

DOOGAN, DEXTER, OR DOC HOLLIDAY: Reading Dog Teams in Action

by DONITA SHAW

THE PURPOSE OF THIS STUDY was to analyze elementary students' reading scores before and after reading to a dog over the course of a school year. Further, it was my goal to learn what students, parents, and teachers said about this nontraditional reading experience. The sample for this study consisted of 455 students ranging from kindergarten to fifth grade from nine

titative and qualitative means that reading dogs positively impact students' reading ability and attitudes. It can be concluded that reading dogs are a valuable asset in assisting children to read.

The value of children reading to dogs has received increased attention over the past decade (Cool, 2009; Davis, 2015; Fisher & Cozens, 2014; Hall, Gee, & Mills, 2016; LeRoux, Swartz, & Swart, 2014; Skodack, 2009). Most of the reports have been anecdotal (Cool, 2009; Skodack, 2009) or case study (Fisher & Cozens, 2014), while a few recent studies included larger populations (Davis, 2015) and a randomized sampling (LeRoux, Swartz, & Swart, 2014). An up-to-date systematic review of the literature found there is minimal empirical evidence that children benefit when they read to a dog (Hall, Gee, & Mills, 2016). With a need for further evidence, this paper attempts to share the findings of one school district's data. Ten years ago this Desert Rose (pseudonym) School District in the southwestern part of the United States began implementing a reading intervention, specifically the R.E.A.D. program, which allowed at-risk students to read to trained therapy dogs. Reading Education Assistance Dogs® (R.E.A.D.®), a literacy support program founded by Intermountain

Therapy Animals, is "a carefully planned reading program that involves collaboration among, at the very least, reading professionals, registered and insured therapy dogs and handlers, schools and/or local library and media specialists, and the families/community" (Jalongo, 2005, p. 153). Student achievement data along with student, teacher, and parent feedback has been collected systematically by the aforementioned district for the past ten school years. Therefore, the purpose of this study was to



Doogan
(Soft-coated
Wheaten Terrier)...

elementary schools in the district. Each child met with a Reading Education Assistance Dog team (handler and dog) for approximately 17 hours during the school year. Quantitative assessments were either the *Developmental Reading Assessment* or *Measures of Academic Progress*. Qualitatively, at the end of each school year, district leaders created questionnaires to solicit feedback from all participating classroom teachers, parents, and students. The school district data consistently show through quan-

analyze students' reading scores before and after reading to a dog over the course of a school year. Further, it was my goal to learn what students, parents, and teachers said about this nontraditional reading experience. Specifically I asked,

1. How much reading growth was shown by children who read to a dog during a school year?
2. What did students say about their reading abilities and attitudes after reading to a dog?
3. What did parents say about their children's reading abilities and attitudes after reading to a dog?
4. What did classroom teachers say about students' reading abilities and attitudes after reading to a dog?

Theoretical Framework

Playful Reading Theory (Davis, 2015) guides this research. The theory (see Figure 1) includes four subcategories: 1) *Child's best friend* occurs as the children develop a close emotional bond with the animal, 2) *Happy capital* allows children to have a positive and calming experience that strengthens their resilience to cope with learning stress, 3) Children believe the dog is *genuinely listening*, and 4) As children begin to see their literacy growth, the children become engaged in a self-perpetuating cycle of positive reinforcement that increases *real reading*.

Methodology

Participants

Desert Rose School District is located in the southwest region of the United States. The sample for this study consisted of 455 students ranging in grades kindergarten to fifth from nine elementary schools in the district. Ethnicity of the students was 41% Caucasian, 48% Hispanic, 3% African-American, 2.5% Asian/Pacific Islander, and 4.5% Native American. District statistics show 59% of the students were economically disadvantaged and 6% were English learners. While some of the 455 students received supplementary interventions with their individualized education plans, the majority of the participants in this study were regular education students who did not receive additional intervention. Classroom teachers selected the students based on a number of factors: baseline reading assessment scores, social skills, confidence, emotional/physical limitations, family environ-

ment, and other considerations.

