, Mikulincer & Shaver, 2011).

Similar limitations were found with all of the articles that claimed successful results. Most studies had relatively small sample sizes therefore; the researchers were not able to state that their results could be generalized or if there was quantitative data, that the results were significant through statistical analysis. Every article stated that there needed to be significantly
more quantitative research conducted on the benefits of AAT. For example, studies should evaluate test scores, increases in positive behaviors, and decreases in negative behaviors. Additionally, there was not a definitive way to distinguish whether or not the changes in language and social interaction was due to the dogs’ presence or if the improved interaction with therapists was to gain access to the dog (Berry, Borgi, Francia, Alleva & Cirulli, 2012; Gee, Gould, Swanson & Wagner, 2012; Sams, Fortney & Willenbring, 2006).

In an article written by the Scientific American, many questions were discussed that could discredit AAT, such as the claim that animal assisted therapy can reduce blood pressure or stress but no quantitative data has been found that supports the statements. It is possible that reductions in blood pressure or stress could also occur using other preferred stimuli. Jomaa (2012) also points out that researchers cannot rule out the reactivity to the introduction of a therapy dog as novel reinforcement that may cause a positive effect in itself. There have also been no studies that prove long-term effects of AAT (Lilienfeld & Arkowitz, 2008). Martin and Farnum (2002) actually found that there was an increase in stereotypy during AAT but could not determine if it was caused by the excitement of interacting with the therapy animal. It was also suggested that the client might have been more focused on the dog than on the therapist and that the dog was a distraction. However, in this study they also stated that the children in the therapy sessions were more agreeable to the therapist’s requests and more focused than they had been without the therapy dog. The children’s verbal interactions were analyzed via a repeated measures analysis of variance (Martin & Farnum, 2002).

The program of interest for the current study was the Reading Education Assistance Dogs (R.E.A.D.) program, through Intermountain Therapy Animals, which strives to improve children’s reading and communication skills by having the child read to a therapy dog. Their
mission is to” improve literacy skills of children through the assistance of registered therapy teams as literary mentors.” This program was launched in 1999 in Salt Lake City, Utah. Today there are more than 3,500 therapy teams in various countries (Intermountain Therapy Animals, 2014). A pilot program was conducted at Bennion Elementary School in Salt Lake City, Utah. Ten students participated, ages 5-9, foreign born with English as a second language and below reading level. Once a week a R.E.A.D. volunteer and dog would come after school and read with the students one-on-one for 20 minutes. The students that participated in the full program (13 months) gained two or more grade levels in reading. The results gathered from this program indicate that animal assisted activities may be useful in motivating children to read. The results were collected by the schools reading specialists using the Reading Roots Assessment tool for students in grades K-1 and the Success For All tools for students in grades 2-6 (Intermountain Therapy Animals, 2014). However, there are limitations to the R.E.A.D. program, quantitative data was not taken during the individual sessions so there is not a way to say if the improvement in reading was due to the interactions with the human reading assistant or the therapy dog. There is also no data to conclude whether or not the increase in reading performance was due to the instruction of the teachers rather than the R.E.A.D. team.

Therefore, the purpose of this study was to evaluate whether AAT would result in increases in reading for children diagnosed with Autism Spectrum Disorder (ASD) by collecting quantitative data (minutes read). This study sought to determine whether children would show increases in reading duration when a therapy dog was present non-contingently as compared to a baseline condition when the dog was not present. If increases in reading duration were not observed with the presence of the dog, then an additional condition in which children could earn access to the dog contingent upon increases in reading was conducted.
CHAPTER TWO:

METHODS

Participants and Settings

Three participants diagnosed with ASD were selected for this study. All participants were verbal and able to read based on parent report. The teacher or parent reported the child’s current reading level to the investigator. Participants were selected based on parent recommendation or interest due to the child’s disinterest in reading during designated scheduled reading times. Names of the participants have been changed to protect their identities.

