Fostering literacy learning with three middle school special-education students using therapy dogs as reading partners

Donna E. Lamkin
University at Albany, State University of New York, dlamkin@albany.edu
FOSTERING LITERACY LEARNING
WITH THREE MIDDLE SCHOOL SPECIAL-EDUCATION STUDENTS
USING THERAPY DOGS AS READING PARTNERS

by

Donna Lamkin

A Dissertation
Submitted to the University at Albany, State University of New York
in Partial Fulfillment of
the Requirements for the Degree of
Doctor of Philosophy

School of Education
Department of Literacy Teaching and Learning
2017
Fostering Literacy Learning

With Three Middle School Special-Education Students

Using Therapy Dogs as Reading Partners

by

Donna Lamkin
Abstract

This case study explored dog-assisted reading with three middle-school special education students in a self-contained alternative school. Data collection conducted over a 15-month period included observations, interviews, and artifacts. In this study, reading with therapy dogs and their handlers, helped three adolescent readers with their reading motivation, engagement, and literacy processes/behaviors. The students’ engagement with the dog, the role of the dog handler, and the role of the context all impacted students in different and multiple ways.

The students read to the dogs and liked engaging with them – this calmed and interested each student and created a purpose for reading. Concurrently, through the handler’s vocabulary supports, questions, comments, and book choices, the students also became more attentive to their own reading performance. Students began to self-monitor, self-correct, and discuss stories. As the study transitioned from an office setting to the classroom, the dog and handler continued as reading partners, now with a growing audience of additional students and staff. Students talked and interacted with books in a way that bypassed reading level, behavior issues and computer-based comprehension questions, ultimately forming a community of readers.

Recommendations encourage school personnel to intentionally structure and integrate dog-assisted reading teams for literacy learning, with training sessions for handlers to learn how to engage with books, listen carefully to readers, and notice when students need additional support. Professional development can help classroom teams better integrate dog-assisted reading and literature-based instructional approaches. Importantly, providing a wide range of reading materials during dog-assisted time can support students to engage as readers in multiple ways.
DEDICATION

This dissertation is written in memory of my parents, Loretta and William Epstein. As lifelong teachers, learners, voracious readers, and dog aficionados, they influenced my life profoundly. I am thankful for their love and inspiration.
ACKNOWLEDGEMENTS

Writing a dissertation is the ultimate educational journey; a social act filled with an array of individuals who become a profound community of support. First, I would like to thank my committee: Dr. Cheryl Dozier, Dr. Sean Walmsley, and Dr. Virginia Goatley.

As my Committee Chair, Dr. Cheryl Dozier provided a continuing focus and filter for my work on this project. From the beginning, she guided me to write a reading story, keeping the emotional aspects in balance, reminding me that my duty was to make a contribution to the literacy field. She also wisely advised me to observe my case study students through a lens of strength rather than deficiency. Overall, Cheryl helped me grow as a learner, consistently and patiently helping me broaden and clarify my own thinking.

Dr. Sean Walmsley, Committee Member and Professor Emeritus, was the mentor who first connected me with the joy of teaching literacy, and I was honored to have him on my committee. It’s hard to believe that I have known Sean for nearly 30 years. I am particularly grateful to him for encouraging me to follow my passions, and for his enthusiastic yet practical support of this project, which included specific but far-reaching suggestions.

As Chair of the Literacy Teaching and Learning Department, Committee Member Dr. Virginia Goatley was incredibly busy, yet she always found time to send me a relevant article, provide supportive comments, or pose a provocative question. She also positively influenced my writing style early on. I am thankful for Ginny’s assistance on this project, and appreciative of all she has brought to the department.

Next, I would like to thank those in my personal circle who have supported me through this multi-year journey. First and foremost, I want to thank my wonderful husband Michael for his never-ending belief in me. Michael always encouraged me to move forward on this project
and was a cheerleader during the times I thought I could never complete it. He has been a kind, sensitive, caring, and creative partner, walking beside me and sharing my vision, and I am deeply grateful to have him in my life.

Judith Swota is my dear friend. Her scientist’s mind is a gift, and I am humbled that she would use her vast thinking abilities to help me on my path. Judith believed in this project and continually encouraged me, serving as a critical reader and a writing coach. She reviewed many rewrites and offered detailed and meaningful suggestions for changes. Our conversations, filled with her clarifying and probing questions and observations, were immensely helpful. Through our partnership, I experienced first-hand how social interaction constructs learning.

I also lovingly thank my three siblings, Judy, Joel, and Howard, and my childhood friend, Frank, for their unfailing interest, encouragement, and support throughout this process.

Last in my personal circle, but certainly not least, are my own pets. I have had too many to name, and have loved them all with a depth that cannot quite be put into words. I would like to single out the dog that was the inspiration for this project. His name was Handsome, and he was a rascally old rescued hound whose appeal to children was magical and legendary. It was upon Handsome’s passing that I decided to launch this investigation, combining my knowledge and passion for literacy instruction with two other great loves in my life: children and dogs.

Finally, I want to thank all the people who participated in this study, especially the three case-study students, their teacher, and the primary handler and her dog. Without their willingness, dedication, and honesty about their experiences, I would have been unable to complete my research.

