Exploring Reading Assistance Dogs for Explicit,

Systematic Reading Instruction to Alleviate Reader Stress

by

Sydney Khosla

A thesis submitted to the faculty of Wittenberg University in partial fulfillment of the requirements for

DEPARTMENTAL HONORS IN EDUCATION

Wittenberg University

December 2023

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Abstract

In response to the increased prevalence of childhood anxiety post-pandemic, this applied thesis investigates the potential of reading assistance dogs in mitigating anxiety felt by struggling readers during explicit, systematic reading instruction. With a focus on creating an infographic for dissemination, the annotated bibliography explores the literature on anxiety in school-aged children, the importance of explicit reading instruction, and the efficacy of reading assistance dogs. The thesis argues for the integration of reading assistance dogs as a valuable strategy to alleviate anxiety and enhance the learning experience. The paper synthesizes the intersection between performance anxiety during research-based reading instruction as well as the roles, benefits, and considerations of incorporating reading assistance dogs in educational settings. The accompanying infographic, the product of this applied thesis, is intended for widespread sharing, aiming to promote the successful implementation and maintenance of reading assistance dog programs.

Dedication

This thesis is dedicated to teachers, administrators, and educational staff members who want to

make a difference in the lives of students using a reading assistance dog.

Exploring Reading Assistance Dogs for Explicit, Systematic Reading Instruction to Alleviate Reader Stress

Since the pandemic, the prevalence of childhood anxiety has more than doubled, and now one in five children show clinically elevated anxiety symptoms (Racine et al., 2021). Even a few years removed from the initial shock of the COVID-19 virus, school-aged children are suffering from the onset of anxiety symptoms due to missed milestones (p. E2). This increased anxiety can follow young readers into the classroom and have a lasting impact on children's confidence and academic achievement. To combat reductions in student achievement, teachers can use researchbased, systematic strategies, such as those found in *The Science of Reading* (Snowling et al., 2022). While researchers have known about the importance of a systematic approach to reading for decades (Hulme & Snowling, 2013), the translation into practice has been slow until the past few years (Hollingsworth, 2023). As childhood anxiety rates escalate and teachers increasingly emphasize systematic, explicit reading instruction, educators may find value in considering the integration of reading dog therapy into educational settings as a viable and beneficial strategy for reducing performance-based anxiety.

The purpose of this applied thesis is to examine the potential role of reading assistance dogs in reducing anxiety during reading instruction and create an infographic to spread awareness. The annotated bibliography includes research on rising rates of anxiety in schoolaged children, the anxiety felt by children during explicit, systematic reading instruction, and studies on reading assistance dogs. This thesis proposes that incorporating reading assistance dogs into explicit, systematic reading instruction can be a valuable strategy to mitigate anxiety and enhance children's learning experience. The paper will cover anxiety in reading instruction and explore the roles, benefits, and considerations of using reading assistance dogs in school settings. The infographic, which is the product of this applied thesis, is freely sharable with the purpose of promoting the implementation and maintenance of successful reading assistance dog programs.

Annotated Bibliography

Blad, E. (2023, January 24). Using therapy dogs in schools: 8 do's and don'ts. Education Week. https://www.edweek.org/leadership/using-therapy-dogs-in-schools-8-dos-anddonts/2023/01

This article describes four strategies that should be implemented when using therapy dogs in schools and four that should not. The four "do's" include: Do focus on dog temperament, do designate a handler to monitor each dog's interactions with students, do find a great training program, and do get insurance coverage for school therapy dogs. The four "don'ts" include: Don'tt focus on dog breeds, don't bring a therapy dog into a school without creating goals, don't assume your school needs its own dog, and don't ignore student limits. This source is relevant to reading assistance therapy dogs and their role in mitigating stress and anxiety during reading, as these are specially trained school-based therapy dogs that must be used purposefully and adequately. A program is only successful if all avenues are navigated, and possibilities are exhausted. This source contributes to understanding the field's topic by highlighting potential scenarios that may not come to mind; reading assistance therapy programs are beneficial, but only when used correctly. This source is relevant because it addresses the fundamentals of schoolbased therapy dogs and their complexities. The strengths of this source come from the author, Evie Blad, a reporter covering state and federal policy, child well-being, civil rights, and school safety. She previously wrote on K-12 education, higher education, and

healthcare for the statewide Arkansas newspaper. The author also included various schools with therapy dogs, collected input from participating members like school counselors, and spoke with a research center that helps train and screen handlers for dogbased therapies in schools. This source connects with others listed as it examines the potential complications of bringing reading assistance dogs into schools. The findings and perspectives from this source might be applied in the education world as school districts investigate implementing school-based therapy dogs into their buildings. Potential areas for future research are the types of goals linked to a dog, reading assistance, and general therapy dogs that could benefit the school.