Theo was an 8-year-old boy who lived at home with his mother, 2 sisters, one dog and attended a private school for children with disabilities. He reportedly “hated reading”. Simon was an 8-year-old boy who lived with his parents, older brother, younger sister and numerous animals including chickens, pigs, dogs, and cats. He attended a private school for children with disabilities. Alvin was an 11-year-old boy who lived at home with his parents, younger sister and brother, attended a public elementary school and had no pets. Theo and Simon were approximately on a 1st grade reading level and Alvin was approximately on a 4th grade reading level.

Sessions were conducted for Simon and Theo at their elementary school and sessions were conducted at home for Alvin. The participants were taken to an area with minimal distractions. A large blanket on the ground and signs that indicated it as the reading area designated the chosen area.
A certified therapy dog named Sadie was present to read with the participant during the intervention phases of the study. Sadie was a 4-year-old Apricot English Mastiff that was certified though a county approved therapy program in May 2016. She weighed around 95lbs and was approximately 3 ft tall.

**Materials**

Books that were on or slightly below the participants reading level were selected for each session. The investigator picked out books she thought the participants would enjoy on topics such as superheroes, cartoons, animals, and automobiles. Theo read mostly automobile books, Simon read mostly cartoon books and Simon read mostly superhero books. A MacBook Pro, and Data Collection iPhone application was used to collect and monitor data.

**Target Behavior and Data Collections**

Independent reading duration was the primary dependent variable measured. Independent reading was defined as reading out loud with a speaking volume able to be heard from 2 to 3 feet away, head and eyes directed and looking at the book and not looking away from the book for longer than 5 seconds. The participant had to be in the designated reading area in order for independent reading duration to be recorded. Reading duration was recorded, in seconds, using the timer iPhone application. An investigator was present during each session and data was collected by the investigator and research assistant watching the recorded videos of the sessions. An instance of independent reading ended if the participant looked away, stopped reading, or left the designated reading area for longer than 5 seconds. Duration recording started again when active reading resumed. The total duration time of independent reading was calculated by taking the total active reading seconds divided by the total time of the session. That number was
multiplied by 100 to get the total percentage of time the participant was engaged in independent reading.

**Interobserver Agreement (IOA)**

Two observers independently watched and scored 38% of sessions for Theo, 33% of sessions for Simon, and 37% of sessions for Alvin across all conditions. Agreement of independent reading duration was calculated by taking the total seconds recorded by one observer (smaller number) divided by the total number of seconds recorded by the second observer (larger number) multiplied by 100.

IOA was 98% in baseline and 98.6% in intervention for Alvin. IOA was 100% in baseline and 99.8% in intervention for Theo. IOA was 94.3% in baseline and 99% in intervention for Simon. Ranges for IOA were from 94% to 100%.

**Experimental Design**

A multiple baseline across participants design was used to evaluate the independent reading duration of each participant. If the desired results were not observed after implementing the noncontingent access to dog intervention then an additional phase was conducted to include a contingent access to dog condition.

**Procedure**

For all conditions, participants were seated in the designated reading area and given directions by the investigator. Approximately 5 to 7 books were provided to allow for enough reading material for the length of the session. The participant chose which of these books they wanted to read throughout all sessions. The participants were also allowed to reread books and switch books during each session. For all sessions, the investigator was present and sitting 2 to 3 feet away from the participant. If the participant left the designated reading area the investigator
followed the participant to remain within 2 to 3 feet away at all times to ensure the safety of the participant. Sessions were 20 mins long throughout all conditions. At the end of each session the participant was told that “it’s time to stop reading” and duration was no longer recorded.

**Baseline.** The investigator scripted to participants at the start of every session, “It’s time to read out loud for 20 minutes. I have work I need to do so I cannot talk with you. If you have trouble with a word I can help you, then you need to continue reading on your own.” The directions were given once. If at any time the child attempted to converse or ask questions of the investigator that were not related to pronouncing a word then the investigator ignored the questions. If the child asked for help with a word, the investigator provided help by reading the word for the child then immediately resuming their work. Reading duration was recorded according to the definition reported earlier.

