

Evaluating the Influence of Animal-Assisted Intervention on Task Persistence During Literacy
Activities in Early Readers

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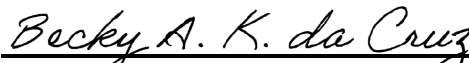
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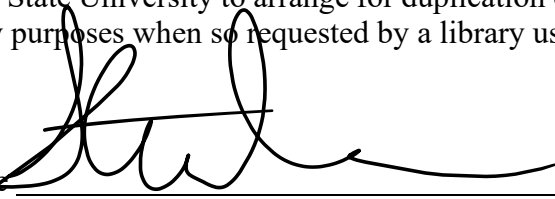
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ABSTRACT

This study investigated how animal-assisted intervention (AAI) affects persistent behaviors in children when reading familiar and unfamiliar texts. While traditional literacy interventions emphasize fluency, accuracy, and comprehension, limited research has explored behavioral persistence, particularly in the presence of a therapy dog. This study addressed this gap by examining how a therapy dog influences children's task persistence and motivation when reading familiar and unfamiliar texts. A within-subjects, mixed-methods design was conducted with eight children ages 6 to 12. Participants completed structured reading sessions with a certified therapy dog, reading one familiar and two unfamiliar books. Quantitative data included pre- and post-reading surveys addressing motivation towards reading and rubric-based persistence scores, while qualitative data were collected through behavioral observations. Results indicated a statistically significant increase in reading motivation following the intervention, $t(7) = -2.5, p = 0.04$. All participants demonstrated equal or increased motivation post-session, with notable gains in comfort reading aloud. Behavioral findings showed consistent persistence, as all participants engaged with unfamiliar texts and elected to continue reading when offered more unfamiliar material. Qualitative data supported these findings, with most participants describing reading positively after the session. These findings suggest that the presence of a therapy dog may positively impact motivational and behavioral components of reading persistence. This study contributes to literacy and speech-language pathology by highlighting persistence as a critical yet underexplored factor in reading development and supports AAI as a promising, low-risk strategy to improve engagement, confidence, and perseverance in young readers.

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Chapter I

Introduction to the Study

Reading persistence, or the ability to persevere through challenging texts, is a vital component of children's literacy development. Many young readers struggle to maintain focus and motivation when presented with unfamiliar or challenging texts. This could be attributed to a lack of confidence or willingness to persevere through comprehension or decoding obstacles. When texts are challenging, children are more likely to exhibit signs of frustration, disengagement, or avoidance, which can limit the development of reading fluency and stamina. Animal-assisted interventions (AAI) have become increasingly popular for enhancing reading confidence, increasing motivation, reducing anxiety, and fostering positive attitudes towards reading.

Statement of the Problem

Research on reading interventions has traditionally focused on fluency, accuracy, and comprehension. A gap exists in the literature regarding how children respond behaviorally to reading challenges and whether they demonstrate persistence when encountering unfamiliar texts.

There is a lack of research examining how therapy dogs influence reading persistence. Understanding how a therapy dog's presence can affect persistence during challenging reading tasks could have significant implications for both educational and clinical settings. This study seeks to address this gap by examining the behavioral characteristics of children when reading both familiar and unfamiliar texts in the presence of a therapy dog. By observing behavioral

indicators of persistence, the study aims to provide insight into how a supportive, nonjudgmental environment may influence a child's willingness to persist in reading challenges. Results from this study may support the development of targeted AAI to enhance literacy outcomes, especially for reluctant or struggling readers. Exploring the relationship among motivation, task difficulty, and the presence of a therapy dog can inform educational and therapeutic practice and influence future research in reading intervention and animal-assisted literacy programs.

Purpose of the Study

The purpose of this study is to investigate how the presence of a therapy dog affects persistent behaviors in children when reading familiar and unfamiliar texts. Reading persistence is a crucial yet underexplored component of literacy development. Previous research has shown that therapy dogs can reduce anxiety and increase motivation during reading activities. There remains a gap in understanding how therapy animals may impact a child's ability to sustain effort through challenging or unfamiliar reading tasks. This study aims to address that gap by examining whether children persist in reading when a therapy dog is present and whether persistence levels differ based on the familiarity of the reading material.

Examining the interaction between book familiarity and the presence of a therapy dog will contribute to research aimed at identifying new and innovative strategies for educators, speech-language pathologists, and other professionals to promote reading persistence in early learners. When children lack sufficient focus and attention during challenging reading tasks, their progress can slow. This lack of progress can impact confidence and later academic performance. The use of therapy dogs could assist in this area by improving motivation, enhancing confidence, and increasing reading persistence.

Speech-language pathologists (SLPs) address literacy-related challenges, yet there is little research on how they incorporate motivational strategies to support persistence. In educational settings, children often need to engage with unfamiliar texts that require sustained attention and effort. Educators and clinicians need clearer insight into the observable behaviors associated with persistence and how best to promote them during instruction and intervention.

This study can provide information for public libraries, clinical reading programs, and animal-assisted therapy settings, where children engage in reading activities. Teachers and other service providers may be interested in this study because animal-assisted therapy has been shown to increase a student's self-regulation. Some studies report that the presence of a dog in a classroom reduces aggressive behavior (Hergovich et al., 2002; Kotrschal & Ortbauer, 2003). Decreased negative behavior and increased motivation to complete academic and therapeutic tasks can benefit not only teachers and service providers but also administrators, as problems often escalate to their level. Additionally, educators, therapists, and caregivers may be drawn to this problem because it explores an engaging, low-risk intervention with the potential to improve reading behaviors and encourage long-term success.

AAI offers an opportunity to foster motivation, reduce anxiety, and improve attention to task. Studies have not specifically examined the influence of therapy dogs on reading persistence with unfamiliar text. Without further research in this area, educators, administrators, and speech-language pathologists are limited in their ability to make informed, evidence-based decisions about incorporating therapy dogs or similar strategies into literacy instruction. This study aims to address this gap by examining the impact of a therapy dog's presence on children's persistence during familiar and unfamiliar reading tasks and identifying the behavioral characteristics that accompany this persistence.

By focusing on persistence, this research targets a component of reading often overlooked in traditional interventions. By observing persistent behavior characteristics, this study has the potential to expand understanding of persistence and the emotional, motivational, and behavioral factors that affect reading outcomes. This study may help eliminate common misconceptions that reading intervention should primarily focus on decoding or comprehension and highlight how confidence, focus, and motivation contribute to persistence.

This research study acknowledges that AAI is not without risk. The acceptance of AAI programs can be sporadic in educational settings due to concerns related to a lack of education regarding AAI, a lack of standardization of protocols, safety, and allergies. By examining the use of a trained, certified therapy dog in structured reading tasks, this study provides a framework for evaluating both the potential benefits and the considerations required for AAI. The findings will provide evidence for professionals to make informed, ethical, and evidence-based decisions regarding the implementation of therapy animals in educational and clinical settings.

The study observes, evaluates, and compares how children behave when reading familiar and unfamiliar texts with a therapy dog present. It also measures motivation to read using an initial survey and analyzes observable, persistent behaviors. It is essential to compare patterns of task persistence across familiar and unfamiliar tasks to assess whether AAI influences children's willingness to persist during challenging literacy tasks.

Without this study, the opportunity to identify a student-centered intervention that could help children persist through reading challenges may be lost. It would also leave a gap in the literature on the effects of a therapy dog's presence on reading engagement and persistence. The results contribute to the growing field of AAI literacy research by providing additional insight into the relationship among text familiarity, motivation, and task persistence in early readers. It

addresses an underexplored area by examining how children respond behaviorally to reading tasks and whether a therapy dog's presence supports on-task behavior and engagement, especially when presented with an unfamiliar book. In addition, the findings offer insight into effective intervention strategies by providing educators and clinicians with an understanding of students' perseverance, motivation, and literacy task completion.

This research also contributes to the field of motivation in speech-language therapy by exploring how AAI can serve as a practical addition to treatment. By framing motivation not only as something intrinsic but also as something shaped by the learning environment and emotional connection, the study may support the use of therapy dogs as a practical motivational strategy. The results provide a foundation for future research into the emotional and environmental dimensions of treatment outcomes in literacy and communication.

Given the focus of this investigation, journals specializing in speech-language pathology, education, animal-assisted therapy, and school-based interventions may be interested in publishing the findings. While journals such as the *American Journal of Speech-Language Pathology (AJSLP)* and *Language, Speech, and Hearing Services in Schools (LSHSS)* are natural fits for the speech therapy aspect, the study's focus on therapy dogs makes human-animal journals particularly relevant. Journals such as the *Human-Animal Interaction Bulletin*, *Anthrozoös*, and *People and Animals: The International Journal of Research and Practice* focus on the impact of animals in therapeutic and educational settings.

Research Questions and Hypotheses

The following research questions will be investigated:

- 1) Will participants continue to persist in reading an unfamiliar book while in the presence of a therapy dog?

- 2) What persistent behavioral characteristics are reported about reading?
- 3) While in the presence of a therapy dog, what persistent behavioral characteristics do children exhibit when reading an unfamiliar book?

By examining these questions, the study aims to increase our understanding of how therapy dog programs can support sustained reading effort, with implications for educators, therapists, and caregivers working to strengthen early literacy outcomes and student motivation when reading unfamiliar academic material. The following is hypothesized regarding the research questions:

- 1) Previous studies have reported behaviors such as increased persistence, motivation, fluency, and confidence when reading to a therapy dog (Barber & Proops, 2019; Linder et al., 2017; Rousseau & Tardif-Williams, 2019). Given these findings, participants are expected to persist in the dog's presence by continuing to read unfamiliar material, including attempting to read a third book when offered. Despite their initial self-reported persistence level, it is hypothesized that participants will persist while reading to the therapy dog and either finish the book or reach the time limit for each book.
- 2) It is expected that participants will rate reading aloud, reading in front of classmates, reading in front of parents, and reading difficult material as a 2 (no) or a 1 (never) on the pre-reading survey (see Appendix A). These responses would indicate that they do not enjoy these tasks.
- 3) Participants are expected to experience increased motivation with the therapy dog and demonstrate persistence, as observed by increased time on task, sustained attention, increased decoding attempts, fewer redirections, and consistent effort. Behavioral characteristics of persistence will be observed and recorded on the Observational Data Tracker (see Appendix B). Based on the level of persistence observed, the participants will be assigned a rubric score (see

Appendix C). It is expected that all participants will receive rubric scores of 3 and 4 when reading both familiar and unfamiliar books, reflecting strong and exceptional persistence during reading tasks with the dog, despite their initial ratings on the pre-reading survey.

Theoretical Framework of the Study

This study contributes to the development and refinement of educational theory and practice by examining how motivation and persistence, primarily as conceptualized through expectancy-value theory, function within early literacy tasks and speech-language therapy. It bridges theory and practice by exploring how external factors, such as the presence of a therapy dog, may positively influence student behavior during learning activities. By placing persistence within a motivational framework, this study offers a lens for understanding how learners respond to challenging or unfamiliar tasks and how engagement can be impacted through AAI (Eccles & Wigfield, 2020; Wigfield & Eccles, 2000).

By investigating AAI as a relationship-driven, multisensory intervention, the study aligns with theories including the self-determination theory, which emphasizes emotional well-being, learner autonomy, and personalized support. If findings indicate that therapy dogs are perceived as beneficial or lead to increased motivation and persistence, the research could broaden current motivational models in education and therapy to include more emotionally responsive and integrative approaches (Ryan & Deci, 2000).

The research has both theoretical and applied significance for educational psychology, speech-language pathology, AAI, and early childhood education. Despite motivation being a well-established factor in academic and therapeutic success, there is limited empirical evidence that AAI can impact a child's persistence when engaged in complex or unfamiliar tasks. Previous studies have demonstrated that therapy dogs can enhance reading confidence, reduce anxiety, and

improve motivation in children. Studies have shown that students often report more positive attitudes toward reading when engaged in animal-assisted programs. While these are significant findings, most existing studies have focused on broad motivational outcomes rather than closely observing persistence. Few studies have utilized observation of persistent behaviors to examine how students interact while reading, particularly in the context of text familiarity versus unfamiliarity.

Although animal-assisted intervention (AAI) is a growing interdisciplinary field with documented benefits across a variety of settings, research still faces key limitations that limit generalizability. Many existing studies have relied on small sample sizes, limited control conditions, and non-standardized protocols. There is currently no standardized approach to implementing animal-assisted interventions, with inconsistencies in therapy-animal training, session protocols, and outcome measurement tools. As a result, findings across studies are difficult to compare and apply consistently in professional settings. Although the existing evidence is encouraging, it lacks the rigor and consistency needed to support widespread acceptance or formal policy development.

This approach may inform professional practice by shaping guidelines, training, and decision-making frameworks for integrating AAI into literacy and language interventions. It may also serve as a foundation for future studies exploring how motivational theory can use environmental factors to influence learning. Furthermore, this research may clarify the impact of therapy dogs on reading persistence and learner behavior, inform the development of new reading intervention strategies, and create increasingly engaging environments for young readers. The findings may also support the integration of AAI into literacy instruction and speech-language therapy.

Significance of the Study

The significance of this study lies in both its theoretical and applied aspects. It draws on Expectancy-Value Theory and Self-Determination Theory to explore how environmental factors influence persistence and motivation, thereby refining educational and therapeutic models. It also addresses a professional need for more rigorous observational research to inform the ethical, practical, and policy aspects of implementing AAI in schools and therapy settings. The findings have the potential to inform literacy intervention practices, support innovation in speech-language pathology, and shape future research at the intersection of education, therapy, and human–animal interaction.

The central focus is to provide insight into how reading motivation, supportive environments, and task difficulty interact during the early stages of literacy development, with an emphasis on reading persistence in the presence of a therapy dog. It aims to support educators, speech-language pathologists (SLPs), administrators, and caregivers in identifying practical, evidence-based approaches to engage struggling readers and contribute meaningfully to overall student success.

Assumptions, Delimitations, and Limitations

Assumptions

This study is based on several methodological assumptions. It is assumed that parents can accurately identify a book their child has previously read aloud independently. It is also expected that the parent or guardian can confirm that the unfamiliar books offered during the session are new to the child. It is assumed that the participants will respond truthfully to the motivation survey. It is believed that parents will respond truthfully on the initial intake questionnaire that

they have not previously participated in a therapy dog reading program, thereby eliminating the novelty effect.

Limitations

Several limitations must be acknowledged. First, the sample is restricted to families who choose to participate, which may introduce self-selection bias. Participants may differ from non-participants in motivation, reading proficiency, need for reading intervention or services, literacy experiences, or comfort with animals. The initial motivation survey was developed specifically for this study, adapting items from the Motivation for Reading Questionnaire (Wigfield & Guthrie, 1997). It has not yet been validated in its current form. Additionally, the presence or absence of parents during the session may influence a child's willingness to participate fully.