The input of all these people helped me improve the clarity, thoroughness, and accuracy of this dissertation; any errors or omissions that may remain are solely my responsibility.
# TABLE OF CONTENTS

DEDICATION ........................................................................................................................................ iv

ACKNOWLEDGEMENTS .................................................................................................................. v

TABLE OF CONTENTS .................................................................................................................... vii

LIST OF TABLES ........................................................................................................................... xiii

LIST OF APPENDICES .................................................................................................................. xiv

Chapter 1: Introduction/Purpose of this Study............................................................................... 1

  Background ................................................................................................................................... 2

  Motivation and Engagement History ......................................................................................... 3

  Situating the Study ..................................................................................................................... 5

  Ways Educators Use Therapy Dogs to Support Readers at Randall School ......................... 6

  Therapy Dog Introduction into Upton Classrooms ................................................................. 7

  Therapy Dog and Handler Training ....................................................................................... 8

  Organization of This Dissertation ......................................................................................... 9

Chapter 2: Review of the Literature ............................................................................................ 11

  Theoretical Framework ........................................................................................................... 11

    Learning is Social .................................................................................................................. 12

    Levels of Development ....................................................................................................... 12

    Zone of Proximal Development (ZPD) ............................................................................... 13

    Sharing Activity with Others .............................................................................................. 14

    The Role of the Dog ............................................................................................................. 15

    The Role of the Dog-With-Handler ................................................................................... 15

    The Role of Meaning ......................................................................................................... 16
The Role of Mentorship .......................................................... 16
A Unique Structure .............................................................. 17
The Role of Instructional Literacy Practices .......................... 18
Related Literature ............................................................... 18
Effective Instructional Practices to Improve Literacy ............ 18
Animal-Assisted Interactions .............................................. 31
Summary ............................................................................. 37
Chapter 3: Methodology ..................................................... 39
Phases of Research ............................................................ 40
Selection of Sites and Participants ...................................... 40
   Sites .............................................................................. 42
   Student Participants and Their Parents ............................ 46
   Therapy Dog and Handlers .......................................... 48
   Staff Participants ....................................................... 49
Data Collection, Sources, and Schedules ............................ 51
   Observations With Videos and Descriptive Field Notes .... 53
   Reflective Memoranda in Research Journal .................. 56
   Interviews ................................................................... 57
   Artifacts ...................................................................... 58
   Researcher Bias .......................................................... 58
Case-Study Analysis .......................................................... 59
Credibility .......................................................................... 66
Summary ............................................................................. 67
Chapter 4: Ways Educators Used Therapy Dogs at Randall School ............................................ 68

Audience Members for Oral Reading ......................................................................................... 68

Dogs Sat in Proximity to Students, Watching Attentively ......................................................... 68

Dogs Looked Directly at or Into Books ..................................................................................... 69

Handlers Often Spoke for Dogs, Reinforcing Dogs’ Role as Interested Listeners ......................... 69

Teachers and Handlers Explicitly Told Students Dogs Were There to Listen to Them Read .......... 70

Bridges to Personalize and Discuss Stories ............................................................................. 70

Dogs as Points of Reference for Story Actions and Characters ................................................. 70

Dogs as General Conversation Enhancers ................................................................................. 72

Focusing and Calming Agents ................................................................................................. 72

Touch-Based Interactions ......................................................................................................... 73

Taking Walks ........................................................................................................................... 73

Obedience Commands ............................................................................................................ 73

Literacy Motivators .................................................................................................................. 74

Enjoyment Around Reading, Building a Positive Classroom Atmosphere .............................. 74

Comfort Through Touch .......................................................................................................... 75

Bolster Self-Confidence ........................................................................................................... 75

Handlers Provided Dog-Related Incentives Associated With Reading ..................................... 76

Summary .................................................................................................................................... 77

Chapter 5: Anna ......................................................................................................................... 78

The Learner: Discovery Space .................................................................................................... 78
Observations With the Therapy Dog ................................................................. 133

The Guides: Instructional Practices and Intentional Supports ........................... 141

Observations Without the Therapy Dog ............................................................. 141

Observations With the Therapy Dog ................................................................. 142

The Community: Connecting with Others in Literacy Events ........................... 150

Observations Without the Therapy Dog ............................................................. 151

Observations With the Therapy Dog ................................................................. 152

Summary ........................................................................................................... 158

Chapter 8: Cross-Case Analysis ....................................................................... 161

Literacy Learning through Dog-Assisted Reading ............................................. 161

Motivation ........................................................................................................ 161

Engagement ...................................................................................................... 171

Literacy Processes/Behaviors .......................................................................... 174

Influence of Social Context ............................................................................. 183

The Three Contexts ......................................................................................... 184

Effect of Context on Motivation ....................................................................... 186

Effect of Context on Engagement ................................................................... 187

Effect of Context on Literacy Processes/Behaviors .......................................... 189

Effects That Emerged only in Classroom With Dog and Handler ..................... 191

Summary ........................................................................................................... 197

Chapter 9: Discussion ...................................................................................... 199

Complexities Within Dog-Assisted Reading ................................................... 200

Student Engagement With Dogs ..................................................................... 201
LIST OF TABLES