**Non-contingent access to dog (NCDog).** Sessions in this condition were conducted in the same manner as baseline with the only change being the addition of the therapy dog. During NCDog, a certified therapy dog started in a sitting position and then laid down next to the participant during each session. The participant had constant access to the therapy dog in the form of petting, scratching, hugging, etc. The therapy dog was instructed to remain sitting or laying down during the entire 20 min session regardless of if the child stood up or moved around. The investigator was seated directly next to the therapy dog. Baseline instructions were the same except for the addition of the statement “the dog will lay or sit next to you while you read”.

**Contingent access to dog (CDog).** A Cdog phase was used if a substantial increase in reading duration was not accomplished during the NCDog condition. In the CDog phase the participant was required to engage in reading behavior in order to earn access to the dog. The dog was not in sight of the participant until they earned access. A separate room was used that
had a conjoining hallway closet where the dog stayed until the participant earned access to the therapy dog. To determine the amount of time each participant needed to read to earn access to the dog the following rules were applied: The amount of time read during the NCDog phase was increased 50% if the average time from the NCDog phase was below 4 min and if the average time was above 4 min then 2 min were added to the average time. For example, if the child read for an average of 7 min in the NCdog phase they were required to read 9 min in the CDog phase before earning access to the dog. After the participant reached the required reading time they had access to the dog for 2 min before being directed back to reading. The dog was then removed out of the sight of the participant. The participant could earn the dog back for continued reading. During the break the participant was allowed to walk with the therapy dog and give her treats. The amount of time spent with the dog was subtracted from the total session time (20 min) and was not included on the graph. Baseline instructions were the same except they also included “you must read X amount of minutes to play with the dog.”

**Social Validity**

Social validity was collected from the participants and parents (Alvin) or teachers (Theo and Simon) of participants at the end of the study to assess if the participants enjoyed reading to the dog and if the parents or teachers noticed any changes in reading behavior. The participants and parents or teachers filled out a questionnaire using a five point Likert type scale for adults (see Appendix A) and three point Likert type scale for children (see Appendix B) on their opinion of the intervention. The children also filled out an open-ended question (see Appendix B) about how they felt about the intervention.
CHAPTER THREE: 
RESULTS

Overall, participants showed an increase in independent reading duration after intervention was implemented. Results are displayed in figure 1. In baseline, Theo showed a variable but decreasing duration in reading averaging a reading time of 5 min and 52 sec. Alvin showed high variability averaging at 8 min and 42 sec in baseline. Simon showed variability during baseline and averaged 13 min and 30 sec of reading. Theo remained variable in the NCDog intervention and averaged at 7 min and 48 sec. Theo was introduced to the CDog intervention which resulted in a stable increase in reading duration with his reading average at 15 min and 59 sec. Alvin was introduced to the NCDog intervention and showed an increase in reading duration immediately and remained fairly constant for the rest of his sessions averaging at 17 min and 3 sec. Simon was introduced to the NCDog intervention and also showed an immediate increase in reading duration and remained consistent until the end of his sessions. His average reading duration during intervention was 17 min and 29 sec. The findings indicated that for both Alvin and Simon the NCDog condition resulted in increases in reading duration while Theo needed the CDog intervention to improve his reading duration.

With regard to the social validity questionnaire, Theo, Alvin, and Simon answered that they liked reading to the dog (3), that they felt their friends would like reading to the dog (3), and that they would rather read to the dog than by themselves (1). For the open-ended question, Theo said that he liked giving the dog treats, Alvin said he liked reading about the united states to the dog and Simon said that he just liked the dog in general. Theo’s teacher answered that she agreed
that she saw an increase in his motivation to read (4), that she strongly disagreed that he was motivated to read to the dog (1), and that she agreed that she noticed him reading more after intervention (4). Alvin’s mother agreed that she saw an increase in his motivation to read (4), was neutral about his motivation to read to the dog (3), and that she agreed that she noticed him reading more after intervention (4). Simon’s teacher answered that she agreed that she saw an increase in motivation to read (4), she strongly agreed that he was motivated to read to the therapy dog (5), and that she strongly agreed that she had noticed him reading more after intervention (5).
CHAPTER FOUR:

DISCUSSION

The purpose of this study was to determine if Animal-Assisted Therapy would increase independent reading duration for children that were diagnosed with Autism Spectrum Disorder. Independent reading duration increased for all participants after either the NCDog intervention or the CDog intervention was introduced. This indicated that for some children having a dog present during reading might result in increased reading duration. However, standard AAT may not result in prolonged increases in reading duration as observed in Theo’s data. Practitioners may need to modify the intervention and use the dog as a reinforcer to increase reading.