Delimitations

This study is also subject to specific delimitations based on the researcher's design choices. The decision to include only children who have not previously participated in the therapy dog reading program is intended to control for the novelty effect, but it limits generalizability. The public library setting narrows the population to children whose families use the library.

Definitions

Animal-Assisted Intervention (AAI). A goal-directed intervention that incorporates trained animals as part of a structured plan to improve physical, social, emotional, or cognitive functioning in humans. In educational settings, AAI is commonly used to support student well-being, motivation, and engagement (Pet Partners, n.d.).

Early Readers. Children in the stages of literacy development who are beginning to decode words, recognize sentence patterns, and engage in independent reading activities. For this study, early readers are children ages 5-12.

Familiar Text. A reading passage that has been previously read aloud independently by the child participant. In this study, familiar texts will be identified by the child's parent or guardian, based on prior exposure at home.

Finlea (Therapy Dog). The certified therapy dog that is participating in this study. Therapy dogs must demonstrate stable temperament, obedience, and a positive response to unfamiliar environments and individuals (Alliance of Therapy Dogs, n.d.). They are trained and certified to provide comfort, emotional support, and motivation in therapeutic, medical, or educational settings. Finlea is a four-year-old female Goldendoodle who has passed her American Kennel Club Canine Good Citizen test and is an active member of the Alliance of Therapy Dogs, with over 240 documented visits in schools, libraries, and healthcare settings. She is up to date on vaccinations and receives regular wellness checks by a licensed veterinarian, as needed to maintain proper therapy dog certification.

Motivation. The internal drive or willingness to initiate and sustain goal-directed behavior. In this study, motivation refers to a child's desire to engage in reading tasks, whether or not a therapy dog is present (Wigfield & Eccles, 2000).

Reading Persistence. The ability of a child to sustain focus and effort while reading. For this study, reading persistence is defined as the child's continued attempt to complete a reading task without abandoning it, despite potential difficulty or frustration.

Structured Reading Session. A timed and guided reading activity that is conducted in a consistent setting. Sessions in this study involve one child, the therapy dog handler/researcher, a

research assistant, and the therapy dog, all of whom are present in a quiet, controlled environment.

Task Avoidance. A behavioral response in which a child disengages from a challenging activity, often due to frustration, lack of confidence, or low motivation. Observable indicators may include off-task behavior, refusal to continue, or requests to stop reading.

Unfamiliar Text. A reading passage that the child has not previously read or heard. In this study, unfamiliar texts are selected based on the child's reading level to ensure appropriate challenge without significantly exceeding decoding skills.

Chapter Summary

Practitioners, school-based clinicians, and literacy specialists are increasingly seeking evidence-based strategies to support struggling readers, especially those who exhibit negative behaviors and lose focus and motivation when reading becomes difficult. By contributing observational and survey-based data on motivational strategies, task persistence, and the potential role of therapy dogs, this study offers new insight into how educators and clinicians can better support student engagement. As interest in AAI expands, professionals require more rigorous, practice-relevant research to inform responsible implementation, policy development, and program design.

Reading persistence is the ability to maintain effort and focus during challenging tasks and is an essential component of reading development. While many reading interventions emphasize fluency, decoding, and comprehension, few examine how children respond behaviorally when confronted with unfamiliar texts. The growing use of AAI, particularly with therapy dogs, has shown promise in reducing anxiety, improving attitudes towards learning, and enhancing motivation in educational settings. However, few studies have directly focused on the

impact of therapy dogs on children's persistence during unfamiliar reading tasks. This study addresses that gap by investigating how the presence of a certified therapy dog influences children's reading persistence when engaging with both familiar and unfamiliar texts. Using a within-subjects, mixed-methods design, the study will observe behavioral indicators of persistence and assess participants' motivation to read using structured observations and survey data. By examining both behavior and motivational responses, this research will provide evidence on AAI and its potential to promote engagement, positive attitudes, and sustained effort in literacy tasks.

Chapter II

Literature Review

Struggling and reluctant readers often lack reading persistence, or the ability to sustain effort and attention when confronted with challenging or unfamiliar texts. This type of persistence is essential for long-term literacy development; however, many existing reading interventions focus narrowly on decoding, fluency, and comprehension. There is limited attention to how children respond behaviorally when reading becomes challenging. An intentional integration of strategies that foster behavioral persistence in the face of literacy difficulties could benefit struggling readers.

Despite acknowledging that motivation is a key factor in academic engagement and literacy development, many reading programs continue to overlook its importance (Parsons & Erickson, 2024). Children are significantly less likely to persist through difficult academic tasks when they lack intrinsic motivation. Motivation has been positively correlated with reading achievement and school well-being (Vaknin-Nusbaum & Tuckwiller, 2023), which demonstrates the importance of supporting students' engagement.

Persistence is an individual's willingness to continue working through a difficult task despite frustration. Children who persist in their learning tend to learn more and perform better than those who do not exhibit persistent behavior (Formanek & Spaulding, 2024). Persistence enables children to recover from setbacks and capitalize on opportunities for growth and development. A child's persistence during challenging tasks is crucial for learning, development, and achievement. Motivation is a key factor in the success and progress of speech-language

students, particularly children and adolescents receiving school-based or clinical services. Due to language deficits, children with speech and language disorders frequently encounter difficulties in both academic and social settings. Moments of struggle can erode persistence, and after repeated failures, children tend to choose less challenging tasks. Progress toward goals and other academic tasks could be hindered by a lack of desire to persevere when tasks become difficult. When students are engaged and motivated, they are more likely to participate, maintain focus, and make progress toward communication goals (Paul & Norbury, 2012). Maintaining motivation for students with complex needs, behavioral challenges, or anxiety remains a challenge for speech-language pathologists (SLPs). As a result, they continue to seek strategies to improve engagement and therapeutic outcomes.

Emerging research on animal-assisted interventions (AAI) suggests that SLPs can benefit from integrating therapy dogs into sessions to improve student motivation, reduce anxiety, and promote student engagement (Antonucci, 2022; Jalongo & Petro, 2018). Dogs can complement traditional therapy by increasing the individual's happiness and desire to participate. The bond formed with a therapy dog can increase children's willingness to complete tasks, as they feel they are performing the task for the dog, not the therapist. Dogs provide an unconditional, non-threatening friend who can reassure children that the therapy dog would be happy with them regardless of their performance (Hill et al., 2020a). Additionally, AAI can help maintain a child's focus and regulate behavior (London et al., 2020). Animals can help children behave respectfully and self-regulate when they recognize the animal's needs and receive direct feedback from them (Lewis & Grigg, 2021).

Libraries and schools have introduced various dog-assisted reading programs in recent years. Some programs target entire classes, while others may include only struggling

readers. Results have varied; however, authors have generally agreed that incorporating therapy dogs into reading programs increases student interest and enthusiasm, enhances self-esteem, reduces disruptive behaviors, and improves reading and writing skills (Kirnan et al., 2015). The impact of therapy dogs on focus, self-regulation, and motivation can positively influence student persistence. SLPs and educators utilize this information to implement effective literacy strategies that support both academic and social well-being.

Animal-assisted literacy programs, such as therapy dog reading sessions, may offer a developmentally appropriate way to support motivation and, by extension, task persistence. The presence of a therapy dog can create a calm, non-judgmental reading environment that fosters autonomy and comfort. Early research shows that this environment can reduce anxiety and increase reading confidence and enjoyment (Jalongo, 2005). While the current study centers on behavioral observation of persistence, understanding motivation provides context for interpreting children's engagement levels during therapy dog reading sessions.

Motivation

According to the 2024 National Assessment of Educational Progress (NAEP) results, reading proficiency in the United States has continued to decline. Approximately 40% of fourth-graders scored at a basic level, indicating they lack fundamental reading skills for their age (National Center for Education Statistics, 2024). Educators must utilize interventions and instructional strategies to target struggling readers and prevent them from falling further behind. Many programs grounded in the science of reading have neglected the importance of motivation in learning to read and building literacy skills (Parsons & Erickson, 2024). Motivation plays a central role in learning. Children are unlikely to continue participating

in an academic task when they are not motivated. Reading motivation, school well-being, and reading achievement are all positively correlated (Vaknin-Nusbaum & Tuckwiller, 2023).

Two widely accepted theories support the relationship between motivation and persistence: self-determination theory (SDT) and expectancy-value theory (EVT). According to SDT, intrinsic motivation increases when children experience a sense of autonomy (freedom to choose), competence (feeling capable), and relatedness (connection to others) during learning activities (Ryan & Deci, 2000). Intrinsically motivated learners demonstrate greater resilience and sustained effort because they find the activity meaningful, not simply as a means to an external reward (Ryan & Deci, 2000). In reading contexts, intrinsically motivated children are more likely to engage with complex texts, attempt decoding unfamiliar words and persist when challenged (Wigfield & Guthrie, 1997). These elements are strongly associated with a child's likelihood to persist through difficult or unfamiliar reading tasks. EVT adds that persistence is influenced by the value a child places on a task and their belief in their ability to succeed (Wigfield & Eccles, 2000). Together, these frameworks suggest that the more children enjoy reading and believe in their ability to do it well, the more likely they are to keep trying when a text becomes challenging.

Intrinsic motivation is a foundational driver of persistent learning behaviors in young children. Intrinsic motivation is the desire to engage in a task for enjoyment, interest, or personal satisfaction. It has been linked to enhanced self-regulation skills (Ryan & Deci, 2000). In contrast to extrinsic motivation, which is driven by rewards or external approval, intrinsically motivated children are more likely to read for pleasure, to seek out books independently, and to persist through challenges without external prompting. In such cases, increased motivation can

play a critical role in fostering greater persistence during reading activities (Wigfield & Guthrie, 1997).

Kanonire et al. (2022) found a negative relationship between extrinsic motivation and reading performance in elementary students. The researchers concluded that external control can create an unfavorable environment, which in turn leads to poor future reading success. Intrinsically motivated students have shown more positive learning outcomes, deeper cognitive engagement, and greater persistence. Programs that provide students with choices in reading materials, integrate reading with engaging content areas, and create supportive reading environments have been shown to increase students' intrinsic motivation to read (Guthrie et al., 2007). Schiefele et al. (2022) found that intrinsic reading motivation significantly predicted reading comprehension in elementary students, suggesting that children who read for enjoyment develop better reading skills over time. This finding supports a previous study by Wang et al. (2020) which found that intrinsic motivation positively affects reading achievement through increased reading amount. Encouraging students' independence, self-perceived competence, and interest in reading is important. Ample opportunities should be provided to practice and facilitate the development of reading skills in elementary school (Kanonire et al., 2022). These findings highlight the importance of cultivating intrinsic motivation in early readers to promote sustained reading engagement and enhanced reading performance. Understanding students' motivation is essential for designing learning environments that promote long-term academic growth and developing proficient, lifelong readers. SLPs can benefit from this information regarding intrinsic motivation. Many children with language impairments struggle with self-confidence, experience frequent communication breakdowns, and may feel discouraged during literacy-based tasks. As a result, they may disengage when faced with difficulty.

Motivation in Speech Therapy

Speech-language pathologists must keep students motivated to target their specific goals during sessions. Studies suggest that incorporating engaging, child-centered strategies can enhance outcomes. Abendroth and Whited (2021) identified motivation, rapport, and resilience as areas that need strengthening as children transition from childhood to adolescence. To shift to a client-centered therapy model, speech-language therapy should focus on these pillars (Abendroth & Whited, 2021). Collins (2021) suggested that incorporating motivation and behavior change techniques into language intervention via telepractice promotes self-determination. Adolescents experienced satisfaction in their need for autonomy, relatedness, and competence when addressing their language-based literacy deficits (Collins, 2021). SLPs use gamification to motivate students by incorporating playfulness, aligning with children's interests, and setting goals (Elo et al., 2023). Many therapists use board games or digital games to keep children engaged. After conducting a systematic review, Noda et al. (2019) concluded that, despite limited research, board games have been shown to increase motivation and knowledge in a targeted area. Board games can contribute to improvements in areas such as educational knowledge, cognitive functions, physical activity, anxiety, ADHD symptoms, and the severity of Alzheimer's disease. The games enhanced interpersonal interactions, motivated participants, and promoted learning (Noda et al., 2019). Zajc et al. (2018) examined the integration of tablet games into speech therapy for children aged three to 12 with speech disorders. The study found that children accepted tablet games for therapeutic purposes, which positively impacted their motivation and satisfaction during therapy sessions (Zajc et al., 2018).

Motivation in speech therapy can decline as children reach adolescence. Therapists find they must design therapy sessions to encourage the client's active participation. Collins & Woller

(2017) engaged students by integrating Latin and Greek roots into superhero comics, thereby enhancing decoding skills in a meaningful way. Saeedi et al. (2022) conducted a systematic review of articles on the use of digital games developed to treat speech sound disorders. These games had a positive impact on children's satisfaction, motivation, and attention during therapy. Despite these positive effects, there were also barriers and limitations to using digital games. Children often experience frustration and low self-esteem after several failed attempts at playing games. Additional limitations include environmental constraints, speech-recognition issues, and a mismatch between game levels and the target group's needs (Saeedi et al., 2022). Folkins et al. (2015) summarized design principles from video games and related them to their potential applications in speech therapy. Researchers suggest that the six principles (essential experience, discovery, risk-taking, generalization, reward system, identity) could positively affect engagement and motivation. The principles connect aspects around a central emotion or cognitive connection, promote indirect learning in focused environments, incorporate risk-taking, provide multiple opportunities to generalize skills, include reward systems, and redefine self-perceptions. For example, the reward system principle is built into video games. The games often give feedback, adapt to the player, and suggest ongoing achievement. SLPs frequently apply these strategies by scaffolding, providing positive verbal feedback, and offering small prizes.

SLPs routinely monitor a child's engagement and behavioral stamina as part of their clinical decision-making process. Task persistence reflects how SLPs document participation, responsiveness to techniques and interventions, and attention to a task. Recent studies emphasize the importance of designing language-based tasks that foster engagement, particularly for children with language and learning differences. Formanek and Spaulding (2024) investigated persistence in preschool children with developmental language disorder (DLD) and preschoolers

with typical language (TL). Participants were asked to complete two moderately difficult, nonlinguistic tasks. Researchers used time on task as the index of persistence behavior and observed children's task-relevant verbal and/or nonverbal behavior. Egbert et al. (2021) proposed a learner-centered framework for language task engagement, highlighting factors such as autonomy, clarity of task purpose, and emotional support, which are highly relevant to fostering persistence in therapy. Teubner-Rhodes et al. (2020) identify "cognitive persistence" as the sustained mental effort needed to complete demanding tasks, noting that this capacity can be supported by structuring appropriately challenging but emotionally supportive interventions. These findings align with the embedded-explicit approach to intervention in SLP, which encourages clinicians to use naturalistic activities, such as shared book reading, as both a language stimulus and a means of monitoring children's effort, attention, and follow-through (Justice et al., 2009). By tracking behaviors such as willingness to attempt difficult words, ability to remain focused throughout an activity, and responsiveness to cueing, SLPs gather insight into a child's task persistence, which provides valuable information for individualized goal setting and intervention planning.