Grové, C., Henderson, L., Lee, F., & Wardlaw, P. (2021, June). Therapy dogs in educational settings: Guidelines and recommendations for implementation. *Frontiers in Veterinary Science*, 8 (Article # 655104).

https://www.frontiersin.org/articles/10.3389/fvets.2021.655104/full

This source speaks to the guidelines and recommendations for implementing a therapy dog in the classroom. It then constructed recommendations to address the lack of research before this publication. It used open-ended online questionnaires and phone interviews with 13 school staff members and two coordinators from therapy dog organizations. This source is relevant to reading assistance dogs as it touches on the concerns, risks, objections, suggested guidelines and regulations, and implementations of science that go into having therapy dogs, safely and productively, in the school buildings. The methodology utilized a qualitative research design using open-ended questionnaires in the form of a survey and semi-structured phone interviews. The three groups were those with school-based therapy programs in place, those considering implementing a school-based

therapy dog program, and therapy dog organizations. Participants signed consent forms to account for the ethics required for the study. Online surveys took 15-30 minutes, and the semi-structured phone interviews were between 20 and 90 minutes. This source contributes to the understanding of the topic in the field as it fills a gap in the literature regarding the complexities of implementing a therapy dog program in schools. This proved to be a foundational study relevant to the paper as it addresses the fundamentals of program implementation. The limitations of this study are its small size and inclusion of only perspectives of selected school staff and therapy dog coordinators. Feedback from school staff and coordinators may be slightly biased due to their interest and investment in therapy dog programs. It would be beneficial to gain insight from other school staff not involved in the program, students, and parents. The study's strengths are its researchers, methodology, and findings that reflect past studies. This source connects with others as it addresses the fundamentals of program implementation, looking out for potential complications and issues. The findings from this source may be applied in the education world as more districts attempt to implement a therapy dog program. Potential areas for future research or investigations stemming from this source's findings involve surveying students, parents, and non-program educational staff regarding the implementation and success of therapy dog programs in the schools.

Hulme, C., & Snowling, M. J. (2013). Learning to read: What we know and what we need to understand better. *Child Development Perspectives*, 7(1); 1-5.

https://doi.org/10.1111/cdep.12005

This source addresses the three cognitive foundations for learning to read: letter-sound knowledge, rapid automatized naming skills, and phonemic awareness. It explains that

deficiencies in these three areas can create problems for children learning to read. It closes with the diagnosis and treatment of children with reading difficulties. This source is relevant to reading assistance dogs as they mitigate the potential harm, stress, and frustration during reading instruction when one or more of the three cognitive foundations for learning to read are unmet. The source's main points and arguments are causal influences on learning to read, such as biological and environmental factors on brain development, individual differences in children's early reading skills, and types of interventions. The source asks for additional research on more intensive interventions, where reading assistance dogs come in. This source contributes to understanding the topic as it delves into why some students struggle skill-wise with learning to read, which can cause anxiety and stress. It is relevant to the systematic, explicit reading instruction in the paper. Strengths of the source are the usage of longitudinal studies examining cognitive variables, comparisons of children with dyslexia to neurotypical peers, and training studies providing evidence for causal effects. Limitations include evidence of short-term interventions. The findings of this source can be applied to the education world as educators work to provide meaningful interventions, like reading assistance dogs, to meet the needs of students struggling with their three cognitive foundations for learning. Potential areas for future research or investigation following the literature gaps include identifying if reading assistance dogs can suffice as a long-term intervention per the three cognitive foundations for learning to read and in what ways. Intermountain Therapy Animals. (2019). What is R.E.A.D.? Reading education

assistance dogs: A program of Intermountain Therapy Animals [Brochure]. Salt Lake

City, UT: Intermountain Therapy Animals. <u>https://therapyanimals.org/wp-</u> content/uploads/2021/03/read-brochure-2019.pdf

This source is a brochure from a renowned therapy dog organization in Utah. It covers the origin and mission of the organization, a simple explanation of what the R.E.A.D program and R.E.A.D. dogs are, the benefits of therapy dogs, where programs are implemented, the results of interventions, and quotes from success stories. The source is relevant to reading assistance dogs and their role in mitigating stress, as that is the entire premise of the organization. The source describes how the results of the R.E.A.D. program include significant strides in reading and communication skills and an increase in class participation and attendance. This source contributes to the understanding of the topic for the field as it outlines several questions that educators interested in using reading assistance dogs may ask and includes contact information for any additional questions. This source is relevant to the foundations of the paper, why to use reading assistance dogs, what they provide students with, and how to implement a program in a school. The strengths of this source are its credibility and framework, which many other programs have utilized, and the thousands of active R.E.A.D. dogs found in classrooms all over the 50 states. This source connects with others as it acknowledges the many complexities of therapy dog programs while emphasizing the reasons to implement one. The perspectives and findings of this source might be applied in the education world as it is a highly established organization willing to help districts around the nation implement successful programs. Potential areas for future research include identifying which states have the highest population of R.E.A.D. dogs and what about these programs promote longevity and success.