Table 1 Phases of Research ............................................................................................................41
Table 2 Observation Schedule .......................................................................................................51
Table 3 Interview Schedule ...........................................................................................................52
Table 4 Artifact Schedule ..............................................................................................................52
Table 5 STAR Test Results Schedule ............................................................................................53
Table 6 Research Journal Excerpt ..................................................................................................55
Table 7 Early Categories for Field Data ..........................................................................................60
Table 8 Early Categories for Interview Data ....................................................................................61
Table 9 Early Categories for Artifact Data .......................................................................................62
Table 10 Progression of Categories Through Perspective Grid .....................................................63
Table 11 Progression of Categories Through Context Matrix—Identification of Themes ..........64
Table 12 Distribution of Categories across Themes ........................................................................64
Table 13 Final Themes ...................................................................................................................65
Table 14 Final Categories in Themes for Each Student .................................................................65
LIST OF APPENDICES

Appendix A: Sample Consent Forms ................................................................. 243
Appendix B: Description of the Standardized Test for Assessment of Reading (STAR) ... 247
Appendix C: Student Interview Questions .......................................................... 248
Appendix D: Adult Participant Interview Questions ............................................. 249
Appendix E: Samples of Student Artifacts ......................................................... 251
Appendix F: Perspective Grid Excerpt ............................................................... 257
Appendix G: Context Matrix Excerpt ................................................................. 259
Appendix H: STAR Test Data for Case Study Students ....................................... 258
Chapter 1: Introduction/Purpose of this Study

Literacy is crucial for success in U.S. society. The youth of the United States need to be equipped with excellent literacy education to succeed in school and life. Otherwise, these students will find themselves challenged in social settings, as civil participants, and in the working world (Biancarosa & Snow, 2006). Therefore, it is vital that educators work to help youth move forward in their literacy abilities. Raising the literacy achievement of students is an important and difficult challenge because literacy learning involves not only the acquisition of skills, but also motivation. According to Gambrell (2015), “educators have to have two equally important reading goals: to teach our students to read and to teach our students to want to read” (p. 259). The most effective approaches to support literacy will provide competent and motivating practices.

One approach used to support students in literacy involves dog-assisted reading. Using therapy dogs as reading partners began more than 15 years ago and has grown, especially in the last 5-7 years, into a popular literacy-learning support strategy. Reading to a therapy dog has emerged as an effective way to meet the literacy challenges of improved performance and of improved motivation. Reading to therapy dogs inspires intrinsic motivation: the kind of motivation that leads to reading even when it is not mandatory, which can create a lifelong love of reading and learning (Beetz, 2015; Griess, 2010; Treat, 2013).

Reading aloud to a therapy dog inspires children: to enjoy the process of reading more (Beetz; 2015; Martin, 2001; Snider, 2007; Treat, 2013), to want to read to dogs more often (Friesen, 2012; Inklebarger, 2014; Kaymen, 2005; Lloyd & Sorin, 2014; Pamungkas, 2015; Pillow-Price, Yonts, & Stinson, 2014), to feel more confident and competent in their reading (Briggs, 2003; Dunlap, 2010; Griess, 2010; Shannon, 2007; Shaw, 2013), and to participate more
in reading-based activities in and outside the classroom (Bassette & Taber-Doughty, 2013; Garnto, 2014; Intermountain Therapy Animals [ITA], 2015; Jalongo, 2005; Jalongo, Astorino, & Bomboy, 2004; Truett & Becnel, 2013). Reading to a therapy dog can also, when coupled with recommended practices in literacy teaching, improve students’ fluency and comprehension beyond what can be obtained without the dog (Black, 2009; B. Fisher & Cozens, 2014; Heyer & Beetz, 2014; Lane & Zavada, 2013; Le Roux, Swartz, & Swart, 2014; Paradise, 2007; C. E. Smith, 2009; M. H. Smith & Meehan, 2010; Treat, 2013; Walsh, 2014). Dogs in classrooms help improve students’ attitudes, attentiveness, and responsiveness. In light of these findings, it is perhaps no surprise that, “like a quiet underground movement, the popularity of animal-assisted literacy mentoring programs continues to grow across North America and abroad” (Friesen, 2012, p. 1).

**Background**

This dissertation explores using trained therapy dogs as reading partners to enhance literacy motivation and learning. The spark for this study began in my childhood when I observed and was inspired by the way animals, especially dogs, could provide emotional support to humans and help them connect. Years later, as a literacy coordinator in a special-education department, I observed a therapy dog named Walter (pseudonym) who worked alongside an occupational therapist to help students improve their motor skills. When Walter visited our normally staid administrative office, I noticed an immediate change in the atmosphere. The dog became the center of attention and communication between staff members increased. I jokingly commented I needed Walter’s help to support reading in the classrooms. A colleague responded that dogs were used in libraries for exactly that purpose. I was surprised and intrigued.
I became attuned to the topic of dog-assisted reading and learned more about it. I discovered therapy dogs supported students’ reading in schools as well as libraries. Eventually, through the support of administrators, a growing group of teachers, and the Therapy Dogs International (TDI) organization, I brought dog-assisted reading to our special-education division. When I later entered the doctoral program, I decided to focus my dissertation on further investigating this phenomenon.