Measuring Motivation

Measuring reading motivation has proven challenging. Researchers have concluded that the available reading motivation measurement tools are insufficient due to inconsistencies in language and usage. It is important to clarify the definition of reading motivation, as there is currently no consensus on the best model or the most valid and reliable scale to measure this important construct. As a result, Jeldrez et al. (2023) drew on existing motivation measurement scales and piloted their own with students in grades two through six. Researchers concluded that their results supported the expectancy-value theory. Expectancy-value theory (EVT) is a

motivational theory that explains a learner's motivation to engage in a task is determined by their belief in their ability to succeed (expectancy) and the perceived importance or enjoyment of the task (value) (Wigfield & Eccles, 2000). When both expectancy and value are high, students are more likely to persist through challenging assignments, including reading, and demonstrate greater effort and achievement (Eccles & Wigfield, 2020). Similarly, Jeldrez et al. (2023) suggest that reading motivation comprises two main dimensions: reading value and readers' self-concept, which encompass both social and individual aspects. These two dimensions have distinct, independent effects: affirming and undermining.

The Motivations for Reading Questionnaire (MRQ) (Wigfield & Guthrie, 1995) was developed to assess aspects of reading motivation. EVT supports the idea that intrinsic motivation is strongest when students both believe they can succeed (high expectancy) and find the task personally rewarding (high intrinsic value) (Wigfield & Eccles, 2020). This is especially relevant for early readers when joy and confidence in reading can lead to greater academic growth and resilience. The initial MRQ included 82 items measuring 11 dimensions of reading motivation. Based on scale reliabilities and item characteristics among a small sample of elementary school students, 28 items were eliminated. Thus, the final version of the MRQ contains 54 items that address 11 dimensions of reading motivation, including efficacy, challenge, work avoidance, curiosity, involvement, importance, recognition, grades, competition, social, and compliance. All items are answered on a scale from 1 to 4 (very different from me, a little different from me, a little like me, a lot like me). Reading efficacy indicates the student's beliefs about their self-reported reading ability, whereas challenge is intended to reveal their internal motivation to read challenging text. These items regarding challenge will be

incorporated in the student survey in the current study to determine if a child exhibits persistence before reading with a therapy dog.

Task Persistence

When students are intrinsically motivated to read, they tend to demonstrate longer reading sessions and greater persistence (Guthrie et al., 2007; Schiefele et al., 2022; Wang et al., 2020). Persistence is a dynamic, malleable process in early childhood (Formanek & Spaulding, 2024). During preschool, children learn self-regulation, which impacts their ability to persist with challenging tasks. During this stage of development, children may give up easily and rely more on adults to model consistent effort. At this stage, children continue to learn to manage their frustrations. Through observation and experience with adults, they can learn to gradually push through when things become difficult.

Elementary school students may exhibit greater self-regulation, enhanced problem-solving skills, and a better understanding of how to identify goals and work towards achieving them. They may also be more focused on tasks and seek help when needed. School-age children may demonstrate more persistence in completing complex tasks.

As children enter adolescence, they may become more self-aware of their strengths and weaknesses. They may focus more on tasks that align with their abilities and interests. They can comprehend the concept of delayed gratification, which helps them focus on long-term goals.

Behavioral Indicators of Persistence

Educators, parents, and professionals can observe behavioral characteristics to determine a child's level of persistence during activities. Children exhibiting persistence may show less distraction, regulated behavior, the drive to continue despite difficulty, and a sense of initiative. Children who demonstrate persistence may work through tasks with few distractions. Their

sustained focus enables them to complete a task without needing adult redirection. Children who exhibit persistence continue to pursue a task despite difficulty. Even when a task becomes difficult, they appear determined, use problem-solving strategies, and persist. They will likely try alternative strategies or ask for help if they make mistakes rather than give up. Children manage their frustrations appropriately and avoid withdrawal when faced with challenges. Overall, students complete tasks when persistent.

Factors Influencing Persistence

Many factors can affect a child's persistence. For example, if children have parents who consistently demonstrate persistence, they are more likely to show persistence themselves. Leonard, Garcia and Schulz (2020) investigated how adults' actions, outcomes, and words affected preschoolers' persistence on novel tasks. Researchers found that children tried harder when they observed adult success. When adults communicated that the task was difficult, the children persisted only when they saw the adult succeed. This suggests that when preschoolers knew the task was achievable, they persisted.

Task difficulty can influence persistence. Providing children with opportunities to engage in challenging but achievable tasks helps them develop a sense of accomplishment and encourages them to persist through difficulty. Perceived likelihood of success can influence young children's persistence on challenging assignments. Children with language disorders may exhibit less persistence because they have struggled to learn language compared to children with typical language (Formanek & Spaulding, 2024). The type of feedback a child receives can affect their willingness to persist with a task. Ishikawa and Yanakogi (2025) explored children's desire to employ self-generated strategies to complete tasks. Students who were provided with multiple methods to complete a task generated fewer strategies independently. Findings suggest that when

parents offer less input and suggestions, children develop more of their own strategies and exhibit increased persistence. Children who received additional strategies and continued to have difficulty may have felt unable to complete the task. Researchers concluded that providing fewer hints fosters a child's autonomy, which may enhance their persistence on challenging tasks (Ishikawa & Yanakogi, 2025).

Leonard, Kalvin and Lupyan (2020) concluded that when adults praise preschoolers' hard work rather than their intelligence, the children view the effort as within their control. Students may not believe they can complete complex tasks if they hold a self-perception of being unintelligent.

Educators must identify barriers to learning, including reduced persistence, to tailor classroom instruction and intervention. Identifying reduced persistence early is essential so children do not develop a generalized response to giving up when challenged (Formanek & Spaulding, 2024). Therefore, educators, parents, and service providers can be aware of their role in assisting with academic and therapeutic tasks to encourage persistent behavior in children.

Role of Speech-Language Pathologists in Literacy

SLPs play a direct and vital role in literacy development. According to the American Speech-Language-Hearing Association (2001), SLPs roles in reading and writing include, but are not limited to (a) fostering language acquisition and emergent literacy; (b) identifying children at risk for reading and writing; (c) assessments; (d) providing intervention and documenting outcomes; and (e) assisting general education teachers, parents, and students; advocating for effective literacy practices; and advancing the knowledge base. Overall, SLPs can make a significant impact on literacy and stay informed about recent practices to benefit struggling readers.

Children's Interest in Reading

The home literacy environment shapes children's interest in books and future literacy development. McGinty and Justice (2009) found that the quality of home literacy practices significantly predicted children's print knowledge. Similarly, Caglar-Ryeng et al. (2020) reported a strong association between book exposure and preschoolers' interest in reading. However, their study also showed that neither book exposure nor interest in books significantly predicted expressive vocabulary or grammar, regardless of a child's family risk for dyslexia. Instead, early vocabulary skills appeared to drive the development of lexical abilities. Meng (2015) further supported this connection by suggesting that children's vocabulary competence can influence the frequency of joint book-reading sessions at home. Justice et al. (2019) also found that children with stronger language skills and nonverbal cognition before a book-reading intervention were more likely to have caregivers complete an entire 15-week intervention.

Literacy Intervention

SLPs and caregivers play a significant role in children's literacy development. Book exposure and shared book reading, combined with print referencing strategies, are effective for building literacy skills. Studies have shown that caregivers can receive training to develop skills that enable them to better engage their children in practical reading sessions (Akemoglu & Tomeny, 2020; Justice et al., 2019; Noble et al., 2020). Although these strategies have effectively increased awareness of print and vocabulary skills, they do not specifically address motivation or a child's persistence during book reading. Animal-assisted intervention is a positive addition to book-reading experiences, linked to increased motivation and self-regulation.

Shared Book Reading

Shared book reading can support children's early language development. Caregivers do not consistently demonstrate awareness of strategies to help young readers and often require training to implement these strategies effectively. Interactive book reading typically involves recasts, expansions, and open-ended questions to expose children to new language. Noble et al. (2020) found that providing a pre-intervention session effectively increased interactive shared reading behaviors over a 6-week intervention period. Caregivers of high and low socioeconomic status implemented the interventions equally (Noble et al., 2020).

Some research indicates that caregivers do not consistently maintain taught strategies over extended periods and often fail to complete required behaviors during research studies. Financial incentives and encouragement are not always successful in motivating all participants to complete entire programs. Justice et al. (2019) investigated caregivers' ability to implement a 15-week home-based book-reading intervention. It was determined that if a family dropped out of the study, it occurred at the beginning of the intervention. In this study, encouragement and financial rewards successfully motivated caregivers to complete the intervention, although only 55% completed the "gold-standard" intervention as intended (Justice et al., 2019). Parent education has been a factor in whether caregivers complete an intervention program. Justice et al. (2011) determined that younger mothers and parents who did not complete high school were less likely to complete the intervention.

Little is known about the quality of shared book-reading behaviors between fathers and mothers. Some research has found that fathers use complex and challenging language that supports later learning and development. Campbell and Schindler (2022) found that each father had their own techniques and seemed to choose strategies based on their child's current

knowledge without training on methods to use during shared book reading. Fathers with children who had higher language skills asked their children for more complex information, such as predictions. When children relied more on vocalizations than words, fathers elicited more speech and confirmation of understanding (Campbell & Schindler, 2022).

Mother-child interaction patterns during book reading change as children grow older and demonstrate higher language skills. More attention-seeking strategies and elaborations are frequently used with younger children, while more questions are asked when reading with older children. Chang and Luo (2019) investigated the interaction strategies Taiwanese mothers used during book reading with their children. Mothers decreased their use of task-behavioral regulation strategies but increased the production of non-immediate talk, print-related talk, responses, and text reading as children age. Predicting, inference, evaluation, and print-related talk positively correlated with language and literacy skills. Print-related talk was also positively associated with higher print-concept, language, and story comprehension performance (Chang & Luo, 2019). Choosing appropriate interaction strategies for joint book reading with children at different stages of language and literacy development is a crucial skill for parents to acquire.

Print Referencing

Print referencing is a literacy strategy that increases children's awareness of print during joint book-reading sessions. Print referencing includes verbal and nonverbal cues that direct children to focus on the print during joint book-reading sessions. Verbal cues include questions and comments, while nonverbal cues include pointing and tracking the print while reading. Using print referencing strategies does not come naturally to some caregivers. Families, especially those with lower socioeconomic status, have been found to benefit from training in using print references during joint book-reading sessions. Lovelace and Stewart (2007)

investigated the effectiveness of non-evocative strategies, including tracking the print, pointing to the print, and commenting, which do not require a response from the child. Results indicated that using these strategies twice weekly during 10-minute sessions effectively developed print concepts for students with language impairments. The results suggest that verbal print referencing is unnecessary in increasing a child's print concept knowledge (Lovelace & Stewart, 2007).

Ard and Beverly (2004) conducted a study with typically developing preschoolers to investigate the effects of adult questions and comments during joint book reading. Nonsense words were targeted to ensure that children did not have prior knowledge or exposure to vocabulary. Children who heard adult questions, comments, or a combination of questions and comments demonstrated significant improvements in receptive word learning. Adult comments were also associated with improved naming. The intervention group, which received combined questions and comments, produced the most words on expressive posttests (Ard & Beverly, 2004).

Justice et al. (2011) found that children with language impairments who received print-focused or sound-focused interventions showed greater growth than those who received picture-focused reading interventions. However, the children who received print-referencing intervention did not show a significant gain in alphabet knowledge. Attentional difficulties pose an additional risk to the development of print knowledge in children with language impairments. In an environment with low home literacy quality, the print knowledge of children who displayed language and attention difficulties was almost one standard deviation below that of children with language difficulties only (McGinty & Justice, 2009). Similarly, autistic children are at risk for reading difficulties. Previous research has shown that children on the autism spectrum often

demonstrate strengths in print-related skills, which were predictive of later word recognition and later reading comprehension difficulties. Impaired joint attention is a characteristic of autism that may impact the development of emergent literacy skills and their interest in shared book-reading experiences. Bean et al. (2019) found significant positive correlations between book-reading orientation and oral language and print concept knowledge in the autism group. For autistic children, explicit teaching of story structure significantly predicted the number of child utterances during book reading (Westerveld et al., 2020). Shared book reading behaviors, especially questions asked by caregivers, were strongly correlated with children's verbal behaviors. However, this did not significantly affect scores on receptive vocabulary and communication skills assessments (Westerveld et al., 2020). Akemoglu and Tomeny (2020) found that parent coaching, focusing on reading techniques and naturalistic communication, significantly increased children's responses and initiations. Overall, parents found the strategies easy to implement, and coaching was the factor that helped mothers improve and maintain fidelity (Akemoglu & Tomeny, 2020). Overall, parent coaching could be an effective way to help parents apply literacy strategies.

Animal-Assisted Intervention (AAI)

While considerable research has examined the influence of caregiver strategies and literacy environments on children's early language and reading development, fewer studies have directly explored how children's motivation and persistence affect their engagement with reading tasks, particularly among children who present with speech or language impairments. In clinical and school-based speech-language pathology settings, many children exhibit low task persistence during shared reading or literacy-based intervention activities, often due to frustration, reduced expressive ability, or attentional challenges (Bean et al., 2019; McGinty & Justice, 2009).

Intrinsic motivation, the internal drive to engage in reading for its enjoyment or value, has been linked to higher persistence, improved reading comprehension, and deeper cognitive engagement in typically developing children (Ryan & Deci, 2000; Wigfield & Guthrie, 1997). However, there is a need to investigate how this motivational construct applies to children during independent reading. Animal-assisted interventions, such as therapy-dog reading sessions, offer a low-pressure environment that may enhance a child's willingness to persist with reading challenges.

Defining AAI

Animal-assisted intervention (AAI) refers to the intentional integration of trained animals into therapeutic, educational, or support settings to promote the physical, emotional, cognitive, and social well-being of individuals. AAI encompasses three primary approaches: Animal-assisted education (AAE), animal-assisted therapy (AAT), and animal-assisted activities (AAA). The animals involved may be owned by the professional or affiliated with a volunteer organization. In both cases, the relationship between the animal and the handler is foundational to the success of any AAI program. Handlers must recognize and respond to signs of stress or discomfort in the animal to ensure safe and ethical practice (Antonucci, 2022).