Kurt, S. (2021, January 30). *Maslow's hierarchy of needs in Education*. Education Library. https://educationlibrary.org/maslows-hierarchy-of-needs-in-education/

This source examines Maslow's Hierarchy of Needs in accordance with education. It talks about how education cannot take priority if a student's needs are unmet. The source highlights how teachers can work to provide students with a sense of psychological and emotional safety free of peer judgment. This source is relevant to reading assistance therapy dogs and their role in decreasing stress while improving well-being, as these therapy dogs can provide students with a sense of security and stress relief that educators may not be able to. It contributes to the understanding of the topic by providing a psychological explanation of why students suffering from the effects of anxiety cannot necessarily prioritize their education if feelings of safety are not being met. This source is relevant to the paper by explaining why an intervention like reading assistance therapy dogs could benefit students' mental and emotional well-being. Strengths of this source include the author's background in education and his doctoral research in curriculum and instruction. Limitations include a reliance on professional expertise and the sole reference being Maslow's Theory. This source connects with other sources as it attempts to explain the gap in knowledge due to distractions, such as anxiety and stress, and the consequences it holds on students' education and retainment of knowledge. The perspectives of this source might be applied to the education world as teachers search for signs of unmet needs in their students, especially those struggling. Potential areas for future research include a study fixated on student academic performance before and after essential needs of safety, specifically anxiety, are met.

Meints, K., Brelsford, V. L., Dimolareva, M., Maréchal, L., Pennington, K., Rowan, E., & Gee, N. R. (2022). Can dogs reduce stress levels in school children? Effects of dogassisted interventions on salivary cortisol in children with and without special educational needs using randomized controlled trials. *PLoS ONE*, *17*(6), 1–26.

https://doi.org/10.1371/journal.pone.0269333

This study investigated the correlation between stress levels in children and dog-assisted intervention by monitoring salivary cortisol levels. The research showed significant evidence of lower stress in children due to access to therapy dog interventions. This study is relevant to the role of reading assistance dogs as animal-based interventions were demonstrated to be helpful in decreasing stress levels; therefore, reading assistance dogs are presumed to cause the same effect. This study was a randomized controlled trial. The study had 90 neurotypical children aging from 8-9 years (43 boys and 47 girls), 44 children with special educational needs aging from 8-11 years (38 boys and 6 girls), and 23 dogs with their handlers. All interventions were carried out in small groups (maximum of 7 students) and individually, twice weekly, for four consecutive weeks. Participants were randomly assigned to one of three groups: a no-treatment control group, a relaxation intervention group, and a dog intervention group. Cortisol levels were taken from all participants three times once per day before the trial, and three times, once each day after the trial. Acute cortisol levels were also collected before interventions during sessions 1, 4, and 8. For acute cortisol levels, samples were collected right before interventions and again 25-30 minutes after interventions. The main argument made in the source was the success of dog-assisted interventions for students. This source contributes to understanding the field topic as it scientifically demonstrates the positive effects of dog

interventions on stress levels. This source is relevant to the paper because it emphasizes dogs' role in mitigating potential harm from stressful subjects, such as reading. The strengths of this source include the methodology and data collection. This source applies to other sources as it unequivocally demonstrates the physiological benefits of animal therapies. The findings of this source may be applied in the education world as teachers attempt to find ways to integrate school-based therapy dogs into the curriculum to ameliorate student well-being. This source recommends additional research to answer questions on individual differences and doses of animal-based interventions. Ohio School Safety Center. (n.d.). Pre K-12 Schools: School Facility Dogs & Therapy Dogs. Ohio Department of Public Safety. https://ohioschoolsafetycenter.ohio.gov/pre-k-12-schools/school-facility-dogs-and-therapy-dogs/school-facility-dogs-and-therapy-dogs This government-sponsored website communicates the benefits of facility and therapy dogs, the fundamentals of therapy dog programs, including credentialing, liability, and insurance, and identifies a highly approved credentialing organization, The American Kennel Club. The source lists benefits such as improved academic performance, motivation for learning, increased reading competency, development of social skills, and reduced school-related stress. This source is relevant to reading assistance dogs as it explains their roles and how to obtain credentialing. This source from the Ohio School Safety Center contributes to understanding the field's topic as it outlines where therapy dogs can be evaluated and registered, the benefits that therapy dogs offer to students, and insurance coverage for interested handlers. This source is relevant to the paper because it covers the fundamentals of animal-assisted support in a simple, easy-to-read format. Strengths of this source are the reliability of the Ohio Safety Center and the links to

various resources regarding therapy dogs. This source connects to others as it sums up the logistics and benefits of therapy dogs. Perspectives from this source can be applied to the education world as it gives a framework for therapy dog evaluation and registration, legalities, and reasons to implement a program. Potential areas for future investigation include how many therapy dog programs, specifically reading assistance, are active statewide.