**Motivation and Engagement History**

Educators grapple with how to cultivate a classroom environment that fosters reading motivation, enjoyment, and engagement. Cambria and Guthrie (2010) called the motivational aspects of literacy the “neglected half” of reading, whereas as recently as 2016, researchers Wilhelm and Smith observed that “pleasure has enormous power in fostering reading engagement and development, yet pleasure is not foregrounded in schools in ways that would leverage and develop student reading, and that would help students grow as readers and as human beings” (p. 25). These statements align with the observations of Allington and Gabriel (2012) that current academic reading trends show schools allocate little time in curricula for pleasure reading. Instead, classroom teachers feel pressure for accountability, and are often required to use skill-driven methods and scripted, fast-paced, inflexible programs (Allington, 2011, 2013; Baker, Dreher, & Guthrie, 2000; Margolis & McCabe, 2006; Wells, 2000), leading to what Gallagher (2009) called “readicide”: the demise of students’ desire to read. This trend connects to a study by the National Endowment for the Arts (2015), showing that fewer and fewer Americans of all ages read for pleasure -- a trend that bodes particularly ill for students who are already struggling with literacy, as they are likely to read even less when they enjoy it less, creating a downward spiral. The relationship between attitude and ability grows stronger
over time (Guthrie, 2004a; Guthrie & Cox, 2001; McKenna, Kear, & Ellsworth, 1995), and students who fall behind in their current literacy growth are likely to have their potential decline as well (Stanovich, 1986; Snow & Matthews, 2016).

The link between motivation and literacy development is vital. Adams (1990), in a landmark synthesis of reading research, stated, “If we want children to read well, we must find a way to induce them to read lots” (p. 5). Other researchers concurred (Allington, 2009; Gambrell, 2015; Stanovich, 1986; Worthy, Broaddus, & Ivey, 2001). Gambrell (2015) reported, “We know that students who enjoy reading are likely to choose to read more often than students who do not enjoy reading. We also know that the more students read, the better readers they become” (p. 259). Strategies that connect motivation and emotion with cognition are essential to induce students to read more (Dai & Sternberg, 2004; Springer, Harris, & Dole, 2017; Wilhelm & Smith, 2016). According to Cambria and Guthrie (2010):

You can certainly ignore motivation if you choose. But if you do, you may be neglecting the most important part of reading. There are two sides to reading … skill and will. In the “will” part, we are talking about motivation to read. This describes children’s enjoyment, their wants, and their behaviors surrounding reading. A student with skill may be capable, but without will, she cannot become a reader. It is her will power that determines whether she reads widely and frequently and grows into a student who enjoys and benefits from literacy. So we think you should care about motivation because it is the other half of reading. Sadly, it is the neglected half. (p. 16)

Guthrie et al. (2006) identified two kinds of motivation: intrinsic and extrinsic. Intrinsic motivation is inspired from within: a person engages with a task because they want to, not because an external event or situation compels them to do so. Intrinsic motivation for reading creates a “permanent predisposition” to participate in the reading process, which is not dependent on external circumstances or rewards. Approaches to literacy teaching that stimulate intrinsic motivation can create children who love to read and who therefore “read lots.” Reading to
therapy dogs is one emerging strategy that meets the “skill” and the “will” requirements for effective literacy learning.

**Situating the Study**

Dog-assisted reading has been in use for more than 15 years, with increasing numbers of formal and informal studies. Most formal studies have focused on statistical analyses of standardized test results to demonstrate the dogs’ beneficial effects (often supplementing with anecdotal and affective reports of changes in students’ behaviors and attitudes). Formal and informal studies have yielded strong evidence that dog-assisted reading is effective to motivate children to want to read more and to improve their reading abilities; however, the reasons it is successful are complex and not fully understood. Complex phenomena may benefit particularly from case-study analysis (Merriam, 1998, 2009; Stake, 1995; Yin, 2009), which provides data-rich observations and insights about the phenomena, thereby contributing valuable information to extend understanding and to inspire further dialogue about the subject. My extensive review of the literature indicated that detailed case studies about dog-assisted reading are almost nonexistent. I therefore chose a case-study methodology for this study.

In addition, most dog-assisted reading studies have been completed with grade-school children. I found no studies that focused specifically on middle or high school students, even though older below-grade readers are a population for whom additional progress is traditionally very difficult (Snow & Biancarosa, 2003). Given dog-assisted reading’s consistent positive effects on younger readers, I wanted to research dog-assisted reading with older students for this study.

Finally, I also wanted to observe dog-assisted reading in different environments with the same students. Only a small number of existing studies explored dog-assisted reading in different
contexts (Hall, Gee, & Mills, 2016). I specifically wanted to compare how the student/dog/handler team interacted in a quiet office setting versus a more bustling classroom, and how the dog-assisted team’s presence affected the classroom.

For this research, I chose to investigate dog-assisted reading using a case-study methodology with middle school children in multiple settings. This dissertation explores the experiences of three middle-school special-education students, each with unique reading profiles in three different contexts: (a) in their classroom without any therapy dog or handler, (b) in an office one on one with a therapy dog and handler, and (c) in the classroom with different therapy dogs and their handlers. To explore the multiple layers involved in the dog-assisted reading experience, I asked the following questions:

1. In what ways are therapy dogs used to support readers at Randall School? (Note, all sites and participants are identified with pseudonyms.)

2. In what ways do therapy dogs impact literacy learning (motivation, engagement, and literacy processes/behaviors) of three middle school special-education students at Randall School?

3. In what ways do the therapy dog/handler/reader triad and the social context influence each other at Randall School?

My intent in answering these questions was to provide data-rich details about dog/child/handler interactions in different contexts for three middle school children with different reading profiles.