Animal-assisted education (AAE) is a structured intervention delivered by general or special education professionals to support targeted academic, social, or cognitive goals. In contrast, animal-assisted therapy (AAT) is a goal-directed clinical intervention conducted by credentialed healthcare providers, including physicians, occupational and physical therapists, speech-language pathologists, mental health professionals, and social workers. Within AAT, animals are integrated into individualized treatment plans to promote healing and enhance quality of life, particularly for individuals coping with trauma, anxiety, stress, or disabilities. Therapy animals can reduce student anxiety, improve engagement, and support social-emotional

development in school settings (Antonucci, 2022; Jalongo & Petro, 2018; Vaknin-Nusbaum & Tuckwiller, 2023). Dogs have been shown to promote relaxation, mood regulation, communication, and empathy, making them ideal partners in therapeutic and educational contexts (Beetz et al., 2019; Holman et al., 2020; Kunz-Lomelin & Nordberg, 2019; Paul & Norbury, 2012). Unlike informal activities, AAE and AAT involve progress monitoring and consistent documentation.

In comparison, animal-assisted activities (AAA) consist of informal, unstructured visits that provide comfort, emotional support, and companionship in various community settings, such as schools, hospitals, nursing homes, libraries, and college campuses. Although less rigorous in structure than AAE or AAT, AAA contributes meaningfully to positive emotional outcomes and motivational climates through human-animal interaction.

Among these approaches, AAT continues to gain particular recognition for its potential to enhance therapeutic outcomes. Studies have shown that therapy dogs can reduce stress, increase client motivation, and facilitate engagement in clinical sessions. These animals often complement traditional interventions by promoting emotional regulation, encouraging communication, and strengthening interpersonal connections. However, successful AAT implementation requires deliberate planning, specialized therapist training, and close attention to the participant's comfort, needs, and therapeutic goals. As the field advances, additional research is needed to determine for whom and under what conditions AAT is most effective.

Although knowledge of AAT's benefits continues to grow, implementing such programs remains a complex task. Many institutions allow therapy dogs to be certified through national organizations, but they often do so without additional context-specific training or protocols. The lack of consistent guidelines or regulatory standards can lead to hesitation among decision-

makers. For instance, school districts may recognize the emotional and behavioral benefits of therapy dog programs, but they often lack a uniform process for approving and implementing them. Some districts opt out entirely without clearly defined standards, and concerns regarding safety, liability, logistics, training, and funding. Additionally, a lack of interdisciplinary collaboration between educators and veterinarians can result in inconsistent or misaligned practices that deviate from recognized standards for human-animal interaction, potentially compromising both student welfare and animal well-being (Sandt, 2019). Institutions must carefully evaluate these trade-offs when considering AAI integration, striking a balance between therapeutic potential, operational feasibility, and ethical safeguards.

Although research on therapy animals shows encouraging trends, many existing studies face methodological limitations, including small sample sizes, limited control conditions, and a lack of focus on specific areas, such as communication disorders (Antonucci, 2022). Despite these limitations, no significant adverse outcomes related to canine-assisted interventions have been reported. Continued empirical investigation is necessary to validate AAI's efficacy, particularly within specialized populations and intervention models.

Animals Involved in AAI

While dogs are the most commonly studied and widely used in AAI, research has explored the use of other animal species across therapeutic, educational, and healthcare settings. Animals such as donkeys and horses, as well as dogs, have been used to decrease stress, increase motivation, and improve physiological measures in children participating in therapy and other academic tasks. Animal-assisted intervention with donkeys can enhance self-esteem, improve cognitive function, and aid in the recovery of language skills in children with dyslexia (Corallo et al., 2023). Coman et al. (2018) investigated the impact of equine-assisted activities on the social

and sensory functioning of children with autism in a randomized controlled trial. Following a 12-week intervention, children exhibited significant improvements in social cognition, communication, motivation, and autistic mannerisms. Teachers reported improvements in social awareness. In addition, teachers reported that students maintained progress in autistic mannerisms and social cognition eight weeks following intervention. Overall, the researchers concluded that the multisensory experience of equine-assisted therapy can be a beneficial medium for providing evidence-based treatments (Coman et al., 2018).

O’Haire et al. (2014) conducted an AAA study in Australia with 64 subjects aged five to 12 years who were diagnosed with autism. Children were exposed to a guinea pig for eight weeks in addition to 16 20-minute animal interaction sessions. Results were obtained from parent and teacher reports and three standardized instruments. Standardized measures were administered upon study entry, after an 8-week waiting period, during the week prior to the AAA program, and during the week following the 8-week program. Significant improvements were noted in social behaviors, and a significant decrease in social withdrawal was observed. These results demonstrate a simple, cost-effective means to improve the social functioning of students on the autism spectrum (O’Haire et al., 2014).

Therapy Dogs Across Settings

Therapy dogs have been used in various settings to enhance the environment. Additionally, therapy dogs have been studied in non-traditional settings, such as dental offices, where anxiety is often heightened. Thakkar et al. (2020) found that 96% of parents reported improved dental visits for their children when a therapy dog was present and expressed interest in having therapy dogs at future appointments. Vincent et al. (2020) investigated the effect of a therapy dog on visits to dentists’ offices. Children’s oxytocin levels increased while cortisol

levels decreased. All caregivers supported the dog's presence (Vincent et al., 2020). Similarly, adults showed lower perceived stress and lower blood pressure when accompanied by a dog during the dental procedure (Cruz-Fierro et al., 2019). In the hospital setting, most studies include dog visits to patient rooms, ranging from a single 12-minute session to over a year of consistent visits, dependent upon the severity of the injury. During hospital visits, the presence of therapy dogs has been found to lower anxiety, decrease pain perception, increase well-being, and enhance satisfaction with staff. Adult oncology patients reported increased energy levels following visits with a dog (Ginex et al., 2018). Patients with traumatic brain injury demonstrated a significant increase in cognitive testing after 151 canine-assisted sessions (Horton et al., 2023).

Prison inmates have had opportunities to interact with a therapy dog through training, grooming, and walking. The presence of a dog had positive effects for women who exhibited moderate to severe pre-treatment anxiety (Holman et al., 2020). Studies have shown improvements in social skills, increased trust, fewer behavioral infractions, and better emotional regulation and communication among male prisoners. Mental health, emotional regulation, empathy, and academic skills may be enhanced through dog-assisted therapy (Kunz-Lomelin & Nordberg, 2019).

A pilot study found that therapy dog interaction was effective for active-duty soldiers (Beetz et al., 2019). Ten soldiers in Germany participated in a 3-hour session, once a week, for four weeks. There was a control group. Subjective well-being increased after the dog visits, with reports of "feeling happy again." There were no significant improvements regarding post-traumatic stress disorder (PTSD) symptom severity, perceived stress, or functional problems with emotions and actions due to the PTSD. The study noted that the patient's relationship with the

dog handler improved, which researchers found beneficial given the soldiers' social deficits (Beetz et al., 2019).

College campuses have benefited from having therapy dogs. Fiocco and Hunse (2017) examined university students preparing for exams. They found that even a brief 10-minute interaction with a therapy dog significantly reduced stress responses to future stressors, even in the dog's absence. Bultas and Rittiwong (2023) concluded that integrating a therapy dog into the classroom is feasible and gives students a positive experience. A pretest-posttest design, two-group study was conducted with 67 nursing students. The participants in the intervention group experienced improvements in stress, anxiety, and happiness. The students in the control group showed no improvement. Overall, students reported positive feelings and benefits from the dog's presence (Bultas & Rittiwong, 2023).

Therapy Dogs and Autism Spectrum Disorders

AAI has been widely studied across different age groups, demonstrating positive effects on children and adults on the autism spectrum. Interaction with animals has been associated with reduced stress levels, increased confidence, and heightened engagement, all of which contribute to a supportive learning environment (Lewis & Grigg, 2021). For example, a study by Wijker et al. (2019) found that AAT led to a reduction in self-perceived stress among adults with ASD. Furthermore, Wijker et al. (2020) reported a positive correlation between a confident body posture and spontaneous interaction with a therapy dog, reinforcing the notion that confidence and motivation enhance therapy outcomes. Following engagement in free play with a therapy dog, adults were more likely to adhere to their overall therapy program (Wijker et al., 2020).

One reason therapy dogs are particularly effective is their ability to provide vestibular, proprioceptive, and tactile stimulation, which supports adaptive responses to the environment

(Morales-Moreno et al., 2020). The tactile experience of petting a dog assists with sensory awareness and emotional well-being in children (Lewis & Grigg, 2021). In therapy, dogs complement traditional interventions by enhancing happiness, encouraging communication, and reducing repetitive speech behaviors, such as echolalia (Morales-Moreno et al., 2020).

A positive aspect of therapy dog interactions is the bond that forms between the child and the dog, which can serve as a motivating factor. Hill et al. (2020a) found that children were more willing to complete tasks when they felt they were doing it for the dog rather than for the therapist. The unconditional acceptance offered by therapy dogs creates a safe, non-judgmental space where children can engage without fear of failure (Hill et al., 2020a). Hill et al. (2020b) conducted a pilot, randomized controlled study to examine the impact of canine-assisted occupational therapy on the task maintenance and goal attainment of 22 autistic children ages four to seven. Results indicated a positive trend, but they were not statistically significant. Researchers agreed that this supported the need for further research in this area (Hill et al., 2020b).

Therapy dogs have also been shown to play a crucial role in behavioral regulation. London et al. (2020) highlighted that therapy sessions involving a dog helped children remain focused and regulated. Lewis and Grigg (2021) noted that recognizing the dog's needs encourages respectful behavior and self-regulation in children. Chadwick et al. (2022) studied the effect of animal-assisted intervention on three students aged 12-15 with ASD and/or ADHD diagnoses. Interviews indicated that AAI was a positive intervention that improved psychological well-being, particularly in self-esteem, self-awareness, and strategy support (Chadwick et al., 2022).

There is also ongoing debate regarding the effectiveness of AAT in improving social interaction and communication skills. Dimolareva and Dunn (2021) suggest that the role of animals in promoting social engagement may be limited, emphasizing that their meta-analysis excluded observational and single-case studies, which could have provided a more nuanced understanding of AAT's impact. Few studies have examined animal incorporation practices within clinical ABA services as well as surveys. As a result, little is known about how often individual clinician populations use animals and about the characteristics of those implementation practices. Many of these surveys indicated that pets were used rather than certified therapy animals. Clay et al. (2023) conducted paired-stimulus preference assessments and follow-up reinforcer assessments to determine if a therapy dog might be an effective reinforcer for six children. They found that one-third of the participants preferred the dog least, one-third preferred it moderately, and one-third preferred it highly compared with other stimuli. The study concluded that future research should focus on the applications of preference and reinforcer assessment in animal-assisted intervention, as well as more efficient methods for conducting preference assessments involving therapy animals (Clay et al., 2023).

AAI as Behavioral Intervention

Children diagnosed with a learning or behavioral disorder can exhibit behaviors that impede their learning. They may struggle to remain on task during academic tasks or exhibit aggressive behavior that affects their classroom performance and interactions. Researchers investigated the impact of a canine-assisted reading program on elementary students with emotional and behavioral disorders (EBD) and academic engagement behaviors. Although there were only three participants in this study, the results indicated that a dog's presence can positively affect on-task reading behaviors following a 4-week intervention (Bassette & Taber-

Doughty, 2013). The same researchers conducted a study with the same population, measuring reading fluency, comprehension, and motivation following a 3-month AAI. Reading performance improved in all participants, and motivation increased in three out of four students. The increase in reading performance may not be solely due to the dog's presence. Other interventions were implemented, including repeated readings, error correction, and performance feedback (Bassette & Taber-Doughty, 2016). More research is needed to determine whether the increase in motivation was related to the presence of the dog or the increased attention it received from the adult through error correction and performance feedback.

Kotrschal and Ortbauer (2003) found that the presence of a dog in the classroom led to fewer negative behaviors such as verbal outbursts, physical aggression, and social withdrawal. The duration of behaviors decreased, and overall aggression decreased significantly (Kotrschal & Ortbauer, 2003). Hergovich et al. (2002) concluded that the presence of a dog in the classroom is important for the social and cognitive development of young immigrant children. Children were more integrated into the classroom after having the dog present, and teachers reported less aggression (Hergovich et al., 2002). Kirnan et al. (2018) investigated the effect of a dog-assisted reading program in an elementary school's self-contained special needs classroom. A significant, positive behavior change was found in one of four students when the dog was in the classroom. Teacher interview data revealed additional positive outcomes, including increased motivation, on-task behavior, increased confidence, decreased negative behaviors, and a generally calming effect in the classroom when the dog was present (Kirnan et al., 2018). Although not all results reached statistical significance, these studies suggest that AAI can impact the reading motivation and behavior of elementary students with behavioral and learning disorders.

Physiological Effects of AAI

The presence of an animal during intervention has been shown to impact physiological measures in children. Schretzmayer et al. (2017) investigated the effects of a dog's presence on children's reading performance by measuring heart rate (HR), heart rate variability (HRV), salivary cortisol, and other behavioral variables. Higher HR was observed when the dog was present, and there was no significant difference in HRV with or without the dog present. Minor effects were found in cortisol levels (Schretzmayer et al., 2017). Fung (2019) also measured HRV to determine the students' level of relaxation while reading to the therapy dog. Students completed eight 20-minute reading sessions with the canine. Students were allowed to bring a book of their choice to increase their comfort level. Results indicated increased frequency and relaxation after animal-assisted intervention (Fung, 2019). Schretzmayer et al. (2017) used a sample of typical readers, while Fung (2019) had a sample of children categorized as low-performing readers. It is possible that the low-performing students initially felt more stress when reading aloud, and the dog's presence had a greater impact on their heart rate variability (HRV) and stress levels.

Dogs in the Classroom

Several studies have been conducted to investigate the impact of dogs' presence in the classroom environment, both in-person and virtually. Some studies have involved students reading aloud to a dog in a corner of the classroom, while others have incorporated various elements involving the therapy dog. Steel (2023) conducted a study that evaluated an online, multi-component Reading to Dogs (RTD) intervention named Paws and Learn (PAL). The PAL 4-week intervention included: 1) Dog handler PAL Storytime, 30 min twice a week in a whole group setting; 2) Approximately three minutes of individual reading to the dog via a screen

weekly; 3) PAL Notebook; 4) PAL Connectors including photos of the dog to build connection; 5) PAL Book Box with animal themed books for the classroom. The study investigated the intervention's impact on children's well-being, reading affect and frequency (RAF), as well as children's and teachers' perceptions and experiences of PAL, and implementation considerations for the classroom. Some positive perceptions and experiences regarding well-being and reading had a positive effect, although these measures did not reach statistical significance. Overall, researchers concluded that online PAL is feasible for classroom use and has a positive impact on students (Steel, 2023).

Other studies that have implemented a therapy dog program in the classroom have also shown positive results. Kirnan et al. (2015) concluded that kindergarten students demonstrated a statistically significant improvement in reading skills following a canine-assisted intervention. Additional benefits included motivation, interest, focus, attention to task, and increased confidence in the program. Teachers also noted improvements in writing, including content and sentence length (Kirnan et al., 2015). The same authors conducted a follow-up study that indicated that both English language learners (ELLs) and non-ELL students in Kindergarten in the therapy dog group exhibited significantly higher reading scores than the control group (Kirnan et al., 2018). Ngai et al. (2021) found that classroom-based, animal-assisted intervention increased cognitive competence, empathy, and reduced hyperactivity. Qualitative results indicated enhanced self-control, a promotion of humane attitudes, and improved reading skills (Ngai et al., 2021).