The 455 students participated for the duration of one school year beginning with 2006-2007 through 2015-2016. Each child met with a R.E.A.D. team (handler and dog) for 30 minutes per week for approximately 33 weeks during the school year. The total "one-on-one" reading

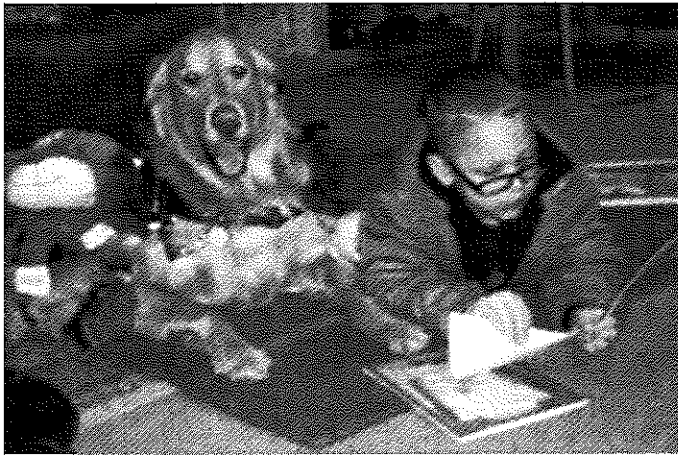


...Dexter (Miniature Schnauzer)...

intervention time for a school year was approximately 17 hours, although some students with disabilities worked for 20 minutes per week rather than 30 minutes.

Data collection and analysis

This study employed a mixed methodology. Overall reading scores of participants were examined before and after the R.E.A.D. intervention. The district either used the *Developmental Reading Assessment* (DRA) (Beaver, 2006) or the Northwest Evaluation Association's (2004) *Measures of Academic Progress* (MAP) computerized assessment. The DRA is a criterion-referenced formative assessment that teachers administer for evaluating students' oral reading fluency and comprehension. The MAP is a personalized assessment that is adapted for each child regardless if the child performs below, on, or above grade. It also measures students' reading fluency and comprehension. The term "level" indicates a gradient of text difficulty that the child should be able to read independently. For example, the DRA expectation for a first grader is to start at level 3 and progress to level 16 by the end of the school year, whereas a fifth grader should start at level 40 and progress to level 50. In the early years of this research study, the district typically administered DRA to students in grades kindergarten to third grade



...and Doc Holliday (Golden Retriever) all have something in common: They love listening to children read and children love reading to them!

and MAP for students in fourth and fifth grade. In most recent years all students in the district received the MAP. These tests were administered by approved district personnel and records were kept by the district. For this study I obtained the students' pre and post DRA or MAP test scores from the district and the scores were entered into a statistical spreadsheet along with other descriptive information such as grade. I ran paired-samples t-tests.

Qualitatively, at the end of each school year, district leaders created questionnaires to solicit feedback from all participating classroom teachers, parents, and students. The questionnaires contained the following information.

- **Students:** You have been working with a R.E.A.D. program team (dog and owner) for all/portion of this school year... If you would like to comment on this experience and how it has impacted you (reading skills, confidence, overall observations) we welcome your comments.
- **Parents:** Your child has been working with a R.E.A.D. program team (dog/owner) for the (specific) school year... We ask you to share any comments/observations/changes you have seen in your child since participating in the program.
- **Teachers:** 1) Would you rate the experiences of working with a R.E.A.D. team this as positive? Why? If no, why not? 2) Do you intend on requesting a R.E.A.D. team to work with your class again next year? If no, why not? 3) Would you consider the R.E.A.D. program

as a viable literacy intervention? Why? 4) What changes in students' reading levels were you able to observe and document? 5) What changes did you observe in your students' eagerness to start a reading activity as a result of this program? 6) Were you able to see any other positive benefits in your students' behaviors, social skills, communication skills or overall well-being? 7) Any general comments?

I used case study techniques to analyze qualitative data (Merriam, 2009). I individually read each participant's response. While reading, I grouped like responses together such as "grew one grade" and "My child went up significantly on his reading (DRA) score." After emerging themes formed, I drew conclusions and labeled each theme with a header, such as "reading growth." The themes have been inserted into the manuscript with participants' voices included for evidence.

Results

The results will be presented by guiding questions.

How much reading growth has been shown by children who read to a dog?

I wanted to learn if the difference between the pre-intervention and post-intervention test scores might be significantly different from zero. Across the 248 students who took DRA and 207 students who took MAP, data show they grew significantly in their reading. Table 1 shows the number of students in each grade and corresponding statistical information. The mean difference is the amount of student gain by grade. The standard deviation is the amount of variation among students in that grade. The significance of the intervention (*p* value) should be lower than .05. Finally, the table shows the effect size (*D*) which is the strength of the relationship among the intervention and test scores; the higher the number the more likely the students are to be affected by reading to a dog.