**Ways Educators Use Therapy Dogs to Support Readers at Randall School**

Educators use therapy dogs in educational settings across the country in a range of ways. Dogs are frequently found in classrooms, libraries, and on college campuses. In these settings, educators use dogs to calm fears, relieve anxiety, and teach skills, supporting students through
their unique aspects of interaction. Individuals can pet and stroke a dog, thereby gaining calm and comfort through touch. Interaction with dogs could enable the animals to fill a gap in the learning environment that helps increase motivation. In a relaxed state, a student may be more available for cognitive and social interactions.

Even without physical contact, the presence of a dog in a room lowers human blood pressure (Friedmann, Katcher, Thomas, Lynch, & Messent, 1983). When a situation creates the physiological effects of anxiety and stress, the individual is not only uncomfortable in the moment, but they also assess their skills as inadequate, creating a cycle of diminished self-esteem and self-confidence. When a dog lowers a student’s blood pressure, the perceived physiological effect is one of reduced stress and improved self-assessment, which appears to raise the child’s self-confidence and self-efficacy, often improving performance (Friesen, 2012). Possibly, the dog contributes to the perceived competence and, thanks to its unique ability as a social catalyst, to relatedness.

Overall, dog-assisted reading has become a burgeoning field of study (Jalongo et al., 2004). Given the benefits of animal-assisted therapy, I was guided to bring dogs to the special education classrooms in Randall School as a promising educational and therapeutic support. Randall School was part of Upton Educational Services, a large multiservice organization that provided educational-leadership services.

**Therapy Dog Introduction into Upton Classrooms**

In 2008, a social worker introduced therapy dogs to Upton Educational Services at an Upton school (not Randall School). The social worker brought her service dog to Upton as an in-school therapy dog. The social worker and dog would come into a schoolroom once each week when the teacher was conducting a read-aloud, and the dog would lie on the floor with the
students while the teacher read. At about the same time, a second social worker also began bringing her therapy dog into another Upton classroom where the social worker would sit and read with a small group of students. These informal experiences with dog-assisted reading led me to think a formal dog-assisted reading program would be a good match for Randall School’s student population.

The Randall dog-assisted reading program began in October 2010 as a joint venture between a classroom English-language arts teacher named Erica and me. As avid dog enthusiasts, we both looked for ways to simultaneously have students read more and provide the therapeutic support needed for students with social and emotional issues. After obtaining permission from the principal and superintendent, Erica and I worked through TDI to obtain support. We wrote a letter to TDI requesting dog-assisted reading teams, and TDI published our request in their newsletter. Our letter mentioned that all handlers would be required to be fingerprinted, go through a background check as part of Randall’s volunteer policy, and pay the fee for these services. We received several e-mail and phone inquiries in response to our published letter. We called each handler and talked with them on the phone, selecting teams we thought would be the best fit for our students. We then met with each selected team, collected their documentation, provided a tour of Randall School, and shared guidelines for the therapy-dog visits. We assigned each team to particular students or classrooms and set a schedule.

**Therapy Dog and Handler Training**

Many organizations now exist to train dogs and handlers especially for the purpose of providing dogs as reading partners. TDI, headquartered in New Jersey, trained all of the dog-assisted reading teams used at Randall School. TDI has a number of programs for training therapy dogs, not only for dog-assisted reading in schools and libraries, but also in such diverse
applications as patient support (in hospitals, nursing homes, and hospice), stress relief (at airports and in colleges during examination week), and emotional support for survivors of disasters. One program, called the “Tail Waggin’ Tutors,” aims specifically at children reading to dogs.

According to TDI’s website, the main objective of this program is

   to provide a relaxed and “dog-friendly” atmosphere, which allows students to practice the skill of reading. Many of the children chosen for this program have difficulties reading. … They are often self-conscious when reading aloud in front of other classmates.

The therapy dogs’ purpose is to help students improve their reading skills and enjoy reading more (TDI, 2017).

TDI handlers are trained through a video that shows the proper ways for the dog/handler team to act in schools, with special attention to health, safety, and security considerations for all participants—students, dogs, and staff—including being sensitive and responsive to environments and following proper protocols. TDI also provides a second video showing several “Tail Waggin’ Tutor” teams in action, with footage of dogs and handlers reading with students, as well as interviews with eight handlers discussing their school experiences. Miss Pat and Miss Sharon were the two main handlers in this study. Both had prior experience as teachers. Each woman drew on these experiences to best support each child’s literacy and social needs.

**Organization of This Dissertation**

Chapter 1 explained the purpose of the study and provides an introduction to the concepts. Chapter 2 presents a theoretical framework for the study and a review of related literature. Chapter 3 details the methodology used and identifies the various phases of the study, describing the sites and participants. Chapters 4 through 9 present my findings, as follows: Chapter 4 describes the ways I observed therapy dogs were used in this investigation to help promote literacy; Chapters 5, 6, and 7 detail the three case studies. Chapter 8 compares and contrasts the
three cases. Chapter 9 situates the results in relation to current research and professional literature, and discusses the implications for theory and practice.
Chapter 2: Review of the Literature

Reading matters. Unfortunately, for many students, reading is an arduous undertaking for many reasons. Reading is a complex cognitive process, “a message-getting, problem-solving activity” (Clay, 1991, p. 6) that integrates social and personal factors (Boyd, 2002; Bus & van Ijzendoorn, 1997; Cambourne, 1988; Gambrell, 2015; Guthrie & Wigfield, 2000; Guthrie et al., 2006; Rogoff, 1990; Vygotsky, 1978; West, 2002; Wilhelm & Smith, 2016). Reading and literacy continue to expand and evolve as the world grows in complexity. I designed this research study to explore the effects of dog-assisted reading on literacy learning for middle school readers who, in some ways, find the process of reading difficult. In this work, I particularly focused on older children with school-based reading challenges because improvement seems to become especially difficult past a certain age (Lee & Spratley, 2010; Moore, Bean, Birdyshaw, & Rycik, 1999; Snow & Biancarosa, 2003). I also focused on the ways therapy dogs impacted motivation, engagement, and literacy processes/behaviors for such readers. In this chapter, I first present a theoretical framework for the study; then follow with a discussion of related literature germane to the study.