A case study involving two school-aged children diagnosed with ADHD found that animal-assisted education decreased the severity of ADHD symptoms. The students demonstrated increased attention, improved teacher communication, and greater peer

cooperation. Overall, teacher and researcher observations indicated the beneficial effects of having a dog in the classroom (Juríčková et al., 2020).

Verhoeven et al. (2023) investigated whether AAE affects the social and emotional outcomes of elementary school students aged eight to 13. Researchers used a survey and an observational study. Survey results indicated that students participating in the program with the dogs rated themselves significantly higher in self-confidence following the intervention with a dog. They also reported an increase in positive relationships with other students. Teacher ratings indicated significantly higher student scores with work attitude, pleasant behavior, emotional stability, and social behavior. The observation showed that verbal and non-verbal behaviors of the students increased, except for eye contact (Verhoeven et al., 2023). Wintermantel et al. (2024) employed interviews and surveys to evaluate the perceptions of the benefits of a therapy dog-assisted social-emotional learning (SEL) intervention in the classroom. Interview transcripts and open-ended survey responses from 85 10- to 11-year-olds revealed themes of empowerment through emotional learning, positive relationships, and personal growth. Overall, students showed an increased sense of well-being within the classroom with the dog (Wintermantel et al., 2025).

Goodmon et al. (2021) investigated the benefits of reading to a therapy dog on 38 children aged 8-11 years with dyslexia. For three weeks, half of the group spent one 5-minute session reading to a dog while the other half read to the researcher. After three weeks, the experimental and control groups switched. Researchers measured teacher perception of student engagement, reading ability, and confidence. Reading fluency and comprehension measures were also employed. Students completed a reading motivation subscale at baseline and post-treatment to assess intrinsic motivation, identified regulation, and external reading regulation. The

researchers recorded the number of words correctly read per minute while the child was reading to either the dog or the experimenter. Overall, participants who read to the dog exhibited a significant increase in teacher reports of academic engagement, reading confidence, ability, and motivation from baseline to post-treatment. They also reported greater reading motivation and improved mood. There was no significant increase in reading fluency whether the student read with the dog or the experimenter; however, reading fluency increased significantly from baseline to post-treatment for all students. Students in the 5th grade reported greater mood and motivation levels while reading to the dog compared to reading with the experimenter. Fifth-grade students also demonstrated significant improvements in reading fluency from baseline to the post-treatment period. In this study, researchers conducted reading sessions in the corner of a classroom when other activities were occurring. During the treatment phase, students read in the presence of the researcher, the dog, and the therapy dog handler. It is possible that students experienced increased anxiety while reading in the classroom setting or with an increased number of adults. A quiet environment or decreasing the number of adults in the treatment phase could alleviate students' stress. Results indicate that dog-assisted reading programs can benefit the reading ability, motivation, and mood of students with dyslexia (Goodmon et al., 2021).

Fung (2019) aimed to determine whether a canine-assisted reading program would increase the reading fluency and accuracy of three lower-performing third-graders. Positive findings were only observed in reading fluency. Regarding reading accuracy, researchers allowed students to skip difficult words, read the words with inaccurate pronunciation, or ask the therapy dog handler for the correct pronunciation. Researchers believed that providing students with choices would foster a more accepting reading environment, but it may not have improved reading accuracy. Researchers attributed an increase in reading accuracy from screening to pre-

test to maturation. A trend in relaxation levels was observed in one of three students; therefore, the effect of the canine-assisted intervention could not be concluded (Fung, 2019). Limitations of this study include a small sample size and limited generalizability, as the students were Chinese-speaking.

AAI and Reading Intervention

In recent years, libraries and schools have implemented various canine-assisted reading programs designed to support young readers. While some programs target entire classrooms, others are designed for struggling readers. Researchers have found consistent benefits. Therapy dog programs can increase student interest and enthusiasm for reading, boost self-esteem, reduce disruptive behaviors, and, in some cases, improve reading and writing skills (Kirnan et al., 2015). Therapy dogs complement traditional interventions by fostering positive emotional connections. Children often perceive themselves as reading for the dog rather than the adult, which enhances their willingness to engage in the task (Hill et al., 2020a). The dog provides an unconditional, non-judgmental presence that helps children feel accepted regardless of their performance. Compared with reading aloud to an adult or a teddy bear, students who read to a dog scored significantly higher on reading comprehension (le Roux et al., 2014a). This safe and supportive environment has been associated with improvements in focus, behavioral regulation, and respectful conduct (Lewis & Grigg, 2021; London et al., 2020).

Creating low-stress, affirming reading environments is key to helping children develop a healthy self-concept and stronger attitudes toward reading. Educators have observed that students, particularly younger readers and English language learners, respond well to canine-assisted reading programs, often showing increased interest and improved fluency (Goodmon et al., 2021; Kirnan et al., 2018; Rousseau & Tardif-Williams, 2019). In some cases, children have

reported greater comfort, enjoyment, and a higher sense of self-perceived competence when reading aloud in the presence of a dog.

Several studies have highlighted the impact of therapy dogs on student motivation and engagement, particularly during challenging or unfamiliar reading tasks. For example, Rousseau and Tardif-Williams (2019) found that children showed greater motivation and persistence when reading aloud to a therapy dog, even when the material was slightly above their reading level. Students in these environments reported increased confidence, and some showed greater gains in fluency, pacing, and self-assurance (Barber & Proops, 2019; Linder et al., 2017). While not all studies have reported significant improvements in reading scores, many have found notable improvements in student attitudes and willingness to read, particularly among struggling readers (Coffman et al., 2023; Uccheddu et al., 2019). Coffman et al. (2023) concluded that, despite no measurable gains in fluency, students exhibited notably more positive attitudes toward reading after participating in the program, suggesting that the presence of a therapy dog may enhance students' motivation and enjoyment of reading. Uccheddu et al. (2019) found no significant differences in reading and cognitive test scores between the two groups; however, children in the experimental group attended more reading sessions and, according to parents, were more motivated to read at home after the program.

Notably, while reading attitude and motivation improvements are well documented, less is known about how these programs affect students' willingness to sustain effort during complex tasks. Some findings suggest that reading to a therapy dog helps maintain engagement, even when students face distractions or challenges (Rodriguez-Meehan et al., 2023). Exhibiting persistence is a key driver of reading growth, especially for early readers and students with a history of academic struggle.

Given this emerging evidence, this study focuses on how reading to a therapy dog may influence children's persistence during reading. While prior research has explored outcomes such as fluency, motivation, and self-concept, few studies have directly examined persistence as a behavioral outcome. Understanding how animal-assisted reading environments support sustained effort may offer valuable insights for educators, therapists, and caregivers seeking to improve early literacy outcomes.

Challenges of AAI

Although therapy dogs have been shown to have positive effects when working with children, there are challenges to consider. The presence of a dog can require complex skills that require careful consideration and additional training (Hill et al., 2020b). The effective implementation of a therapy dog requires appropriate protocol, careful planning, and a reflective practice to maintain the safety and well-being of students with disabilities (Sandt, 2019). Managing the dog while simultaneously targeting therapy goals can be challenging for some therapists. Therapists must remain competent clinicians and provide goal-directed interventions (Hill et al., 2020b).

The animal's presence during the intervention can also cause stress. A previous traumatic experience with a dog or other animal can impact the effectiveness and willingness of a child to participate in AAT. Children may have sensory issues, and the animal's smell, loud noises, and unpredictable behavior could cause the child to feel anxious (Lewis & Grigg, 2021). For this reason, AAT should be implemented with caution, recognizing that it may not be suitable for every individual. Although students may initially feel fearful, they often become more comfortable over time. Kirnan et al. (2015) found that by the end of the school year, all children were actively participating, petting, and reading to the dog.

It is also possible that the excitement of having a dog present may diminish over time. Levinson et al. (2017) suggested that the novelty of reading to a dog may play a role, as children showed more significant results in the first five weeks of their ten-week intervention.

Educator and Parent Perception of AAI

Parent and educator support is essential when implementing AAI. Since AAI is relatively new territory in many educational settings, efforts must be made to educate stakeholders so that schools remain open-minded and supportive of therapy dog programs. Educators have observed the positive effects of therapy dogs. For example, Kirnan et al. (2015) found that 100% of kindergarten teachers participating in a therapy dog reading program recommended continuing it, particularly for students with special needs or those struggling academically. Similarly, teachers working with third and fifth students with dyslexia reported improved motivation and mood when students read in the presence of a therapy dog (Goodmon et al., 2021).

While educators often observe benefits, parents may have differing opinions. Fynn and Runacres (2022) surveyed parents in the United Kingdom and found that acceptance of canine-assisted activities varied based on their child's anxiety levels. Parents of children with higher anxiety scores expressed greater willingness to incorporate therapy dogs in reading and social environments. However, they were less supportive of using dogs to target behavioral challenges. This could be due to concerns about distraction or a misunderstanding of the therapeutic intent. This highlights the need for greater parental education about the role and benefits of therapy animals in classrooms (Fynn & Runacres, 2022).

Additional research supports parental acceptance of therapy dogs when the perceived benefit to the child is apparent. Levinson et al. (2017) reported that nearly all parents in their study consented to their child's participation in a therapy dog reading program. Similarly,

London et al. (2020) found that parents observed gains in communication, emotional regulation, motivation, and engagement when children interacted with therapy dogs. All participating parents (n = 17) believed the dog was a valuable, non-verbal communicator that fostered a stronger connection between the child and the task.

Not all findings have been uniformly positive, particularly in home-based programs. Syrnyk et al. (2023) conducted a pilot study during the COVID-19 pandemic to evaluate an at-home AAI literacy program. Although six of eight children improved in reading level, parental stress increased significantly by the end of the study. The researchers noted that more data are needed to determine whether the stress stemmed from the AAI itself or the broader challenges of the pandemic. Nonetheless, this suggests that the implementation context is crucial and that providing parents with proper training and clear expectations is essential to success.

Finally, while most research has focused on younger students, animal-assisted interventions have begun to expand to higher education settings. Randall and Smith-Adcock (2024) explored college counselors' perceptions of incorporating animals into group therapy. Their findings, although based on a small sample, revealed that counselors viewed therapy animals as creating safe and trusting environments that enhanced social connections. The counselors emphasized the importance of handler training, animal welfare, and flexibility in sessions. These findings suggest that when implemented with proper care and preparation, AAI can offer valuable benefits across educational levels.

Support from educators and parents is critical to the sustained implementation of animal-assisted interventions. Continued education, clear communication of therapeutic goals, and appropriate program design will help foster greater acceptance and long-term success in both the school and home environment.

Chapter Summary

Current research highlights the vital role of intrinsic motivation and behavioral persistence in promoting reading development, particularly among children with speech and language difficulties. Animal-assisted intervention (AAI), such as therapy dog reading programs, has demonstrated benefits in improving motivation, reducing anxiety, and enhancing reading attitudes. However, limited research has explored how the presence of a therapy dog affects a child's ability to persist through challenging reading tasks. Few studies have directly examined persistence as an observable behavior. Given that persistence is a critical predictor of literacy success, especially for early readers and those with academic or communication difficulties, this study addresses a significant gap in the literature. By examining how children persist while reading familiar and unfamiliar texts with a therapy dog present, this study seeks to determine whether they maintain effort when faced with complex or unfamiliar reading tasks. The findings will provide valuable insights for speech-language pathologists, educators, and caregivers seeking to motivate students to engage with a broader range of reading materials. In addition, positive findings may contribute to the growing body of research on AAI and help promote broader acceptance and implementation across educational and therapeutic settings.

Chapter III

Methodology

This chapter outlines the methodological framework used to examine motivation and persistence during reading sessions with a certified therapy dog. The study employs a within-subjects, mixed-methods research design to compare persistence and reading motivation when children read familiar versus unfamiliar texts in the presence of a therapy dog.

This chapter details the research design, including population and sampling procedures, therapy dog qualifications, operational definitions of variables, data collection instruments, procedures, and the data analysis plan. Overall, the components were designed to ensure consistency and validity while addressing the study's purpose of exploring how animal-assisted intervention may affect persistence during unfamiliar reading tasks.

Research Design

This within-subjects, mixed-methods design investigated children's behavioral persistence during reading sessions with a therapy dog, comparing responses between familiar and unfamiliar texts. A within-subjects approach allowed each participant to experience both conditions (familiar and unfamiliar book reading), reducing variability related to individual differences and enhancing internal validity.

Quantitative data were collected through a reading motivation questionnaire completed by participants using a 4-point Likert scale. Additionally, each child was assigned a rubric score based on their persistent behavior while reading each book. Qualitative data were gathered through behavioral observation of persistence, such as attempts to decode unknown words,

continued reading despite errors, asking for help, and persevering with the task despite frustration.

Each reading session consisted of three reading tasks: 1) familiar book (selected and confirmed by the parent), 2) unfamiliar book 1 and 3) unfamiliar book 2. Unfamiliar books were selected from a list based on the familiar book's lexile level (see Appendix D). Lexile levels refer to a standardized, scientific metric used to measure the complexity of text.

Children read aloud to a certified therapy dog in a quiet, private room within the public library. The same researcher and research assistant were present for all sessions to maintain consistency. The researcher offered only comments related to the therapy dog interaction and redirection to the task ("Let's get back to the story," "Do your best."), if the participant paused reading or was off task for 10 seconds. The researcher did not assist with sounding out words or comprehension of the story. Parents were asked to wait outside the room to minimize influence on behavior or responses on the survey. Comparisons were made between persistent behaviors across familiar and unfamiliar reading conditions. Comparisons were made between initial motivation survey scores and rubric scores on the observational data tracker (see Appendix B). This design supported the exploration of how the presence of a therapy dog can impact perseverance in unfamiliar tasks, as reflected in observable persistent behaviors.

Recruitment

Participants were recruited through responses to an informational flyer posted at the local public library (see Appendix E). The informational flyer provided an overview of the study's purpose, eligibility, and the researcher's contact information. Parents or guardians who were interested could contact the researcher directly by email or use a survey link provided through Qualtrics. Basic demographic information was collected, including the child's age, gender, grade

level, comfort level/tolerance of dogs, participation in therapy services, and prior participation in therapy dog programs. The information provided by the parent/guardian ensured alignment with inclusion and exclusion criteria.

Population and Sample

Sixteen participants were recruited for the study. Five participants did not respond to the initial scheduling requests. During the scheduling process, three participants indicated they were unable to attend during the scheduled session times. The study resulted in a final sample of 8 participants.