Racine, N., McArthur, B. A., Cooke, J. E., Eirich, R., Zhu, J., & Madigan, S. (2021). Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: A meta-analysis. *JAMA Pediatrics*, *175*(11), 1142-1150.

https://doi.org/10.1001/jamapediatrics.2021.2482

This source investigates the rising anxiety rates of the world's youth over the past 11 years. It emphasizes how the 11.6% of kids with anxiety in 2012 climbed to 20.5% of youth struggling with anxiety symptoms in 2022. The article attributes some of this influx to the COVID-19 pandemic-related stressors, family tension, and missed milestones. The article moves on to discuss the most common symptoms of generalized anxiety. The study identifies girls and older children as at a greater risk for developing internalizing disorders, such as anxiety and depression. The source utilized 29 studies, 6 of which were from North America and comprised 80,879 participants. This source contributes to the understanding of the topic for the field by displaying the growing need for interventions like reading assistance dogs and therapy dogs in general to combat the growing population of students struggling with anxiety. This source is relevant to the need for R.E.A.D. Dogs in the classroom; it explains why these interventions are so essential for this generation of students who missed quality instruction due to the pandemic and are

suffering from anxiety and peer judgment. JAMA Pediatrics is a credible source backed by studies, reports, journals, and national surveys. The limitations of this source are that the studies used were cross-sectional- longitudinal studies could better determine the sustainment of clinically elevated symptoms. Additionally, few studies included participants of the racial or ethnic minority and were self or parent-reported questionnaires; studies using diagnostic interviews or multimodal approaches would better supplement current findings. This source connects to others by describing the need for therapy dogs in the classroom related to social-emotional needs. The findings or perspectives of this source may be applied to the education world as teachers, administrators, and educational staff adjust to the evolving needs of their student populations. Potential areas for future research are investigating the longevity of these effects of the COVID-19 pandemic on social-emotional well-being. Rawe, J. (2023, November 14). *4 reasons kids get anxious about reading - and how to*

help. Understood.org. <u>https://www.understood.org/en/articles/reading-anxiety-causes-</u> help#

This source recognizes students' anxieties with reading and offers four of the most common reasons this occurs. The reasons listed are trouble sounding out words, trouble with vocabulary, trouble staying focused, and thinking about past mistakes. The most pressing issues come from thinking about past mistakes, as students often link embarrassment and teasing from peers while reading in the past to how reading will go in the present. These reasons link to reading assistance dogs and their role in decreasing stress and improving reading experiences. A dog is a nonjudgmental reading partner. This source contributes to understanding the field topic as it delves into why reading-based anxieties may occur. This source is relevant to the paper as it addresses the stressors of reading. Strengths of this source include the review by a 40-year veteran teacher with a Master of Education who actively advocates for the rights of children with learning disabilities and ADHD. Limitations include the article being written by someone outside education, although Rawe has an impressive resume, including 13 years of writing at *Time*. This source connects to others by referring to what causes anxieties that reading assistance dogs can mitigate. Potential areas for future research or investigations that stem from this source's findings are the frequency of negative interactions with reading that lead to anxiety, along with vulnerable populations.

SitStayRead. (2023). Animal-Assisted Literacy Programs. SitStayRead.

https://www.sitstayread.org/

This source is from a non-profit organization based outside of Chicago that uses reading assistance dogs within the curriculum to advance the literacy skills of K-3 students. The organization serves at least 90% of a low-income population and performs mainly under the national reading average. It touches on its available programs, performance gains from animal-assisted instruction, the purpose of the reading assistance dogs, and information for interested volunteers. It is relevant to reading assistance dogs as it is an active program that has shown positive effects and growth in the population it serves. The program's first-grade students outperformed non-participants in reading and writing. Growth was made in vocabulary, written expression, and listening comprehension. This source contributes to understanding the field's topic as it is a successful example of what a reading assistance therapy dog program can do for students. This source are the data and scores

attributed to this R.E.A.D. Program. The findings from this source may inspire others from the education world to recreate a similar program for students using reading assistance dogs. Potential areas for future research are investigating which lessons and interventions utilizing the therapy dogs are most successful for students in each grade level, K-3.

Synthesis of Relevant Literature

Key themes arose during the exploration of the intersection between systematic reading instruction, performance anxiety in struggling readers, and the use of reading assistance dogs. These themes include anxiety during reading instruction, roles and benefits of reading assistance dogs, alternative strategies when reading assistance dogs are not an option, assessment and evaluation strategies for reading assistance dog programs, and considerations for effective implementation of reading assistance dog programs. This synthesis of the literature in the annotated bibliography explains the numerous factors that must be considered when justifying and cultivating a reading assistance dog program.

Anxiety in Systematic Reading Instruction

Although systematic reading instruction is research-supported and leads to performance growth, student anxiety needs to be addressed, especially as reading is a subject that could cause additional distress or nervousness in students who struggle. Some of the reasons students become anxious about reading include trouble sounding out words or issues with vocabulary, difficulty staying focused, and, the most substantive reason, thinking about past mistakes in reading (Rawe, 2023). Students often know how they compare to their same-age peers, especially while reading aloud. According to Rawe, "Sounding out words can be extra stressful for older kids whose classmates have already mastered this skill" (para. 2). To make matters worse, Rawe points out, student reading anxiety soars after they have been teased for minor errors or slow reading speeds. Simply remembering these minor mistakes can increase performance anxiety. Some stress can be beneficial in small doses but can become detrimental if long-lasting. "Stress can affect areas of cognitive processing located in the pre-frontal cortex such as attentional control, executive functioning, and memory... it is widely accepted that educational achievement can also be affected by stress associated with mental health disorders (Meints et al., 2022, p. 3). Maslow's "Hierarchy of Needs" informs educators that students must have their basic physiological needs met before they can be adequately ready to learn (Kurt, 2020). When students experiencing anxiety try to climb Maslow's Hierarchy of Needs, "Their priority will be acquiring safety" (para. 4). Students do not have what they need to feel safe in a learning community when experiencing situational stress or prolonged anxiety. When this occurs, students cannot work their way up the pyramid and prioritize their education or the task at hand.