The results of this study add to the literature by giving quantitative data to the claims of Animal-Assisted Therapy helping children read better. A pilot program conducted by Intermountain Therapy Animal’s R.E.A.D. program showed an increase in two or more grade levels in reading with their participants after reading to their therapy dogs. However, they did not collect data during the individual sessions so there was no way to determine if the improvement in reading was due to the interactions with the human reading assistant or the therapy dog. There was also no data to conclude whether or not the increase in reading performance was due to the instruction of the teachers rather than the R.E.A.D. team (Intermountain Therapy Animals, 2014). In this study, direct observation data was collected during each phase, baseline, non-contingent access to a therapy dog and contingent access to a therapy dog, to provide support that reading to a therapy dog would increase reading duration for children with ASD.
While ATT has become a very popular means of therapy and this study indicated that increased reading duration occurred for two of the three participants, it might not result in improvements for all children. For Theo, it was not enough to merely have the therapy dog present to increase reading duration. However, taking “breaks” during the allotted reading period and earning to see the dog resulted in increased independent reading duration. Unfortunately, it is not known whether the break itself or the break with the dog is what resulted in increases in reading duration. It is also not known whether earning other preferred items (instead of the dog) would have resulted in improvements for Theo.

All participants rated the questions on the social validity highly for all statements, indicating that they enjoyed reading to the therapy dog and think others would as well. This is important to note as prior to the study the mothers of all of the participants reported that they did not enjoy reading. The low score from Theo’s teacher (i.e. saying that she strongly disagreed that he was motivated to read to the therapy dog) may be due to the Theo engaging in problem behavior directly before most of the study sessions. The problem behavior exhibited in the classroom prior to session was non-compliance with teacher demands and refusal to leave his classroom due to it being a teacher demand. The problem behavior always began prior to the researcher arriving to the school. There were never any problem behaviors once the participant went with the researcher to the session. During NCdog intervention, Theo also stated that he was reading in “his mind” instead of aloud, so it is possible that NCdog worked for him as well but we cannot confirm since he was reading covertly.

Although all participants parents reported that their children liked dogs, a limitation of this study was that a preference assessment was never conducted. A preference assessment for type or size of dog and subject matter of reading material could have yielded different results.
Alvin appeared initially nervous about the size of the therapy dog during the first few sessions but this did not appear to affect his reading performance data. Anecdotally, Theo seemed more interested in books about automobiles and other vehicles than any other subject. It is not known whether these types of books resulted in increased reading durations as this data was not collected. However, these types of books were present in all phases of the study.

Another limitation was reactivity toward the researcher’s presence. It is possible that the participants became more comfortable with the observer throughout the study and their reading durations might have increased as a result of the researcher being present and not only due to the therapy dogs’ presence. While the therapy dog was present, the researcher was required to remain next to the dog for the entire duration of the session. In order to control for the required presence of the researcher during intervention, the researcher was also present during all baseline sessions making the presence of the dog the only difference between sessions. In addition, increasing trends in reading during baseline were not noted so this was most likely not the case.

This study only recorded the duration of reading and did not evaluate if participants showed improvements in reading skills or level. There was also no time-stamped data collection so we did not see if the times of not reading were the same in each session.