Demographics

The participants ranged in age from 6 to 12 years of age ($M = 9.4$ years, $SD = 2.3$) and included 4 males (50%) and 4 females (50%). The sample included students in grade one through seven. Participants included two first graders (25%), one fourth grader (12.5%), three fifth graders (37.5%), one sixth grader (12.5%), and one seventh-grade student (12.5%). The distribution indicates a higher representation of upper elementary students.

English was the primary language of all participants. Two participants receive services through an IEP (Individualized Education Program). All participants reported that they have not previously participated in a therapy dog reading program. The selected library site has been hosting a therapy dog reading program since March 2025. During that time, over 40 children in the community have had the opportunity to read to a therapy dog through the Tales for Tails reading program. To preserve the novelty of the therapy dog experience, children who have previously participated in the library's Tales for Tails therapy dog reading sessions were excluded from the study.

Therapy Dog

One therapy dog was used in this study: a 4-year-old female Goldendoodle named Finlea. She is a low-shedding breed, which reduced the risk of allergic reactions in participants. Finlea's vaccinations were up-to-date as recommended for dogs and received routine wellness evaluations in accordance with veterinary standards. Documentation of vaccination records and wellness checks were available upon request. Finlea completed basic, intermediate, and advanced obedience training before the age of 10 months. She earned the American Kennel Club's Canine Good Citizen (CGC) title at 11 months of age. At 14 months, she was approved for membership with the Alliance of Therapy Dogs, having met all observation and testing criteria for therapy certification. Since becoming certified, she has completed over 245 supervised therapy visits in diverse environments including libraries, nursing homes, military installations, and school settings. Continued membership and certification through the Alliance of Therapy Dogs requires submission of the Renewal Health Verification Form. This form is completed by the veterinarian and attests that all three of the following items regarding the dog's health are current: an annual exam, a negative fecal test (within one year), and a rabies vaccine or titer (0.5 IU within two years). Her temperament, health maintenance, and handler supervision meet established best practices for incorporating therapy animals in educational research involving children.

The researcher served as the therapy dog handler and remained with the dog at all times. The researcher/handler is a licensed speech-language pathologist. It is recognized that due to the SLP's education and training in the area of behavior, communication, and language could impact the participant's interaction and progress with the therapy dog; however, the

researcher/handler only interacted with the students as deemed necessary for interaction with the therapy dog and did not provide additional intervention or assistance with the reading activity.

Operational Definitions of Variables

This study includes several variables that require clear operational definitions to ensure consistency in data collection, observation, and analysis. Each variable below is defined by how it will be measured, observed, or confirmed during the structured reading session.

Reading Persistence

Reading persistence is defined as the participant's sustained effort and attention to the task while reading aloud, particularly when encountering unfamiliar material. Persistence will be measured using the researcher-developed reading persistence observational rubric (see Appendix C), which consists of a 4-point scale. Scores reflect specific behavioral indicators, including continued reading despite errors, attempts to decode unfamiliar words, on-task behavior, sustained focus, and willingness to continue reading when offered an additional unfamiliar book.

Familiar Book

A familiar book is defined as a text that the participant has previously read aloud without assistance. Parents will be asked to select and confirm this book before the session. This book will serve as the initial reading task and establish a baseline for reading behavior in the presence of the therapy dog.

Unfamiliar Book

An unfamiliar book is defined as a developmentally appropriate text that the participant has not previously read. The researcher will select unfamiliar books aligned with the participant's familiar book in lexile level (see Appendix D). Parents will confirm that the participant has not

previously encountered any of the unfamiliar texts. These books will be used for the second and optional third reading tasks to assess persistence when reading with the therapy dog.

Therapy Dog Presence

Therapy dog presence refers to the inclusion of a certified therapy dog in the room during all reading sessions. The dog will be situated near the participant. They will have the opportunity to pet, speak to, and interact with the dog as desired throughout the reading sessions. The therapy dog's presence is intended to provide a calming, nonjudgmental atmosphere for all reading tasks.

Reading Motivation

Participants' reading motivation will be measured before and after reading sessions with the therapy dog. Motivation will be measured using the researcher-developed motivation for reading survey (see Appendix A). Survey items focus on participants' attitudes toward reading and their willingness to read in front of peers and adults.

Persistent Behavioral Characteristics

Persistent behavioral characteristics are observable indicators of sustained focus and effort during reading. These include attempts at decoding, reading beyond the required time, completing a book, continuing to read despite errors, asking clarifying questions, self-correction, and minimal off-task behavior. These behaviors will be recorded on the observational data tracker (see Appendix B) and will be used to determine the participant's rubric score.

Procedure

When parents enrolled in the study, they completed the parent/guardian informed consent form (see Appendix F). Children completed the child assent form (see Appendix G). Parents were asked to bring one book for their child to read during the therapy dog session. Parents were instructed to select a familiar book that their child has previously read aloud independently.

The researcher read a standardized script to each participant to ensure consistency across sessions. The script began by explaining the purpose of the initial reading motivation survey and emphasized that there are no right or wrong answers. The script outlined the session structure, including the order in which the familiar and unfamiliar books would be read. Participants were informed that the therapy dog would be present during the readings. The script encouraged participants to try their best, reassuring them that the session is not a test. The participants were told they could ask for help if needed, but were encouraged to attempt to sound out words independently or to skip any they did not know. The script was designed to reduce anxiety, promote autonomy, and clarify expectations for the session.

To minimize the potential for external influence or assistance, parents were asked to wait outside the room during both the motivation survey and the reading sessions. If the participant requested help while reading either the familiar or unfamiliar book, the researcher encouraged the participant to continue trying independently and did not offer direct assistance with decoding or sounding out words.

The researcher set a 7-minute timer when the participant began each book. If the participant reached this limit, they were asked to stop and were offered the next book. The researcher and the trained research assistant documented behavioral observations and assigned a rubric score based on the reading persistence observational rubric (see Appendix C) for each book reading.

Motivation for Reading Survey

Before the reading session, each participant completed a brief 2-minute survey assessing attitudes and perceptions about reading (see Appendix A). Participants were informed that the survey was not a test and that there were no right or wrong answers. The survey utilized a 4-point

Likert-type scale, with response options ranging from “Yes” to “Never.” Children who could read independently were permitted to read the survey questions on their own. The survey items were read to those participants who could not read them independently. The researcher and a research assistant were present throughout the survey administration to provide clarification if a participant had difficulty understanding the wording of any item, while taking care not to influence responses.

Unfamiliar Book Selection Procedures

To ensure that the unfamiliar reading material was developmentally appropriate yet novel to the participant, the researcher provided a curated set of unfamiliar books. Five titles were available at each lexile level (e.g., 200–300L, 300–400L) to align with the participant’s reading ability (see Appendix D). Before the reading session began, parents were asked to confirm that their child had not previously read any of the unfamiliar books at the same lexile level as their familiar book. Any book that was familiar to the participant was removed. During the reading session, unfamiliar books were presented as the second and third reading selections.

Reading a Familiar Book

The participant was asked to read their familiar book with the therapy dog. The dog sat or lay down nearby, allowing the participant to pet her while reading. The participant could either finish the book or reach the 7-minute time limit, whichever came first. A total duration of approximately 20 minutes for the reading tasks is consistent with established practices in animal-assisted reading programs for early readers. It reflects developmentally appropriate expectations for sustained attention.

Reading Unfamiliar Books

Once the participant completed the reading activity with their familiar book, they were asked to read an unfamiliar book chosen by the researcher. The researcher stated, “Let’s read another book,” and handed them the unfamiliar book. The participant either finished the book or reached the 7-minute time limit. Researchers documented behavioral observations as the participant read.

Following the second book reading, the researcher asked, “Do you want to read more?” and offered another unfamiliar book to determine if they continued to persist while reading to the dog. The participant could either finish the book or reach the 7-minute time limit. Researchers documented behavioral observations as the participant read.

Readministration of the Motivation for Reading Survey

Following the reading sessions, the motivation for reading survey was re-administered to determine whether the therapy dog’s presence influenced participants’ attitudes and motivation towards reading (see Appendix A). Children who could read independently were permitted to read the survey questions on their own. The survey items were read to those participants who could not read them independently. The researcher and a research assistant were present throughout the survey administration to provide clarification if a participant had difficulty understanding the wording of any item, while taking care not to influence responses.

Interrater Reliability

A certified speech-language pathologist served as a secondary data collector and observed each reading session alongside the principal investigator to establish interrater reliability. Before any participant involvement, the data collector received training from the principal investigator. Training included a thorough overview of the study’s purpose and

procedures, a detailed explanation of the data collection form and reading persistence observational rubric, and clear definitions of the target behaviors to be observed and scored. The data collector received instructions on maintaining participants' confidentiality, using child-friendly practices, and remaining neutral during interactions. This training aimed to ensure consistency and accuracy in scoring.

Data Analysis

After the data collection was complete, both quantitative and qualitative data were systematically organized and prepared for analysis. Responses from the initial motivation survey and rubric scores were entered into a secure, password-protected digital database. Each participant was assigned a unique identification number to maintain confidentiality. There was no identifying information in this file. Behavioral observations collected during the reading session were documented using an observation data collection sheet and a rubric. These observational notes were reviewed for completeness immediately following each session. Notes were transcribed and prepared for coding, with each session labeled using the participant's ID number. Qualitative data were organized thematically around observed persistence behaviors (e.g., time on task, rereading difficult words, asking for help, showing frustration while continuing).

Data Storage

All data files, including survey responses, observation rubrics, and observational notes, remain securely stored on a password-protected computer. Survey data was reviewed for completeness and accuracy. Any ambiguous responses or anomalies (e.g., skipped items) were flagged and documented.

Confidentiality

Before analysis, identifying information will be removed or replaced with generic descriptors (e.g., “Participant 01”). Data used for reporting or dissemination are presented in aggregate form to protect participant privacy.

Ethical Assurances

This study complies with the ethical standards of the Institutional Review Board (IRB)/Ethics Committee at Valdosta State University (VSU). Given that the study involves minors and includes a certified therapy dog, additional ethical safeguards were implemented to protect the dignity and well-being of all participants. Approval was received by the VSU IRB before conducting the study (see Appendix H).

Chapter Summary

This chapter describes the methodology used to examine children’s reading persistence during reading sessions that incorporate animal-assisted intervention. A within-subjects, mixed-methods design was used to compare task persistence and motivation across familiar and unfamiliar reading conditions. This chapter detailed participant selection, therapy dog qualifications, operational definitions of variables, data collection procedures, and ethical safeguards. These methods provide a framework for investigating the influence of the presence of therapy dogs on task persistence.

Chapter IV

Findings

Analyses of Research Questions

In response to the research question, “Will participants continue to persist in reading an unfamiliar book while in the presence of a therapy dog?”, all participants (100%) chose to read a third book, which was the second unfamiliar one. All participants read all three books (one familiar, two unfamiliar) in full or reached the 7-minute per-book time limit.

Table 1

Individual Pre and Post Reading Motivation Scores

Participant	Pre	Post
1	19	24
2	20	20
3	20	20
4	21	22
5	20	21
6	19	20
7	21	22
8	18	21

Note. Total motivation scores ranged from 6 to 24; 20-24 = strong motivation; 15-19 = moderate motivation; 10-14 = mild motivation; 6-9 = poor motivation.

The next research question asked, “What persistent behavioral characteristics are reported about reading?” Participants completed the motivation for reading survey (see Appendix A) before and after the reading session. Responses are shown in Table 1. The scores represent the sum of responses across six reading motivation items. The possible scores ranged from six to 24. Higher scores indicate greater motivation towards reading experiences.

A paired samples t-test was conducted on the motivation for reading survey before and after the reading session. The analysis found significant increases in motivation towards reading during the post-reading survey administration ($\mu = 21.25$; $\sigma = 1.39$) compared to the pre-reading survey administration ($\mu = 19.75$; $\sigma = 1.04$); $t(7) = -2.5$, $p = 0.04$. Each participant reported an equal or higher level of motivation to read from the pre- to post-survey.

Item-level pre-motivation and post-motivation scores for each participant are provided in Table A (see Appendix I). Across all responses, increased motivation was reported in 12 of 48 (25%). In 34 of 48 (71%) responses, participants reported the same level of motivation towards the task. Two of 48 (4%) responses indicated a decrease in motivation. Participant three indicated a lower rating on “I like to read challenging books,” and participant five indicated a lower rating on “I like to read in front of my parents”. On the survey items, “I enjoy reading.”, “I like to read in front of my classmates.” and “I like to read challenging books.” two of eight participants responded with a higher rating following the therapy dog reading session. When responding to “I enjoy reading out loud.”, six of eight participants (75%) reported an increase in their ratings after therapy dog reading sessions. This suggests that participants may have felt more positive about reading aloud after reading in the presence of a therapy dog.

As part of the motivation for reading survey, participants were asked to provide one word that they would use to describe reading. Three of the eight participants used the word “fun” to

describe reading after the therapy dog reading sessions. Seven of eight participants used positive words to describe reading in the post-reading survey. Participant eight used the word “unsure” to describe reading in both pre- and post-surveys. The researcher refrained from providing further clarification about what was expected during the task to avoid influencing their response. All participant responses to this question are shown in Table 2.

Table 2

Individual Words to Describe Reading

Participant	Pre	Post
1	Good	Awesome
2	Good	Good
3	Interesting	Fun
4	Fun	Cool
5	Like	Fun
6	Normal	Fine
7	Fun	Fun
8	Unsure	Unsure

The final research question asked, “While in the presence of a therapy dog, what persistent behavioral characteristics do children exhibit when reading an unfamiliar book?” All participants (100%) exhibited persistence as they read the 3rd book in its entirety or to the 7-minute time limit. The observational data tracker (see Appendix B) was used to collect additional information on observable persistent behavior characteristics during all reading sessions. Tables 3 and 4 display the persistent behaviors observed during the reading of unfamiliar books. All participants remained on task. When the participants encountered unknown words, they attempted to sound out words independently. During the first unfamiliar

book, three participants asked for help with sounding out words, while only one did during the 3rd book reading.

Table 3

Persistent Behaviors Observed During Second Book Reading

Participant	Redirection needed	Attempts to sound out unknown words	Asks for help
1	No	Yes	No
2	No	Yes	No
3	No	Yes	No
4	No	Yes	No
5	No	Yes	Yes
6	No	Yes	Yes
7	No	Yes	No
8	No	Yes	Yes

Table 4

Persistent Behaviors Observed During Third Book Reading

Participant	Redirection needed	Attempts to sound out unknown words	Asks for help
1	No	Yes	No
2	No	Yes	No
3	No	Yes	No
4	No	Yes	No
5	No	Yes	No
6	No	Yes	No
7	No	Yes	No
8	No	Yes	Yes

Participants were assigned a rubric score during each book reading based on the observed characteristics of persistence, including attempts to sound out words, asking for help, and on-task behavior (see Appendix C). The rubric scores assigned were the following: exceptional persistence (4), strong persistence (3), moderate persistence (2), mild persistence (1), and no observable effort (0). Table 5 depicts the scores for each participant for each book.