With so many positives to systematic reading instruction, allowing students with anxiety to fall through the cracks and miss this opportunity is unacceptable. Teachers must seek out strategies that allow students to gain access to the science of reading while decreasing stress and tension in such a critical school subject.

Role of Reading Assistance Dogs and Benefits

The use of reading assistance dogs is a novel approach that is still being introduced throughout the United States. Intermountain Therapy Animals (2019), a provider of reading assistance dogs, has grown since 1999 to have over 6,000 therapy animal teams located in all 50 states. Their Reading Education Assistance Dogs (R.E.A.D.) programs emphasize how animals make optimal reading companions because they lower students' blood pressure and encourage relaxation. Students experience reduced fear and anxiety because the dogs "…listen attentively, do not judge, laugh, or criticize, allow children to proceed at their own pace, are less intimidating than peers, and let the child become the tutor" (p. 2). As a result, students who participate in R.E.A.D. have been documented making significant gains in reading skills, communication skills, self-esteem, confidence, and social skills.

Sit Stay Read (2023) is a similar organization that provides year-round reading dog therapy to K-3 students in Chicago, Illinois. The program serves students in low-income neighborhoods where the majority of third-graders have below-average reading scores. The surrounding universities of DePaul University, Northeastern University, University of Chicago, and University of Illinois at Chicago Center for Literacy all partner with Sit Stay Read in implementing this canine-centered curriculum. The model's key emphasis lies in fostering enjoyable and positive connections with reading and writing for participating students. Additionally, the dogs in this program provide numerous physical and mental advantages, such as decreased blood pressure and cortisol levels.

These health benefits are supported by research showing that the levels of cortisol, which is a stress hormone, were lower in the saliva of children who participated in dog-assisted interventions in the absence of reading instruction (Meints et al., 2022). Throughout this 4-week randomized-control study, students with and without disabilities were given 20-minute interventions twice weekly in varying settings (individual and small group). Researchers found that the measured amounts of salivary cortisol reflected levels of school children's anxiety. While the students receiving dog-assisted interventions experienced reduced stress levels, their peers in the control group (no dog-assisted interventions) showed significant increases in cortisol levels from the start to the end of the 4-week term. A third group, the relaxation intervention group, was also created to compare an alternative treatment to dog therapy. This group received a relaxation protocol based in mindfulness, meditation, and yoga. This third group was found to have only a moderate effect on reducing cortisol levels in the group of students without disabilities; it was not effective at significantly reducing cortisol in students with disabilities.

Alternative Strategies

Although therapy animals, specifically Reading-Assistance Therapy Animals, are shown to be beneficial to decreasing stress and increasing performance, not every child has this opportunity. Some children may lack access to a R.E.A.D. program, some students may have severe allergies to the therapy animals in their schools, and some students may have intense phobias surrounding dogs or animals in general. When this is the case, interventions to decrease cortisol levels in students are still crucial.

As described by Meints et al. (2022), the relaxation intervention group, like the dogassisted interventions, led to decreased cortisol levels, but only in typically-developing (nondisabled) students. The protocol for this treatment included interventions given in 20-minute sessions twice weekly for four weeks. These sessions were broken down into three parts. During these interventions, students were lying down on a yoga mat. They began each session where they lay down but wiggled their fingers and toes. They then moved into a more relaxed state where they listened to a story while on their mats. Audio recordings of spoken meditations were played aloud. The protocol ended with another active relaxation of wiggling fingers and toes. The research did not determine a reason why this relaxation treatment was not effective with students with special needs, but because the treatment did show some positive effects with typical students, it should not be discounted as an alternative for students who cannot participate in dog-assisted therapy. If a R.E.A.D program is not yet introduced to a district, or a student cannot work with a Reading Assistance Dog, emulating a similar relaxation intervention could allow students similar benefits to decreasing cortisol and anxiety levels before beginning the day's reading instruction.

Assessment and Evaluation

The process of certifying a dog as a therapy dog through an AKC-approved organization can be lengthy, as both the dog and handler undergo training and screening (American Kennel Club, 2022). However, once certified, the handler can apply with Intermountain Therapy Animals (2019) to become a R.E.A.D. program participant. The application, policies, and procedures for the handler and dog are provided in the registration packet, and handlers must pass a written test. The materials are then filed with the AKC, along with a \$60 evaluation fee.