Future studies might also include preference assessments, using not only therapy dogs but other forms of reinforcement as well, to give a clearer indication of the effects of AAT in comparison to other potential types of reinforcement. It would also be important for future studies to include follow-up sessions to see if the participants continued to read at higher durations and if social validity reported that participants showed increases in reading enjoyment. Future studies could also include greater age ranges, longer reading duration and both
neurotypical as well as individuals with disabilities to determine if AAT would be successful for improving reading duration for a variety of individuals.
REFERENCES:


Friesen, L. (2009). How a therapy dog may inspire student literacy engagement in the elementary language arts classroom. *Learning Landscapes, 3*


Kotrschal, K., & Ortbauer, B. (2003). Behavioral effects of the pre of a dog in a classroom. *Anthrozoos, 16*


Figure 1: Duration of independent reading across baseline, noncontingent dog, and contingent dog phases for 1 of the 3 students.
Appendixes

Appendix A
Parent/Teacher Social Validity Questionnaire

1. I see an increase in motivation to read in my child.

5  4  3  2  1
Strongly Agree  Neutral  Strongly disagree

2. My child is motivated to read to the therapy dog.

5  4  3  2  1
Strongly Agree  Neutral  Strongly disagree

3. I have noticed my child reading more.

5  4  3  2  1
Strongly Agree  Neutral  Strongly disagree
Appendix B  
Participant Social Validity Questionnaire

1. I liked reading to the dog.
   | 3 | 2 | 1 |
   | Yes | Maybe | No |

2. I think my friends would like reading to the dog.
   | 3 | 2 | 1 |
   | Yes | Maybe | No |

3. I would rather read by myself than with a dog.
   | 3 | 2 | 1 |
   | Yes | Maybe | No |

4. What did you like about reading to the dog?
9/25/2015

Taylor Butts
ABA-Applied Behavior Analysis
13301 Bruce B. Downs Blvd
Tampa FL 33612

RE: Full Board Approval for Initial Review
IRB#: Pro00020153
Title: Animal-Assisted Therapy to Increase Independent Reading Duration

**Study Approval Period: 8/21/2015 to 8/21/2016**

Dear Ms. Butts:

On 8/21/2015, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents contained within, including those outlined below.

**Approved Item(s):**
- Protocol Document(s):
  - Protocol Guidelines Version 1 Taylor Butts.docx

**Consent/Assent Document(s)*:**
- Parental Permission V#1 9.23.15..pdf

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s).

This research involving children was approved under the minimal risk category 45 CFR 46.404: Research not involving greater than minimal risk.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.
We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board
Parental Permission for Children to Participate in Research Involving Minimal Risk
Information for parents to consider before allowing your child to take part in this research study

Pro # 00020153

The following information is being presented to help you and your child decide whether or not he/she wishes to be a part of a research study. Please read this information carefully. If you have any questions or if you do not understand the information, we encourage you to ask the researcher.

We are asking you to allow your child to take part in a research study called:

Animal Assisted Therapy to Increase Independent Reading in Children.

The person who is in charge of this research study is Taylor Butts. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge. She is being guided in this research by Dr. Kimberly Crosland.

The research will be conducted at the participants’ homes, at Esther School or at Achieve Clinic.

Purpose of study:
The purpose of this study is to find out whether the use of animal-assisted therapy will increase independent reading duration. Intervention will use non-contingent access to a therapy dog to increase independent reading durations, if non-contingent access does not effectively increase reading duration then a contingent access to the therapy dog procedure will be implemented.

Why is your child being asked to take part?
We are asking your child to take part in this research study because you have identified them as being a child that does not enjoy reading or will not read for the allotted amount of time required by their grade level. We want to see if reading to a therapy dog will increase the time your child will read.

Study Procedures:
If your child takes part in this study, she or he will be asked to spend about 2 to 4 months in this study, a
minimum of 12 sessions and maximum of 48 sessions. The reason for this amount of time is to get accurate results and in case there are circumstances where the child may not be able to attend the session. The amount of sessions will be determined by the data collected in baseline and how well the participants respond to intervention. Session length will vary but not exceed 30 minutes.

During the study, your child will be asked to read from a book aloud. The amount of time read will be monitored. We will then introduce a therapy dog and your child will be asked to read aloud with the dog. If reading with the dog present does not increase the amount of time read then the child will be asked to read aloud for a certain time to gain access to the therapy dog.

A study visit is one your child will have with the person in charge of the study or study staff. Some study visits may be longer depending on what happens during the session. Nothing will need to be done in advance prior to the first study visit. Your child will need to participate in the study visits 1-3 times a week for sessions.