Table 5

Rubric Scores for Observed Reading Persistence

Participant	Book 1	Book 2	Book 3
1	4	4	4
2	4	4	4
3	4	4	4
4	4	4	4
5	4	4	4
6	4	4	4
7	4	3	4
8	4	3	3

Note. Reading persistence was rated on a 4-point scale; 4 = Exceptional Persistence, 3 = Strong Persistence, 2 = Moderate Persistence, 1 = Mild Persistence, 0 = No Observable Effort

Interrater Reliability

Interrater reliability was established through observation by the secondary data collector. She is a certified speech-language pathologist and received training from the principal investigator prior to data collection. The observers used the reading persistence observational rubric (see Appendix C) to assign a score during each book reading. Percent agreement was calculated by dividing the number of agreements by the total number of scored items. Observers

agreed on 21 of 24 rubric scores, yielding an interrater agreement of 87.5%. This level of agreement indicates acceptable reliability for observational scoring and supports the consistency of the persistence ratings used in the analysis.

Chapter Summary

The final sample for this study consisted of eight participants after excluding those who were nonresponsive or had scheduling conflicts. Participants ranged in age from six to 12 years ($M = 9.4$, $SD = 2.3$) and included an equal number of males and females. All participants were English-speaking. None of the participants had previously participated in a therapy dog reading program, and two participants received services through an Individualized Education Program (IEP).

Findings indicated consistent persistence in reading behaviors and positive shifts in reading motivation following reading activities with a therapy dog. All participants continued reading unfamiliar texts, with 100% choosing to attempt a third unfamiliar book and either completing all three or reading until the predetermined time limit.

Analysis of motivation data further supported these findings. Results from a paired-samples t-test demonstrated a statistically significant increase in reading motivation from pre to post-motivation survey. Post-reading motivation scores were significantly higher than pre-reading scores. All participants reported greater motivation toward reading after the therapy dog reading session.

Item-level analysis revealed that most responses remained stable across pre- and post-surveys. A decrease occurred in only two responses across two participants. The greatest increases were observed in participants' comfort with reading aloud, with 75% of participants reporting higher ratings on this item following the reading session.

Qualitative responses further supported the quantitative findings. When asked to describe reading using a single word, several participants used positive descriptors following the therapy dog reading session, with “fun” emerging as the most frequently reported post-intervention descriptor.

These findings suggest that therapy dog reading sessions may support both motivational and behavioral aspects of reading persistence among children. The next chapter will provide further discussion, including limitations to the study and recommendations for future research.

Chapter V

Discussion and Implications

Summary of the Study

The purpose of this study was to examine children's reading persistence and motivation during reading sessions conducted in the presence of a certified therapy dog. Using a within-subjects, mixed-methods design, eight children aged 6-12 years read one familiar and two unfamiliar texts aloud in a structured setting at a public library. All participants chose to continue reading when offered the second unfamiliar book and either completed each book or read until the predetermined 7-minute time limit. Data obtained through observation revealed on-task behavior, independent attempts to decode unfamiliar words, and minimal need for redirection when reading unfamiliar material. These behavioral observations suggest that the participants maintained engagement and effort while reading unfamiliar material with a therapy dog. In addition, there was a significantly higher level of reported motivation towards reading following the therapy dog reading sessions.

Major Findings

Motivation for Reading Survey

Quantitative analyses yielded a statistically significant increase in reading motivation following the reading sessions. Participants' scores on the Motivation for Reading Survey following the therapy dog reading sessions were significantly higher than pre-session scores. All participants reported greater motivation to read after reading to a therapy dog. Most participants reported improved motivation to read aloud after the reading experience.

Qualitative findings further supported the quantitative results. Participants used more positive descriptors to characterize reading following the session, with “fun” emerging as the most frequently reported post-session descriptor. Overall, these findings suggest that canine-assisted intervention during reading sessions may positively influence both task persistence and motivational aspects of reading, particularly during unfamiliar literacy tasks.

Observed Reading Persistence

Research on AAI has found that students exhibit increased motivation, on-task behavior, confidence, and fewer negative behaviors, and that a dog’s presence in the classroom has a calming effect (Hergovich et al., 2002; Juríčková et al., 2020; Kirnan et al., 2018). The current study supported this research. While reading in the presence of a therapy dog, all participants read all three books in full or to the predetermined seven-minute time limit. All participants were rated as having exceptional persistence (4) or strong persistence (3) across all three book readings, indicating that they maintained on-task behavior, independently sounded out unfamiliar words, and asked for help when needed to continue with the task. All participants read the unfamiliar books without needing redirection to the task. With the display of increased motivation and task persistence, the current study provides further evidence that dog-assisted reading programs can improve reading skills.

Discussion

Studies have shown that therapy dogs can reduce anxiety, increase motivation, and enhance engagement in clinical sessions (Antonucci, 2022; Goodmon et al., 2021; Jalongo, 2005; Jalongo & Petro, 2018; Paul & Norbury, 2012; Rodriguez-Meehan et al., 2023). Animal-assisted intervention (AAI) has been found to complement traditional interventions by promoting emotional regulation, encouraging communication, and strengthening interpersonal connections

(Fung, 2019; Kirnan et al., 2018; London et al., 2020; Ngai et al., 2021). Although AAI can provide positive impacts, the implementation requires deliberate planning, training, and close attention to the participant's comfort, needs, and therapeutic goals (Antonucci, 2022). Additional research is needed to determine for whom and under what conditions AAT is most effective. Researchers have found that therapy dog programs can increase interest in reading, boost self-esteem, and reduce disruptive behaviors (Barber & Proops, 2019; Hergovich et al., 2002; Kirnan et al., 2015; Kotrschal & Ortbauer, 2003; Linder et al., 2017; London et al., 2020; Rousseau & Tardif-Williams, 2019). Therapy dogs can provide positive emotional connections. Children often perceive that they are reading for the dog rather than the adult, which enhances their willingness to engage in the task (Hill et al., 2020a; Lewis & Grigg, 2021). The current study provides more support in this area, as all participants exhibited exceptional or strong task persistence while reading both familiar and unfamiliar material in the presence of a therapy dog. It is possible that each participant perceived themselves as reading to the dog rather than to the adults in the room, which enhanced their motivation and on-task behavior.

Limitations to the Study

One limitation of the current study is the small sample size, which limits the generalizability of the findings. The small number of participants was impacted by ethical and welfare considerations related to the therapy dog. The therapy dog handler is responsible for implementing best practices, including monitoring the dog's stress levels, fatigue, and overall well-being. This involves establishing appropriate time limits for therapy visits based on the dog's tolerance. Data collection sessions were limited to approximately two to three hours per day to ensure the therapy dog's tolerance and safety were not exceeded. These time constraints limited the number of reading sessions that could be conducted, which reduced the total number

of participants enrolled in the study. While this limitation is consistent with ethical and welfare standards for therapy dog use, it affects the extent to which the results can be generalized to broader populations or settings.

Recommendations for Future Research

Future research should consider incorporating comparison conditions to investigate the effects of animal-assisted interventions on reading motivation and persistence. In the present study, all participants completed reading tasks with a therapy dog for each book, which limits the ability to attribute observed differences specifically to the therapy dog's presence. Future studies could use a within-subjects or mixed-design approach in which participants read unfamiliar texts with and without a therapy dog present, allowing comparison of reading behaviors across conditions.

Summary and Conclusion

The purpose of this study was to examine children's reading persistence and motivation during reading sessions with a certified therapy dog. The findings suggest that therapy dog reading sessions may support both the motivational and behavioral aspects of reading, particularly when children encounter unfamiliar material.

Consistent with expectancy-value theory (Wigfield & Eccles, 2000, 2020), all participants demonstrated sustained engagement when both the expectancy of success and the perceived value of the task were present. All participants persisted in reading unfamiliar texts, chose to continue reading when given the option, and maintained on-task behavior throughout each session. These findings align with previous research, which found that when children believe a task is achievable and experience it as enjoyable or emotionally safe, they are more likely to persist through difficulty (Guthrie et al., 2007; Jeldrez et al., 2023).

The presence of a therapy dog may have contributed to their motivation by reducing the pressure to perform and fostering a nonjudgmental reading environment. Measures of reading motivation further supported these outcomes. Participants showed a statistically significant increase in post-reading motivation scores, with all participants reporting equal or higher motivation after the therapy dog reading. Although challenges remain in consistently measuring reading motivation, particularly among young children, the observed increases align with research indicating that reading motivation is influenced by both self-concept and perceived enjoyment (Jeldrez et al., 2023; Wigfield & Guthrie, 1995). The greatest gains were observed in participants' comfort with reading aloud, a task often associated with anxiety and reduced persistence. This finding is consistent with previous AAI research suggesting that therapy dogs can reduce stress, enhance emotional regulation, and increase willingness to engage in challenging literacy tasks (Antonucci, 2022; Fung, 2019; Goodmon et al., 2021; Jalongo, 2005; Jalongo & Petro, 2018; Kirnan et al., 2018; London et al., 2020; Ngai et al., 2021; Paul & Norbury, 2012; Rodriguez-Meehan et al., 2023).

Behavioral indicators of persistence observed during reading sessions further strengthen the study's conclusions. All participants remained on task, independently attempted to decode unfamiliar words, and asked for help when needed, which are characteristics of persistence identified in the literature. These behaviors reflect developmental expectations for school-age children, who rely on self-regulation and problem-solving when faced with academic challenges (Formanek & Spaulding, 2024). The consistency of these behaviors across sessions suggests that a reading environment with a therapy dog may have supported consistent effort and on-task behavior.

This study found that the presence of a therapy dog during reading sessions had a positive

effect. A small sample size and the absence of a comparison condition without a therapy dog present limited the study. However, the consistent use of reading sessions with a therapy dog allowed for a focused examination of participant outcomes in this intervention context. Ethical and welfare considerations for the therapy dog were appropriately prioritized, reflecting responsible research practice and strengthening the study design's integrity. Although these factors may limit broad generalizability, the findings provide evidence and establish a strong foundation for future controlled studies of canine-assisted reading interventions.

In conclusion, this study contributes to the growing body of research on animal-assisted intervention by addressing a gap in the literature regarding children's observable persistence during reading. While previous studies have emphasized outcomes such as reading fluency, motivation, and self-concept, few have examined persistence. The findings suggest that therapy dog reading sessions may provide a supportive environment that promotes sustained engagement, positive attitudes towards reading, and task completion. These results have important implications for speech-language pathologists, educators, and caregivers seeking innovative, ethically grounded approaches to support literacy development. Continued research with larger sample sizes, comparison conditions, and diverse populations is warranted to further examine the effectiveness of animal-assisted reading interventions.

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Appendix A:

Motivation for Reading Survey

	YES!!(4)	Sometimes (3)	No (2)	Never (1)
I enjoy reading.				
I enjoy reading out loud.				
I like to read in front of my classmates.				
I like to read challenging books.				
I like to read just for fun.				
I like to read in front of my parents.				

What is one word that you would use to describe reading? _____

Total Score: _____

Appendix B:

Observational Data Tracker

Child's Name:			
Date of Birth:			
Date of Reading Session:			
IEP (Y/N):			
	Book 1	Book 2	Book 3
Book Title			
Has the student read the book previously? (Y/N)			
Total Time on Task (minutes)			
% of pages read (Pages read /Total Pages)			
Redirections needed to stay on task? (Y/N)			
Attempted to sound out unknown words? (Y/N)			
Asked for help/clarification? (Y/N)			
Desire to continue with 3rd book? (Y/N)			
Behavioral signs of enjoyment? (For example, smile, laugh, talk to the dog, pet the dog)			
Behavioral signs of frustration? (For example, sighing, fidgeting, giving up)			
Rubric Score			

Other Observations:

Appendix C:

Reading Persistence Observational Rubric

Observational Rubric			
Score	Level	Descriptor	Behavioral Indicators
4	Exceptional Persistence	Participant sustains focus throughout the session, attempts to sound out words, self-corrects, and demonstrates resilience without adult intervention	Sustained attention, re-reading, decoding attempts, positive self-talk, minimal redirection (0-1 times)
3	Strong Persistence	Participant shows consistent effort, attempts to sound out most unknown words, may require minimal prompting (2-3 times), and continues reading after minor challenges.	Occasional glances away, requests help, visible effort, returns to task after difficulty.
2	Moderate Persistence	Participant makes some effort but avoids or skips several unknown words, occasionally disengages, and needs prompting to stay on task (4-5 times).	Skips words, glances around the room, shows signs of frustration, responds to redirection.
1	Mild Persistence	Participant gives up quickly on sounding out unknown words, frequently disengages, and needs repeated redirection to continue (more than 5 times).	Lack of eye contact with text, disengaged posture, refusal to try, multiple prompts needed.
0	No Observable Effort	Participant refuses to read, stops immediately when challenged, or remains off-task for the session.	Refusal to begin, disengagement from the start, complete withdrawal, no attempt to read.

Appendix D:

Books Offered by Lexile Level

100L-199L

Moo Dog- David Milgrim (140L)
I Love Pink- Frances Gilbert (140L)
Dear Zoo- Rod Campbell (150L)
Biscuit Goes to School- Alyssa Satin Capucilli (160L)
David Gets in Trouble- David Shannon (160L)

200L-299L

Miss Bindergarten and the Best Friends (200L)
Space Cows- Eric Seltzer (220L)
Biscuit Loves the Park- Alyssa Satin Capucilli (220L)
Will Sheep Sleep- Hilary Leung (270L)
That's not my Zebra's Colors (290L)

300L-399L

Clark the Shark Tooth Trouble- Bruce Hale (320L)
What Pet Should I Get?- Dr. Seuss (350L)
The Berenstain Bears' New Kitten- Stan and Jan Berenstain (370L)
Wacky Wednesday- Dr. Seuss (370L)
Monster School The Spooky Sleepover- Dave Keane (381L)

400L-499L

It's Not Easy Being a Bunny- Marilyn Sadler (400L)
The Smart Cookie- Jory John and Pete Oswald (440L)
The Berenstain Bears We Love Trucks- Jan and Mike Berenstain (470L)
Valentine Gross Out- Suzanne Lang (480L)
Pirates Past Noon- Mary Pope Osborne (490L)

500L-599L

Sneezy the Snowman- Maureen Wright (500L)
Dolphins- Sharon Bokoske and Margaret Davidson (500L)
Tigers at Twilight- Mary Pope Osborne (510L)
Olaf and the Three Polar Bears- Calliope Glass (530L)
The Gingerbread Man Loose in the School- Laura Murray (580L)

600L-699L

If I Ran the Dog Show- Dr. Seuss (610L)
Thump, Quack, Moo- Doreen Cronin and Betsy Lewin (610L)
Goodnight, Goodnight Construction Site- Sherri Duskey and Tom Lichtenheld (610L)
Pumpkin's Story (670L)

700L-799L

Slam Dunk- Matt Christopher (720L)

Bad Kitty- Nick Bruel (720L)

Whales on Stilts- M.T. Anderson (760L)

Tuck Everything- Natalie Babbitt (770L)

800L-899L

Strega Nona- Tomie de Paola (800L)

The Trolls- Polly Horvath (810L)

Best Friends and Drama Queens (840L)

Gets Slimed- Frances O’Roark Dowell (870L)

Harry Potter and the Sorcerer’s Stone- J.K. Rowling (880L)

900L-1000L

Lucy Rose- Katy Kelly (900)

A Little Princess- Frances Burnett (930L)

Molly McGinty Has a Really Good Day- Gary Paulsen (960L)

Appendix E:
Recruitment Flyer

Volunteers Needed for a Reading Research Study with a Therapy Dog!