As long as the written test is satisfactory and the additional materials are present and valid, the dog and handler will be approved to participate in the R.E.A.D. program. Within 1-2 weeks of receiving the paperwork at Intermountain Therapy Animals headquarters, a membership card will be mailed to the handler with a letter and dog tag. Despite the length and rigor of certification, many handlers endure the process because the rewards of participating in R.E.A.D. outweigh the challenges.

Considerations for Implementation

Research and statistics support the positive effects of using reading assistance dogs in explicit, systematic reading instruction; however, some practicalities and challenges accompany this approach. The first hurdle in applying a reading assistance dog in the classroom comes with the training and certification involved. In choosing a therapy dog, only non-violent breeds are considered. After choosing a non-violent breed, temperament needs to be assessed. The dog must "...possess a naturally social temperament, not be too young or bouncy, and must want the job" (Karetnick, 2021, para. 8). The dog must also enjoy affection from people other than their

handler, have basic obedience skills, be flexible with the environment, and tolerate wearable equipment. To maintain health and sanitation standards, the dog must be current on vaccinations, well-checked, and groomed.

When training a therapy dog, the dog must first be socialized to "new people, places, objects, and surfaces" (Karetnick, 2021, para. 21). The next step is to choose a therapy dog certification program from those registered with the American Kennel Club (2022). Dogs who have earned the Therapy Dog title with an AKC organization may begin working toward the AKC's "Canine Good Citizen" (CGC) title by starting to learn simple commands. After mastering "leave it," "watch me," loose-leash walking, and "four on the floor," the dog can then move to a higher title and practice CGC test items in public places. The dog is then ready to enroll in a therapy dog class, ending in a terminal evaluation. Should the dog pass, it is registered with a national therapy dog organization and can begin visiting the schools (Karetnick, 2021).

Aside from the training and maintenance of the therapy dog, handlers of therapy dogs "are trained to interpret dogs' body language, recognize when they need a break, and get the most out of their interactions with students" (Blad, 2023, para. 17). Handlers ensure the dog and students feel safe and secure and account for students with dog allergies or aversions to dogs. Handlers also "...trouble-shoot when an incident occurs (e.g., when a student has a negative response to a dog) and adopt appropriate measures when needed (e.g., removal of the dog, medical care, debrief with student)" (Grové et al., 2021, para. 39). The handler's primary responsibility is to keep interactions in the learning environment meaningful, safe, and effective.

Despite the clear guidelines for supporting therapy dogs, there are still problems with the logistics of bringing therapy dogs into schools or other educational settings. These issues include a "…lack of knowledge as well as resistance amongst other staff due to various reasons during

the phases of therapy dog planning and implementation" (Grové et al., 2021, para. 9). Handlers, often staff members, are left to take care of all therapy dog responsibilities alone, such as planning, costs, and extra responsibility. This can cause scheduling issues when handlers attempt to balance animal-based therapies with their standard workload. According to Grové et al., one handler stated, "I would've liked to do more, but being a full-time teacher, I just was restricted for time...and as it went on, I just got less and less support from staff...and the momentum stopped" (para. 33). If handlers do not receive adequate support, reading assistance therapy programs will not persist. Another logistical barrier is that handlers must "consult with parents and educators to be aware of students who have allergies and aversions to dogs, avoiding specific classrooms or situations where furry friends may not be welcome" (Blad, 2023, para. 23). This can be tricky in the unpredictable environment of K-12 schools. Furthermore, therapy dogs should also not be handed off from teacher to teacher. Doing so reduces the likelihood that the therapy dog is comfortable and actively monitored in order to receive appropriate breaks between interactions with students.

Legal and ethical issues also play a role in school therapy dog integration. According to Grove et al. (2021), allergies, safety concerns, and possible dog bites along with misperceptions of dogs as fierce, aggressive, or overly protective, can deter the acceptance of dogs as appropriate therapy animals in schools. Additionally, Grové et al. found that cultural beliefs of dogs as unsanitary animals can negatively impact the views of dog therapy by staff and parents. As a result, funding and administrative support for school-based dog therapy programs are few and far between.

To reduce liability, insurance coverage for a therapy dog is heavily endorsed. According to Blad (2023), insuring a therapy dog covers personal injuries, and the insurance can be paid by

a professional organization (such as a school social workers organization), the school or district's existing liability insurance, the dog handler's own homeowner's insurance, or a supplemental insurance plan. Requirements for insurance can vary by local and state laws. Moreover, schools should consult directly with staff and families to make sure that there are no unanticipated complications with having a reading assistance dog in the classroom. In addition to legal and ethical issues, resources such as time and money can become barriers to implementing and maintaining a successful dog therapy program. Veterinary and vaccination bills, food and training treats, toys, certification programs, and insurance for a therapy dog can prove costly for a handler (Grové et al., 2021). Additionally, a therapy dog is an additional responsibility for a staff member, and staff often are not compensated for the dog's care or given any alternative compensation in the form of relief from responsibilities in their daily endeavors. These complexities partly explain why having a reading assistance dog in schools is yet to be common practice.