At each visit, your child will be asked:

To read aloud from a book chosen based on their reading level.

- During the first few sessions the child will be asked to read aloud by themselves with the primary investigator in the room able to answer questions they may have about pronunciation.
- During the next sessions your child will be introduced to a therapy dog and asked to read aloud to the therapy dog.
- If reading to the therapy dog does not increase reading duration then your child will be asked to read aloud without the dog for a certain amount of time to gain access to the therapy dog.
- All session will be videotaped for data purposes. Only people involved in the study will have access to the videos. All participants will be assigned different names for privacy purposes. Once the study is over all videos will be deleted.

**Total Number of Participants**

About 6 individuals will take part in this study at USF.

**Alternatives / Voluntary Participation / Withdrawal**

If you decide not to let your child take part in this study, that is okay. Instead of being in this research study your child can choose not to participate. You should only let your child take part in this study if both of you want to. You or child should not feel that there is any pressure to take part in the study to please the study investigator or the research staff.

**If you decide not to let your child take part:**

- Your child will not be in trouble or lose any rights he/she would normally have.
- You child will still get the same services or health care benefits he/she would normally have.
- Your child can still get their regular treatments from his/her regular doctor.

You can decide after signing this informed consent form that you no longer want your child to take part in this study. We will keep you informed of any new developments which might affect your willingness to allow your child to continue to participate in the study. However, you can decide you want your child
to stop taking part in the study for any reason at any time. If you decide you want your child to stop taking part in the study, tell the study staff as soon as you can.

**Benefits**

We do not know if your child will gain any benefits, however, your child may begin to read for longer periods of time by taking part in this study.

We do not know if this study will help children with autism, that is why we are doing this study. By volunteering you are helping us learn more about the benefits of animal assisted therapy used with children with autism. We will learn more about what does or does not help individuals with this condition. What we learn may help others in the future.

**Risks or Discomfort**

There is a risk of a breach of confidentiality, however every effort will be made by the researchers to maintain the confidentiality of the data collected.

The therapy dogs used in the study will be certified under a certified therapy dog program (ex: Therapy Dogs International) to minimize risk. Although unlikely, if the participant happens to get bit by one of the dogs, the dog will be removed from the room and from the study, the participants parent will be notified, and we will check to make sure the child is ok. If the child needs medical attention they will either be taken to the nearest walk-in clinic or hospital based on the severity of injury.

**Compensation**

Your child will receive no payment or other compensation for taking part in this study.

**Costs**

It will not cost you anything to participate and to let your child take part in the study.

**Privacy and Confidentiality**

We will keep your study records private and confidential. Certain people may need to see your study records. Anyone who looks at your records must keep them confidential. These individuals include:

- The research team, including the Principal Investigator, study coordinator, and all other research staff.
- Certain government and university people who need to know more about the study, and individuals who provide oversight to ensure that we are doing the study in the right way.
- Any agency of the federal, state, or local government that regulates this research.
- The USF Institutional Review Board (IRB) and related staff who have oversight responsibilities for this study, including staff in USF Research Integrity and Compliance.
- Any staff at either Esther School or Achieve Clinic.

We may publish what we learn from this study. If we do, we will not include your name. We will not publish anything that would let people know who you are.
You can get the answers to your questions, concerns, or complaints.
If you have any questions, concerns or complaints about this study, call Taylor Butts at 813-215-9336. If you have questions about you or your child’s rights, complaints, or issues as a person taking part in this study, call the USF IRB at (813) 974-5638.

Consent for My Child to Participate in this Research Study

I freely give my consent to let my child take part in this study. I understand that by signing this form I am agreeing to let my child take part in research. I have received a copy of this form to take with me.

Signature of Parent of the Child Taking Part in Study

Date

Printed Name of Parent of the Child Taking Part in Study

Statement of Person Obtaining Informed Consent

I have carefully explained to the person taking part in the study what he or she can expect from their participation. I confirm that this research subject speaks the language that was used to explain this research and is receiving an informed consent form in their primary language. This research subject has provided legally effective informed consent.

Signature of Person Obtaining Informed Consent

Date

Printed Name of Person Obtaining Informed Consent