Does your child enjoy reading—and love animals? We are conducting a study to learn how reading with a therapy dog affects children's motivation and persistence when reading both familiar and unfamiliar books.

Who Can Participate?

- Children ages 5–12 years old without previous experience reading to therapy dogs

What Will My Child Do?

- Bring a familiar book from home to read aloud
- Read two additional unfamiliar books provided by the researcher
- Spend time reading with a certified, trained therapy dog
- Complete a short reading motivation survey before and after the reading sessions
- Sessions will take approximately 30 minutes
- A parent or guardian must remain on-site but will wait outside the reading room.

Where Will the Study Take Place?

- Grovetown Library Meeting Room
- Appointments scheduled individually after enrollment



How to Participate

Contact

Stephanie Keenan, M.A., CCC-SLP
smkeen@valdosta.edu

OR

REGISTER HERE:



Questions regarding the purpose or procedures of the research should be directed to Stephanie Keenan at smkeen@valdosta.edu. This study has been approved by the Valdosta State University Institutional Review Board (IRB) for the Protection of Human Research Participants. The IRB, a university committee established by Federal law, is responsible for protecting the rights and welfare of research participants. If you have concerns or questions about your rights as a research participant, you may contact the IRB Administrator at 229-253-2947 or irb@valdosta.edu.

Appendix F:

Informed Consent

VALDOSTA STATE UNIVERSITY

Parent/Guardian Permission for Child's Participation in Research

You are being asked to allow your child to participate in a research study entitled "*Evaluating the Influence of Animal-Assisted Intervention on Task Persistence During Literacy Activities in Early Readers*". This research study is being conducted by Stephanie Keenan, a student in the Department of Communication Sciences and Disorders at Valdosta State University. The purpose of this study is to investigate how children persist in reading when presented with both familiar and unfamiliar books, and to explore the influence of a therapy dog's presence on this persistence. Your child's participation in this study is entirely voluntary. From this point forward, the term "child" is used to refer to either a child or a ward.

As described in more detail below, we will ask your child to complete pre- and post-surveys related to reading motivation, then read up to three books in the presence of a therapy dog. Your child will be asked to read their familiar book, followed by one to two unfamiliar books. Your child's participation will last for approximately 30 minutes. Someone in your position might be interested in allowing your child to participate because they may enjoy the experience of reading with a therapy dog and gain confidence in reading aloud. The study also supports broader educational research on reading motivation and child behavior in supportive settings. There are minimal risks associated with participation. Some children may feel shy or hesitant while reading aloud. The presence of the therapy dog is intended to create a calm and supportive environment. The therapy dog is trained, certified, and will remain with her handler at all times. Children will be closely monitored throughout each session, and participation will be discontinued immediately for any child who shows signs of fear, anxiety, or distress. Parents can terminate the session at any time if they feel their child is uncomfortable. It is important for you to know that you or your child may discontinue participation at any time during this study. This form includes detailed information to help you decide whether to participate in this study.

Please read it carefully and ask any questions you have before agreeing to participate. Please be sure to retain a copy of this form for your records.

Procedures:

If you agree for your child to participate in this study, they will take part in a single reading session at the Columbia County Library- Grovetown Branch. The session will last approximately 30 to 40 minutes and will take place in a quiet, private room with a certified therapy dog and trained handler present. At the start of the session, your child will complete a brief reading motivation survey that uses simple questions and pictures to help them express their feelings about reading. You will be asked to bring a familiar book from home that your child has read aloud before and enjoys. Your child will read this familiar book aloud while sitting near the therapy dog, who will remain calm and close by during the session.

Next, your child will be given an unfamiliar book to read aloud. Following the first unfamiliar book reading session, they will be asked if they'd like to read a third book with the dog. Unfamiliar books will be selected based on your child's reading level and confirmed to be ones your child has not read before. Each book reading will be timed for up to 7 minutes. Throughout the session, the researcher and a trained assistant will quietly observe your child's behavior—such as whether they persist, ask for help, or show signs of frustration. They will not help your child with the reading, but will encourage them to do their best. After all reading is complete, your child will retake the same short motivation survey to see if their feelings about reading have changed.

You will remain on-site throughout the session, but will be asked to wait just outside the room to help your child stay focused. If your child appears uncomfortable, anxious, or distressed at any time during the session, the session will be stopped immediately. You may also choose to end the session at any point if you feel your child is not comfortable continuing.

You or your child may discontinue participation at any time during this study, regardless of the reason.

All direct interactions with your child will occur at the Columbia County Library - Grovetown Branch.

This study involves research. There are no alternatives to the experimental procedures in this study. The only alternative is for you to choose not to allow your child to participate.

Possible Risks or Discomfort:

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those you encounter in everyday activities. Although there are no known risks to your child associated with the research procedures, it is not always possible to identify all potential risks of participating in a research study. However, the University has taken reasonable safeguards to minimize potential but unknown risks.

Some children may feel shy or hesitant while reading aloud. The presence of the therapy dog is intended to create a calm and supportive environment. The therapy dog is trained, certified, and will remain with her handler at all times. All sessions involving the therapy dog will be conducted in a safe, controlled environment in a library classroom. The therapy dog will be fully certified, up-to-date on all vaccinations, and accompanied by a trained handler at all times.

Children will be closely monitored throughout each session, and participation will be discontinued immediately for any child who shows signs of fear, anxiety, or distress. Parents can terminate the session at any time if they feel their child is uncomfortable. All activities will follow established rules through the Alliance of Therapy Dogs, the organization of therapy dog certification. The dog will wear appropriate equipment, including a collar, identification, and a 4-foot leash as required by the certifying organization. The handler carries a copy of the immunization record and verification of certification on each visit. The dog will be offered water as needed during the reading sessions; however, the handler or participants will not give treats to reduce the risk and maintain safety. By agreeing to participate in this research project, you are not

waiving any rights that you or your child may have against Valdosta State University for injury resulting from negligence of the University or its researchers.

Potential Benefits:

Your child may not receive any direct or personal benefit from participating in this study. However, some children may find the experience of reading with a therapy dog enjoyable and motivating. Participating in the study may help boost your child's confidence and interest in reading, as research suggests that therapy dogs can provide a calming and encouraging environment for young readers.

There are no guaranteed benefits, and participation is entirely voluntary. The information gathered from this study may help researchers and educators better understand how to support children's reading motivation and persistence, which could lead to improved future reading programs and interventions.

Costs and Compensation:

There are no costs to you or your child for participating in this study. You will not be required to pay any fees, and the researcher will provide all necessary materials for the study. You will be asked to provide your transportation to the library and to bring a familiar book from home for your child to read; however, no additional expenses are expected.

No compensation, payment, or other incentives will be provided for your child's participation in this study. Participation is entirely voluntary, and you may choose to stop at any time without penalty or loss of benefits.

Assurance of Confidentiality:

Valdosta State University and the researcher will keep your child's information confidential to the extent allowed by law. Members of the Institutional Review Board (IRB), a university committee charged with reviewing research to ensure the rights and welfare of research participants, may be given access to your child's confidential information.

Your child will be assigned a code number to identify and track their data. Numbers assigned to your child will not be associated with their name or any other identifying information. This is to ensure that individuals remain unidentifiable. Your child's birth date will be recorded as a way to calculate your child's chronological age to interpret scores and results of this study. All information obtained from testing will be kept in the researcher's office, secured by lock and key. Only those individuals that you choose to share the results with will have access to the results.

Data from this study will be reported in combination with testing information obtained from other participants. None of the participants will be identified in this study by name or birth date.

Voluntary Participation:

Your decision to allow your child to participate in this research project is entirely voluntary. If you agree now to enable your child to participate and you change your mind later, you are free to withdraw your child from the study at that time. By not allowing your child to participate in this

study or by withdrawing them from the study before the research is complete, you are not giving up any rights that you or your child have or any services to which you or your child are otherwise entitled to from Valdosta State University. If you decide to withdraw your child from the study after data collection is complete, your child's information will be deleted from the database and will not be included in research results.

Should you decide to withdraw after data collection is complete, your child's information will be deleted from the database and will not be included in research results.

Information Contacts:

Questions regarding the purpose or procedures of the research should be directed to Stephanie Keenan at smkeen@valdosta.edu. This study has been approved by the Valdosta State University Institutional Review Board (IRB) for the Protection of Human Research Participants. The IRB, a university committee established by Federal law, is responsible for protecting the rights and welfare of research participants. If you have concerns or questions about your rights as a research participant, you may contact the IRB Administrator at 229-253-2947 or irb@valdosta.edu.

Agreement to Participate:

The research project and my child's (or ward's) role in it have been explained to me, and my questions have been answered to my satisfaction. I grant permission for my child to participate in this study. By signing this form, I am indicating that I am either the custodial parent or legal guardian of the child. I have received a copy of this permission form.

I would like to receive a copy of the results of this study: Yes No

Mailing Address: _____

E-mail Address: _____

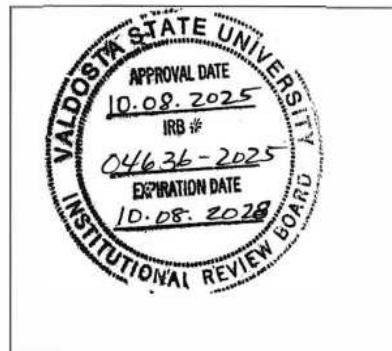
Printed Name of Child/Ward

Printed Name of Parent/Guardian

Signature of Parent/Guardian Date

Signature of Person Obtaining Consent Date

This research project has been approved by the Valdosta State University Institutional Review Board for the Protection of Human Research Participants through the date noted below:



Appendix G:

Child Assent

Hi. My name is Stephanie Keenan. I'm a student at Valdosta State University. Currently, I'm conducting a research study on how children read books in front of a therapy dog. A calm, friendly therapy dog named Finlea will be in the room while you read. I would like to ask you to participate in a study, but before I do, I want to explain what will happen if you decide to help me.

If you decide to participate in this study, I will ask you to answer six questions about your feelings regarding reading before and after you read to the dog. There are no right or wrong answers. First, you will read the book that you brought from home. I will also ask you to read one or two new books you haven't seen before. Finlea, the therapy dog, will be with you while you read. You can pet her while reading to her, or you can simply let her listen.

Nothing bad will happen. If you get tired or don't want to read anymore, that's okay. You can stop reading at any time. No one will be upset with you if you stop. Two grown-ups will be there to help if you have questions. The whole activity will take about 30 minutes. You will not be recorded during any of the tasks today.

You'll get to spend time with a friendly dog and might feel good about reading. By being in this study, you'll help us learn how to help other kids enjoy reading too.

Your parents will not know what you have answered on the survey or how much you choose to read. When I talk about my study with others, I will not use your name, and no one will be able to identify who I'm talking about.

Your parent has said that it is okay for you to be in my study. However, if you don't want to be in the study, you don't have to be. What you decide won't make any difference with your grades or anything to do with school. I won't be upset, and no one else will be upset, if you don't want to be in the study. If you want to be in the study now but change your mind later, that's okay. You can stop at any time. If there is anything you don't understand, please let me know so I can explain it to you.

You can ask me questions about the study. If you have a question later that you don't think of now, you can call me, ask your parent to call me or send me an email.

Do you have any questions for me now?

Would you like to be in my study and answer some questions, then read stories to the dog?

Name of Child: _____

Parental Permission on File: Yes No

Student's Voluntary Response to Participation: Yes No

Signature of Researcher: _____ **Date:** _____

Appendix H:

IRB Approval



Institutional Review Board (IRB) for the Protection of Human Research Participants Expedited Protocol Approval Report

Protocol Number: 04636-2025

Responsible Researcher: Stephanie Keenan

Supervising Faculty: Dr. Katherine Lamb

Co-Investigator: Cassie Mercer

Project Title: *Evaluating the Influence of Animal-Assisted Intervention on Task Persistence During Literacy Activities in Early Readers..*

Level of Risk: Minimal More than Minimal
Type of Review: Expedited Convened (Full Board)
Approval Category: 7
Approval Date: 10.08.2025
Expiration Date: 10.08.2028

Consent Requirements:

- Adult Participants – Written informed consent with documentation (signature)
- Adult Participants – Written informed consent with waiver of documentation (signature)
- Adult Participants – Verbal informed consent (research statement) – interview
- Adult Participants – Research consent statement – online survey
- Adult Participants – Waiver of Informed Consent
- Minor Participants – Written parent/guardian permission with documentation (signature)**
- Minor Participants – Written parent/guardian permission with waiver of documentation (signature)
- Minor Participants – Verbal parent/guardian permission
- Minor Participants – Waiver of parent/guardian permission
- Minor Participants – Written assent with documentation (signature)
- Minor Participants – Written assent with waiver of documentation (no signature)**
- Minor Participants – Verbal assent
- Minor Participants – Waiver of assent
- Waiver of some elements of consent/permission/assent

Comments: IRB approval must be received before altering the scope of the project, research protocol, or consent process/forms.

Approval: This research protocol is approved as presented. The approved consent form, bearing the IRB approval stamp and protocol expiration date, is attached. If you prefer the original stamped consent, please email tmwright@valdosta.edu, and the form will be sent via interoffice mail. Alternatively, you may come by the OSPRA office to obtain the original.

Elizabeth Ann Olphie 10.08.2025
Elizabeth Ann Olphie, IRB Administrator Date

Appendix I:

Table A

Individual Pretest and Posttest Reading Attitude Scores

Item	P1	P2	P3	P4	P5	P6	P7	P8
Enjoy reading	4/4	4/4	4/4	3/3	3/4	3/3	4/4	3/4
Enjoy reading out loud	3/4	3/3	3/4	3/4	2/4	2/3	3/3	2/3
Read in front of classmates	2/4	2/2	3/3	4/4	4/4	3/3	4/4	2/3
Read challenging books	3/4	4/4	3/2	3/3	3/3	3/3	3/4	4/4
Read for fun	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
Read in front of parents	4/4	3/3	3/3	4/4	4/2	4/4	3/3	3/3
Total score (Pre/Post)	19/24	20/20	20/20	21/22	20/21	19/20	21/22	18/21

Yes (4), Sometimes (3), No (2), Never (1)