The sustainability of therapy dog programs is a complex problem as more and more school buildings attempt to provide therapy dogs for their students. Dog therapy research by Grové et al. (2022) found that "...difficulties faced include time constraints and added workload in addition to being a classroom staff. Participants expressed that while they were dedicated and invested in the program, they struggled with managing the responsibilities alone in the implementation process" (para. 33). The research also found that support must be demonstrated by the school leadership as well as staff, parents, and students in order to have a successful implementation of a school-based therapy dog program.

Some states have begun enacting rules and regulations to support the implementation of dog therapy in schools. For example, in Ohio, the state laws now include protections for service

animals to assist people who have disabilities, including those with psychiatric and/or neurological disabilities (Ohio Administrative Code, 2016). These laws have positively impacted school district administrators' willingness to support the use of therapy dogs in the classroom. For example, in Ohio schools, "...liability insurance is covered by the school/district along with cost unless funded through community partnerships... the work schedule mirrors the handler's schedule and is integrated into student lesson plans" (Ohio School Safety Center, n.d., para. 2). Ohio is a state that has experienced a growing acceptance and support for therapy dogs, and other states can look to Ohio as a model for implementing successful and well-regulated therapy dog programs in educational settings.

If a reading assistance therapy dog program is to be put in place and sustain the test of time, it must be done with a team-based approach. There is already a hefty amount of stress on teachers and other educational staff members that, to add an additional program, there must be teamwork and give-and-take to allow a meaningful program to grow and thrive over time. There are a plethora of practical aspects and potential challenges associated with bringing reading assistance dogs into the classroom during instruction. However, with a team-based approach and a growth mindset, these challenges can be recognized, potential solutions can be brainstormed, and new rules and regulations can be implemented. Given the many positive effects of reading assistance dogs on students, facing challenges head-on has proven fruitful.

Thesis Plan

This paper's key findings are presented in the following infographic that can be shared on social media, in future presentations, or in educational materials. The infographic was created by the paper's author using Canva (2023). Appropriate links to resources (articles, research findings, case studies, and a repository of functional materials for educators, parents, and

researchers interested in this topic) are included. It is recommended that the infographic be enlarged to allow for viewing of the websites listed as resources. To access the original infographic and edit the content or design, viewers should email a request to

khoslas@wittenberg.edu.

The infographic is designed to teach the consumer about Reading Education Assistance Dog (R.E.A.D.) programs in schools. The infographic explains the purpose of R.E.A.D. is to mitigate the potential harm of stressful instruction on struggling readers. The purpose also includes a statement about how dogs provide students with a non-judgmental audience in which students can practice their reading without the fear of being criticized by same-aged peers. This statement was based on previously discussed scholarly sources regarding reading instruction and the benefits of reading therapy dogs.

The infographic then describes many of the potential benefits that can result from the use of reading assistance dogs in school. These benefits are all described in the sources covered in the annotated bibliography and synthesis sections of this paper. Because these are research-based findings, they can be used to help the consumer advocate for support and funding of a R.E.A.D. program.

The implementation of a R.E.A.D. program requires careful planning and logistics. The Certification and Handling section of the infographic covers many of the key steps to a successful planning process. This preview gives the consumer a snapshot of the process that implementing a R.E.A.D. program might entail, and this could help with decision-making about moving forward with gathering more information.

Several organizations have worked to plan, implement, refine, and maintain successful R.E.A.D. programs. To help consumers learn more about creating their own R.E.A.D. programs,

the infographic includes the section "Established Reading Assistance Dog Organizations." By learning from these leaders in the field, consumers can garner support for and cultivate new R.E.A.D. programs. Additionally, consumers can reach out to the established groups to ask questions and troubleshoot during the planning and implementation process.

Finally, the infographic includes links and contact information to give the consumer a strong starting place. These links cover many of the scholarly articles discussed in this paper. By sharing this information freely, educators will have the building blocks for learning more about and starting their own dog-assisted reading programs.

This infographic could be used by various people and newly established therapy dog organizations to quickly and efficiently distribute information about reading assistance therapy dogs. This infographic is subject for upload onto social media, without consequence, by interested populations and advocates to spread awareness of a budding intervention. This graphic may also be pasted into a slideshow, allowing a teacher to present a potential R.E.A.D. Program to a school board or parent-teacher organization to garner support. Additionally, the format can be customized as a bookmark to be handed out to interested populations during specified events to spread awareness and provide people with easy access to information surrounding reading assistance education dogs.

Product and Deliverable

R.E.A.D.