Theoretical Framework

According to Anafara and Mertz, “A useful theory is one that tells an enlightening story about some phenomenon. It is a story that gives you new insights and broadens your understanding of the phenomenon” (2006, p. xvii). Social constructivism seems most suited to explain the unique and complex phenomenon of dog-assisted reading. Social constructivism emphasizes social interaction and shared experience.
Learning is Social

In the 1920s–1930s, Soviet researcher Vygotsky (1978) performed a series of studies into children’s cognitive development that laid groundwork for the learning theory that came to be known as social constructivism. This theory’s primary tenet is that learning is a social experience. No one learns in isolation, but rather through the historical and current paradigms and constructs of their culture; that is, by interacting with others in their milieu. Vygotsky believed children are always learning, not just when they are at school, and that every encounter with other people or the natural world provided opportunities for growth (Lee & Smagorinsky, 2000; Vygotsky, 1978; Wells, 2000).

Levels of Development

One way children learn is by imitating adult behavior. Vygotsky (1978) observed that, in so doing, children “can imitate a variety of actions that go well beyond the limits of their own capabilities … doing much more in collective activity or under the guidance of adults” (p. 88). From this observation, Vygotsky theorized two levels of development: an actual level and a potential one, arguing that a child’s immediate potential for cognitive growth is defined on the lower end by what they can accomplish on their own (their actual level), and on the upper end by what they can accomplish with the help of a “more knowledgeable other” such as a teacher or skilled peer (their potential level). Vygotsky found that children solved more complex problems when they had some assistance from a guide. Vygotsky dubbed the difference between what a learner can do without help and what they can do with help the “zone of proximal development” (ZPD).
**Zone of Proximal Development (ZPD)**

The ZPD is currently a widely used construct in education and beyond (Chaiklin, 2003). The ZPD “defines those functions that have not yet matured but are in the process of maturation, functions that ... are currently in an embryonic state” (Vygotsky, 1978, p. 86), and that “what is the zone of proximal development today will be the actual developmental level tomorrow—that is, what a child can do with assistance today she will be able to do by herself tomorrow” (Vygotsky, 1978, p. 87).

Vygotsky (1978) argued that schools need to orient teaching not toward a child’s actual level of development, but toward the ZPD; that is, to keep “stretching the envelope” through social support. Vygotsky was particularly concerned about teaching environments that minimize social interaction, as explained by the editors of his 1978 book:

Many educators, recognizing that the rate of learning may vary from child to child, isolate particularly “slow learners” from their teachers as well as their peers through the use of programmed and frequently mechanized instruction. In contrast, Vygotsky, because he views learning as a profoundly social process, emphasizes dialogue and the varied roles that language plays in instruction and in mediated cognitive growth. The mere exposure of students to new materials through oral lectures neither allows for adult guidance nor for collaboration with peers. (p. 131)

Vygotsky recognized the importance of learning activities that involve spontaneity and freedom, and that accommodate individualized needs, saying, “a functional learning system of one child may not be identical to that of another, though there may be similarities at certain stages of development” (1978, p. 125). Vygotsky believed that playful yet bounded activities (such as games with definite rules) were vital to development because they stretched a child’s ZPD, stimulating conduct “beyond his average age, above his daily behavior” (1978, p. 102). In these activities, children maximize pleasure by simultaneously following rules and engaging their imagination and creativity. Vygotsky observed that the combination of structure and

Clay asserted that children construct internal systems they can control to access new and increasingly complex texts. Through the use of engaging stories at appropriate levels, teachers guide students individually, helping children develop internal strategic systems for reading. More recently, Fountas and Pinnell (2006) modernized Clay’s theories with Guided Reading, a program consisting of systematically leveled books, appealing in their content, used to teach small groups of students with similar reading strengths and needs. Like Vygotsky (1978), these more recent educators championed flexible, yet structured teaching in students’ ZPDs, building on children’s strengths and working toward their potential. Chaiklin (2003) called the ZPD one of the most prominent and studied elements of Vygotsky’s scientific production. Roth and Radford (2010) hailed the ZPD as “the emergence of a new form of collective consciousness, something that cannot be achieved if we act in solitary fashion” (p. 306).

Sharing Activity with Others

Vygotsky defined the ZPD as the growth a learner could make when supported by “adult guidance or in collaboration with more capable peers” (1978, p. 86). Rogoff (1990) expanded this notion and argued that it is “shared activity—which may or may not have explicit lessons for children—[that provides] the material for [their] development” (p. 17). Wells (2000) concurred, stating “participants with relatively little expertise can learn with and from each other as well as from those with greater expertise” (p. 5) and “it is by attempting to make sense with and for others, that we make sense for ourselves” (p. 6).