Assessment Scores									
Table 1. DRA Scores (N=248)					TABLE 2. MAP Scores (N=207)				
Grade	Mean Difference	SD	P	D	Grade	Mean Difference	SD	P	D
K = 7	1.71	1.70	.037	0.53	K = 9	15.11	6.37	.000	2.01
1 = 96	12.19	5.50	.001	2.18	1 = 36	14.56	6.91	.000	1.08
2 = 53	7.49	4.49	.001	0.70	2 = 19	12.42	7.07	.000	1.09
3 = 39	9.18	4.56	.001	0.94	3 = 36	13.94	8.68	.000	0.92
4 = 28	6.00	4.93	.001	0.63	4 = 44	7.32	8.37	.000	0.53
5 = 25	11.24	6.29	.001	0.42	5 = 63	8.52	7.99	.000	0.71

What do students say about their reading abilities and attitudes after reading to a dog?

The students' unanimous responses were of love and joy for the dog, while some also mentioned their reading. Student A said, [The best part was] "being friends with dog and having him listen to me read. Dog is so cute. Handler is so nice. I try to read my best with dog." Student B said, "I like dog because he loves me. Dog listens to me good when I read to her. Dog is cute and she gives good kisses." When questioned about the worst part of working with their dog, the children gave responses such as "saying goodbye" and "when they didn't come very much" or "not having enough time."

What do parents say about their children's reading abilities and attitudes after reading to a dog?

Two dominant themes were mentioned by most parents. First, they said their child had a greater interest and motivation for reading. Second, they saw growth in their child's ability to read. The following quotes from parents summarize both their child's achievement and motivation for reading.

Parent A: "I have noticed my child's reading skills improve dramatically. She also has a true joy in reading now. She reads every sign, box, etc. that she can and is constantly spelling and sounding words out. This is a great program. Thank you."

Parent B: "At the beginning of the school year my son was really struggling with reading. He hated reading and would end up crying every time he tried. By the middle of the school year he had improved tremendously. He finally started to enjoy reading. Now that we're at the end of the school year, I am blown away at how well he reads. He has started on chapter books at home and the best change is that he now loves to read."

Several other themes that were embedded in the previous quotes or emerged in additional data included a reduction of fear and greater confidence (from reading aloud or lessened anxiety about reading), attempted to read more challenging text, spoke more clearly and with articulation, improved social interactions with peers, and eagerness to attend school. Parents also said their children learned to value animals.

What do classroom teachers say about students' reading abilities and attitudes after reading to a dog?

Teachers reported three main themes in their open-ended responses. First, they noticed improved test scores

and growth on reading. Teacher A said, "Student went from a level 10 which is kindergarten DRA to a level 34 which is the middle of third grade." Teacher B wrote, "The students grew within their level of reading. Although they have not raised their [standardized] scores, they have become better readers."

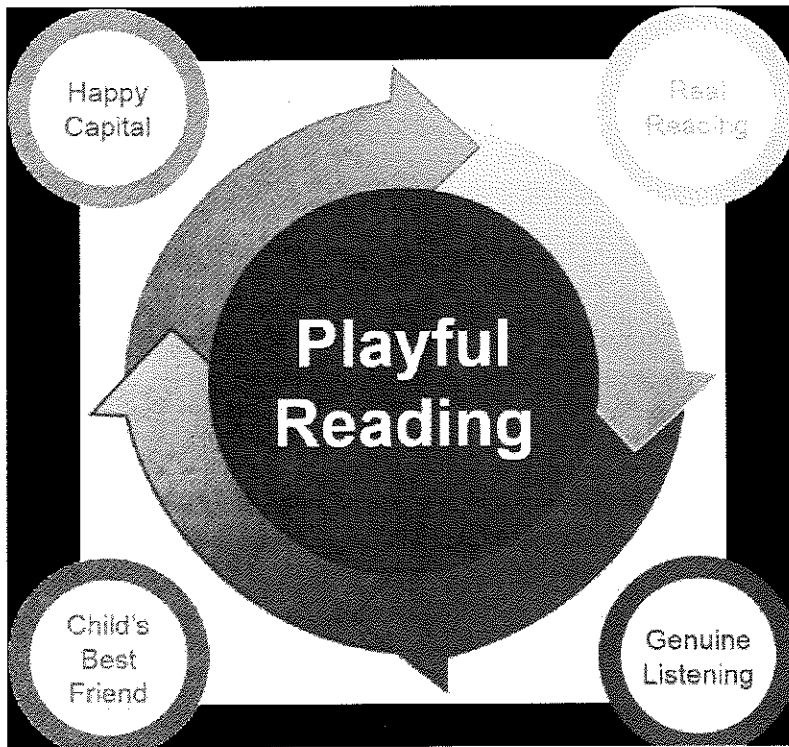
Second, the majority of teachers said they noticed a greater motivation and interest in students' desire to read. Teacher C wrote, "Where they were previously reluctant to read, now they view it as enjoyable." Teacher D wrote, "Handler and dog worked with a very reluctant student. By the second month, he was willing to give up his recess to work more with the R.E.A.D. team."