Reading Education Assistance Dogs in the Classroom

Purpose

-Mitigate potential harm of explicit, systematic reading instruction that can be stressful for struggling readers

-Dog provides the student with a non-judgemental audience in which they can practice their reading without the fear and criticism of same-age peers

Physical & Emotional Benefits

Increase relaxation and decrease bloodpressure

Help build a positive relationship with reading -Lowered levels of cortisol, leading to significant stress reduction

Certification & Handling

- Dog must be a non-violent breed trained and certified thoroughly as a therapy dog through American Kennel Club (AKC)
- Apply for the R.E.A.D. Training package containing: application, policies and procedures for the dog and handler, written test, provided proof of membership in AKC
- After paperwork is evaluated and approved, the dog will receive a membership card and official tags

Established Reading Assistance Dog Organizations



Sit Stay Read (based outside of Chicago)

Intermountain Therapy Animals

(founded in Utah) • https://therapyanimals.org/wpcontent/uploads/2021/03/read-brochure-2019.pdf



Serves low-income Chicago

schools and utilizes an engaging curriculum with certified reading assistance dogs

Intermountain Therapy Animals Advocates for the use of reading assistance dogs in the classroom to improve Jiteracy skills in children



Resources:

https://therapyanimals.org/read-teamsteps/

https://www.ncbi.nlm.nih.gov/pmc/articles/P MC9200172

https://www.understood.org/en/articles/reading-anxiety-causes-help#

https://www.apa.org/monitor/2022/10/childanxiety-treatment

https://www.frontiersin.org/articles/10.3389/fvets.2021.655104/full

https://ohioschoolsafetycenter.ohio.gov/prek-12-schools/school-facility-dogs-andtherapy-dogs/school-facility-dogs-andtherapy-dogs/

https://educationlibrary.org/maslowshierarchy-of-needs-in-education/

https://www.edweek.org/leadership/usingtherapy-dogs-in-schools-8-dos-anddonts/2023/01

https://www.ncbi.nlm.nih.gov/pmc/articles/P MC4538787/



Shareable Version of This Infographic For copy and use.

For additional information & links, please email: Sydneykhosla@gmail.com (This email address can be replaced with your organization's information if re-printing for non-profit purposes)

Conclusions and Further Research

Based on the limited evidence, it is likely that reading assistance dogs can help reduce anxiety during systematic, explicit reading instruction. However, this topic has not yet been researched. Ample research has explored the rising anxiety rates in students and reading achievement following the pandemic. However, very little research has touched on how this anxiety might follow struggling readers into systematic, explicit reading instruction. This "Science of Reading" approach offers little to extinguish a student's anxiety, so I want to investigate and explore this area more in-depth as we know the correlation exists.

I would also like to learn more about the long-term impact of reading education assistance dogs-can students who read with dogs reach a higher tier on Maslow's Hierarchy of Needs? There is a pressing need for studies that examine the impacts of reading assistance dogs on students' reading abilities and emotional well-being in the distant future. As these non-profit organizations are novel, could longitudinal studies capture the need for these R.E.A.D programs? Or would cross-sectional studies find that a specific age group benefits more from reading assistance dogs than others? The full range and effectiveness of these therapy animals must be examined so they can best serve the nation's students.

Potential next steps for future research in this field revolve around finding the previously stated full range of effectiveness of reading assistance dogs. This topic would benefit from additional investigation, as I envision struggling readers in middle school as the most pressing and impactful age group for these animal-based reading therapies. However, with high-stakes testing such as that required by Ohio's Third Grade Reading Guarantee(Ohio Department of Education & Workforce, 2023), students in early elementary school are in high need of these types of interventions.

Additionally, future research on preserving the longevity of these R.E.A.D. programs in schools could be highly effective and prevent programs from fizzling out due to low teacher support. Handlers may also need specific strategies when working with reading assistance dogs as they juggle enough on their plates while attempting to ensure every child is accessing the curriculum at hand.

Some methodological improvements that could enhance the quality of future studies within reading assistance dogs would involve longitudinal and cross-sectional designs. A checkin and check-out slip of paper that students could use to record their anxiety levels each day they attend an animal-based intervention would also contribute to this area. Self-assessment by the students is critical as they can note what interventions make their stress more manageable and increase their well-being. The published studies focused more on scientific components of measurable cortisol levels but did not ask the students to correlate their perceived stress levels to those found in the study.

I implore future researchers to explore the use of reading assistance dogs in diverse educational settings and populations while considering cultural, socioeconomic, and educational differences. By doing so, researchers will be able to consider the potential influences of diverse factors on the effectiveness and reception of reading assistance dog programs. Examining these factors can provide valuable insights into tailoring such interventions to meet the specific needs and nuances of various communities, fostering inclusivity and maximizing the positive impact of reading assistance dogs in education. This exploration could also inform adaptable and culturally sensitive approaches for integrating dog therapy reading programs into educational settings worldwide. A compelling format for potential research could be a comparative study similar to the cortisol study, which applied three different interventions. Researchers could investigate whether other approaches to reduce anxiety and enhance learning outcomes are just as effective when done before reading instruction compared to an intervention with a reading assistance dog. These studies could contribute invaluable insights into alternative strategies available for anxiety reduction in educational settings while increasing student achievement.

Finally, there is a direct need for additional research into developing policies or guidelines for the safe and effective use of therapy dogs in educational settings. With the novelty of these programs like R.E.A.D. and the lack of reading assistance dogs in most school districts, handlers, and dogs need to know they are protected. Likewise, parents need to know that every dog in the school has met all expectations of their reading assistance dog status and that the students will be safe in these interactions. Advocacy groups could work to promote the standardization of policies and guidelines for integrating reading assistance dogs in schools. Ultimately, policy standardization would allow this intervention to gain more traction and reach a larger audience.

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