“Buddy” reading programs demonstrate shared social activity. In these programs, pairs of readers of varying ages and ability levels work together to create more opportunities for positive
reading experiences. In several studies, this collaboration resulted in increased motivation, discussion, and achievement (Fiala & Sheridan, 2003; McDonald, 2010; Nes Ferrara, 2005). Buddy reading has become a popular option for teachers who want to increase reading motivation (Block & Dellamura, 2000/2001; Friedland & Truesdell, 2006; McDonald, 2010; Rubinstein-Avilia, 2003).

**The Role of the Dog**

Buddy reading provides a link to dog-assisted reading in that a therapy dog is a kind of buddy. Although a dog is not the same as a human peer, the dog provides students with many positive supports. The dog has an appealing social presence for children; the dog’s presence reduces anxiety, helps to calm, and improves mood; and the dog provides social support in the form of a “friend” who likes and cares about the student (ITA, 2015; Jalongo, 2005; Le Roux et al., 2014; Netting, Wilson, & New, 1987; Paradise, 2007; Shaw, 2013). Additionally, the dog acts as a social catalyst by attracting other people to interact with the student in positive ways (Friesen, 2012; Garnto, 2014; Heyer & Beetz, 2014; Jalongo et al., 2004; Lane & Zavada, 2013; Lloyd & Sorin, 2014; C. E. Smith, 2009; M. H. Smith & Meehan, 2010; Snider, 2007; Treat, 2013; Truett & Becnel, 2013; Walsh, 2014). These supports help increase a child’s opportunities for constructive and pleasurable learning experiences in their social setting, which can, in turn, help increase intrinsic motivation for learning.

**The Role of the Dog-With-Handler**

Social constructivism focuses on the social aspect of learning. In the dog–child reading intervention, the dog becomes part of the child’s social-learning community, offering “a unique form of social support [that also invites] … peer interaction” (Jalongo, 2005, p. 154). The dog’s handler provides another source of social interaction for the child, and the handler often extends
this support by “speaking” for the dog and by asking questions or offering suggestions on the
dog’s behalf during the reading of a story. In this scenario, the handler acts as a “more
knowledgeable other,” yet the support is intentionally guided by the handler speaking for the dog,
making the educational aid more casual and social instead of formally instructional. The
handler/dog/reader triad becomes a cooperative learning “team” rather than a hierarchy. Together,
these social changes create a less stressful, more enjoyable, and spontaneous atmosphere for
learning, and can help make the process of reading personally meaningful for the student.

The Role of Meaning

Vygotsky gave meaning a strong role in learning and development, stating:

Teaching should be organized in such a way that reading and writing are necessary for
something. … Reading and writing must be something the child needs. [Writing must be
taught not just as a “motor skill” but as] … a complex cultural activity … relevant to life.
(1978, p. 117)

In other words, literacy tasks that are authentic, purposeful, and student-generated will more
readily engage a child in the learning activity. Additionally, a growing body of research indicates
that relationships are a necessary factor for children to achieve success in school (Hymel,
Shonert, & Miller, 2006). Dogs, due to their nonjudgmental and highly social nature (Jalongo et
al., 2004), and their modeling of unconditional acceptance and trust (Friesen, 2012; Le Roux et
al., 2014) provide students with a “‘friend’ to bond with … in the classroom setting” (Friesen,
2012, pp. 41–42). Reading to or with such an important friend is a meaningful interaction. The
dog’s social relevance to the child can create a powerful impetus for learning.

The Role of Mentorship

Friesen (2012) invoked the Reading Education Assistance Dogs (READ) program,
created by Intermountain Therapy Animals’ (ITA), in suggesting that the dog and handler in
dog-assisted reading form a “literacy mentor team” for the child, offering academic support and
a responsive, caring, meaningful relationship. Quoting Brodkin and Coleman, Friesen said that a mentor “provides one-to-one support and attention, is a friend and role-model, boosts a child’s self-esteem, [and] enhances a student’s educational experience” (2012, p. 200). Dog and handler contributed to each of these defined roles, with the dog often being the part of the team on which the child focuses most. The dog’s nonspeaking and noncritical presence, calm yet friendly attentiveness, and enjoyment of the child’s petting, stroking, and speaking to it, provided what Friesen called a “soft social bridge” (2012, p. 187) that creates a safe, playful, enjoyable, and motivating interaction, encouraging learning in the social-constructivist form. Positive social interactions and successes in academic situations can help build a child’s intrinsic motivation for reading, even when the dog is no longer present (Beetz, 2015; Griess, 2010; Treat, 2013).

A Unique Structure

Finally, Rogoff (2003) comprehensively discussed the effects of an individual’s culturally programmed biases and expectational “norms” on learning and behaviors, and noted that exposure to cultures that do things differently from us expands knowledge, options, and tools. Diversity broadens and sometimes helps reshape cultural norms. An educational team that includes a dog is intrinsically different from an all-human team, and has a different set of “rules” by which it operates. These rules will not yet be defined by the culture at large, and this can give the human members of such a team a fresh opportunity to redefine their roles and methods. A dog-assisted reading team is a new type of cultural learning group where the old rules do not necessarily apply. At-risk readers who become part of such a group may find it easier to break out of their old roles and labels to find new ways to interact that better serve their learning process: that is, “rising above oneself” (Wells, 2000, p. 8). In addition, student participants in a dog-assisted reading group are “insiders” (Rogoff, 2003, p. 24) in that group, giving them status
and insights that nonparticipants do not have. This can lead to increased self-esteem as well as new modes of behavior in and outside the group.