The third theme was confidence the students possessed after the experience that "I can read," improved self-esteem, and being happier and well-adjusted. Teacher E wrote, "Students having trouble benefited the most. They could express themselves without fear of failure." Teacher F wrote, "Student's self-esteem increased and her acceptance of herself continues to blossom into a dedicated learner no matter what her level is."

Several minor themes included students improved their skills (fluency specifically), transferred their positive R.E.A.D. experience to other school related tasks, and experienced enhanced peer interactions. Teacher G wrote, "One of my students who reads with the dog weekly has become so much more involved and participates in class much more than he did before. I have also seen his attendance improve tremendously."

Discussion

The school district data presented in this manuscript consistently show through quantitative and qualitative means that reading dogs positively impact students' reading ability and attitudes. Every study has its limitations and this one is no exception. For example, there is no control data nor were the students randomly assigned. Neither is there longitudinal data following the students past the one school year of participation in the reading dog program. The data itself has the intertwining effect of "reading" and "behavior" (Hall, et al., 2016), which can be inter-dependent and complicated to discover through classroom research. All that said, the findings present themselves as is: reading dogs matter. While the positive results in this study are not particularly new compared to previous research (Davis, 2015; Kirnan, Siminerio, & Wong, 2015; Le Roux, et al., 2014; Paradise, 2007; Smith, 2009), the number of students in this sample size over a



'stuffed animal' pet, but teachers may like to try that adaptation as well. Children can be imaginative and report to the teacher (or volunteer) on their experience reading to a stuffed animal. After the child practices reading to the stuffed animal, the teacher can solicit school staff who become volunteer listeners. It's a privilege for the child to walk to the cafeteria and read to a food service worker, or find the housekeeper or secretary and ask him/her to listen.

I believe that reading dogs offer more than a warm and fuzzy encounter (Friesen, 2010) and all the recent related research should be building a case for reading dogs in classrooms. Davis's (2015) theory of Playful Reading is unique and timely for our analysis. I believe this theory captures the hallmarks of this intervention and showcases them as a whole entity. For example, *child's best friend* and *genuine listening* was referred to by Student A and B. *Happy capi-*

period of time does add value to a growing body of literature that indicates canine-friends in the classroom are a very valuable resource and viable intervention.

As previously mentioned by researchers LeRoux, Swartz, and Swart (2014), a reading dog intervention is one of the most economical since the program is provided by trained volunteer handlers. While reading dogs should never entirely replace paid, skilled reading interventionists who have been educated how to teach children for whom reading does not come easily, reading dogs can certainly supplement and provide a rich, meaningful setting to practice reading and build confidence for many, many students. The Desert Rose district particularly sought students who didn't qualify for intervention services, but needed that extra support; evidence showed that reading dogs benefitted them.

The value and benefits of R.E.A.D. can be adapted should such a program not be possible. For example, if your classroom already has a pet such as a hamster or guinea pig, the students can be encouraged to read to the classroom pet by arranging a blanket next to the cage, and/or possibly holding the animal. While it is more effective to have a human handler who interacts with the students, the power of animals should not be diminished if the teacher is limited by human resources. It may be possible to have a volunteer high school student learn how to provide responsive feedback when a child reads to a classroom pet. No research has been conducted on a

tal, the calm and resilience that results from the reading dog experience, was referenced in comments made by Parent B and Teachers D and G. And without *real reading* (mentioned by Parent B), the self-perpetuating positive reading practices would not occur.

A complete reader is not only successful in reading skills and behaviors such as word knowledge, fluency, and comprehension; a complete reader has interest, a positive attitude toward literacy, motivation to read, and is an engaged reader (Layne, 2009). In a previous publication (Shaw, 2013) I stressed the importance of 'engaged reading' as a hallmark of reading education assistance dogs. I, along with other researchers such as Smith (2009), believe that engaged reading truly is the heart of learning. Learning should be stimulating and enjoyable! Learning should be an experience that eliminates anxiety and stress. Unfortunately in our culture where assessment and data-driven accountability have become dominant in the educational landscape, children even in kindergarten feel the pressure and effects of reading to a numerical standard. The "joy" of learning is becoming eradicated, yet reading dogs can bring back that joy. If we know that reading dogs help children, then why do we have to test and test and re-test to have data with greater empirical value and research integrity? Classroom research is real-world, not a testing laboratory. As evidenced by Desert Rose School District who is committed to ten years and counting of reading dogs in their classrooms, we know

reading dogs are effective. As the Desert Rose School District R.E.A.D. Program Coordinator said,

Those of us that work with our special dogs and the children have both seen and felt the “miracle” that takes place on the R.E.A.D. blanket!!! There is no number or data that can measure the pure “joy” and special “bond” that takes place between each child and dog!!!

Now we as educational researchers and educational leaders need to let the dogs go to work at school. This experience is a dog’s pleasure and child’s joy. It is my hope that the combination of the joy of reading and the joy of animals transform learning in our educational system.

REFERENCES

- Beaver, J. (2006). *Developmental Reading Assessment*. Upper Saddle River, NJ: Pearson.
- Cool, L.C. (2009). The dog who changes lives. *Parade*, September 6, 2009.
- Davis, H. (2015). An exploratory study of primary pupils’ experiences of reading to dogs. Retrieved June 27, 2016 from <http://roar.uel.ac.uk/4296/1/Hazel%20Davison.pdf>
- Fisher, B.J., & Cozens, M. (2014). The BaRK (Building Reading Confidence for Kids) canine assisted reading program: One child’s experience. *Education Papers and Journal Articles*. Paper 50. research.avondale.edu.au/edu_papers/50
- Friesen, L. (2010). Exploring animal-assisted programs with children in school and therapeutic contexts. *Early Childhood Education*, 37, 261-267. Doi: 0.1007/s10643-009-0349-5
- Hall, S.S., Gee, N.R., & Mills, D.S. (2016). Children reading to dogs: A systematic review of the literature. *PLoS ONE*, 11(2): e0149759. doi:10.1371/journal.pone.0149759
- Jalongo, M.R. (2005). What are all these dogs doing at school? Using therapy dogs to promote children’s reading practice. *Childhood Education*, 81(3), 152-158.
- Kirnan, J., Siminerio, S., & Wong, Z. (2015). The impact of a therapy dog program on children’s reading skills and attitudes toward reading. *Early Childhood Journal*, DOI 10.1007/s10643-015-0747-9. Retrieved June 30, 2016 from link.springer.com/article/10.1007/s10643-015-0747-9
- Layne, S. (2009). *Igniting a passion for reading*. Portland, ME: Stenhouse Publishers.
- Le Roux, M.C., Swartz, L., & Swart, E. (2014). The effect of an animal-assisted reading program on the reading rate, accuracy, and comprehension of grade 3 students: A randomized control study. *Child Youth Care Forum*, 43, 655-673.
- Merriam, S.B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco: Jossey Bass.
- Northwest Evaluation Association (NWEA). (2004). *Reliability and validity estimates: NWEA achievement level tests and measures of academic progress*. Lake Oswego, OR: Author.
- Paradise, J. L. (2007). An analysis of improving student performance through the use of registered therapy dogs serving as motivators for reluctant readers. (Unpublished doctoral dissertation), University of Central Florida, Orlando, Florida. Retrieved May 25, 2011 from purl.fcla.edu/fcla/etd/CFE0001561.
- Shaw, D.M. (2013). Man’s best friend as a reading facilitator. *The Reading Teacher*, 66(5), 365-371. Doi: 10.1002/TRTR.1136
- Skodack, D. (2009). Fetching young readers. *Kansas City Star*, Thursday, October 8, 2009.
- Smith, C. E. (2009). An analysis and evaluation of sit stay read: Is the program effective in improving student engagement and reading outcomes? In: D. Ed, Foster G. McGaw (Eds.), Graduate School, National-Louis University, Chicago, IL. Retrieved January 5, 2012 from digitalcommons.nlu.edu/cgi/viewcontent.cgi?article=1032&context=diss

About the Author

Dr. Donita Shaw’s love for literacy began as a young reader. She shares that love of literacy with aspiring and practicing teachers. She currently is an associate professor in the College of Education, Health and Aviation at Oklahoma State University-Tulsa. With diverse teaching and tutoring experiences, she brings a developmental and balanced perspective to her college classroom. Donita Shaw’s scholarship focuses on three themes: metaphors of literacy, early literacy, and adult literacy. Donita Shaw may be reached at Donita.shaw@okstate.edu