**The Role of Instructional Literacy Practices**

The dog’s presence alone is usually not sufficient to ensure results. For dog-visitation programs to be effective, they must be also consistent with effective instructional practices in literacy (Jalongo, 2005). Specifically, dog-visitation programs need to be well-planned with collaboration between the handler and teacher, appropriately leveled text of high interest and quality, and opportunities for students to choose their own literature. Additionally, the handler’s knowledge, skill, and finesse with their dog and the students are crucial to the success in the dog/handler/reader triad (Lane & Zavada, 2013). Essentially, every member of the small social group has their own important role to play in the overall learning experience in which they each “coordinate with the group direction” (Rogoff, 2003, p. 9).

**Related Literature**

Research on effective instructional practices for improving literacy, and animal-assisted interactions that influence learning, particularly those with dogs in literacy-related settings informed this study. The students in this study are all middle school special-education students; however two of the three students’ reading levels are developmentally equivalent to grade school children. Therefore, the literature review encompasses studies from a variety of grade levels in elementary and middle school.

**Effective Instructional Practices to Improve Literacy**

The research on effective practices to improve literacy includes (a) fostering motivation and engagement, (b) cultivating positive reading experiences, (c) supporting literacy processes and behaviors, (d) using talk to support thinking, (e) selecting books to match a student’s reading
level, (f) accessing and reading self-selected materials, (g) promoting oral fluency, and (h) providing time for independent and pleasure reading.

**Fostering motivation and engagement.** Although researchers often use the terms *motivation* and *engagement* interchangeably, they have different meanings. Motivation is an inner energy and direction. In contrast, engagement is the outer evidence of that directional energy.

**Motivation.** Motivation refers to one’s willingness to participate in activities and one’s reasons for doing so (Brewster & Fagen, 2000). Many researchers have studied motivation and tried to define its ranges and bounds. Each researcher devised frameworks to view motivation that have relevance to the study of dog-assisted reading. These are discussed below.

According to a 2008 report by the Australian Government’s Department of Education, Science and Training (DEST), motivation builds on a person’s basic drives and needs, as well as the available intrinsic and extrinsic rewards, and has several components: (a) an individual’s goals and purposes, (b) an individual’s expectancy of success/their belief that they can and will reach their goal, and (c) affective elements such as self-worth and happiness. Pink (2011) presented three similar pillars for motivation: (a) autonomy, the desire to be self-directed; (b) mastery, the drive to be good at what we do; and (c) purpose, the sense that what we do has a higher meaning. Csikszentmihalyi’s research (1990) included factors such as having challenging activities that require skill, having clear goals and feedback, and having a sense of control over one’s work.

Motivation also connects to a person’s subjective experiences, including their self-efficacy (Bandura, 1997), which is the strength of a person’s belief in their own ability to succeed and reach a goal, related to self-confidence and self-esteem. Students with high self-
efficacy have intrinsic motivation, perform better on achievement-related tasks, and are apt to choose challenging activities and persist at them despite the difficulty (Schunk & Zimmerman, 1997). Students with high self-efficacy feel more in control of their learning, and vice versa: having control gives a student a sense of self-efficacy. Details can affect self-efficacy. For example, an excessive challenge on a task will produce anxiety and frustration; a minimal challenge will produce boredom; the appropriate level of challenge will produce a sense of competence and self-efficacy, which will increase motivation. Motivation also connects to a person’s sense of comfort, value, and security. In an educational setting, these feelings enable students “to form positive emotional bonds with their teachers and peers and a positive attitude toward school which in turn translates into improved academic motivation and learning” (C. E. Smith, 2009, p. 16).

Consistent with learning as a social activity, students can also be motivated to read when friends and peers are reading and are enthusiastic about, for example, a particular book, series, or genre. Psycholinguist F. Smith (1988) coined the phrase “the literacy club” for children reading together and discussing stories and ideas. Rather than a literal club, the literacy club describes the spontaneous interactions of people who share the common bond of books, becoming energized and joining together to discuss and relate to them. People “join the club” of those with whom they relate and, by engaging in their activities, gain a sense of belonging. Overall, motivation is complex, multifaceted, and a crucial requirement for the activation of behavior (Guthrie & Wigfield, 2000). Teachers and mentors are encouraged to treat motivational goals as equally important to learning goals (Gambrell, 2011, 2015).

**Engagement.** Engagement means motivational energy in action with behavioral, emotional, and cognitive aspects (DEST, 2008). Reading events combine these aspects as
“Engaged reading is a merger of motivation and thoughtfulness. Engaged readers seek to understand; they enjoy learning and they believe in their reading abilities … [they are] mastery-oriented, intrinsically motivated, and have self-efficacy” (Guthrie, 2001, p. 1). Consistent with Vygotsky’s (1978) observations, Newmann, Wehlage, and Lamborn (1992) identified several factors that affect engagement, including students’ needs to become competent, to sense that the work they are being asked to do is authentic, and to sense that they, in turn, are valued and respected by others in the enterprise. Students are also more engaged when they have a sense of commitment to the work, and when the experience is enjoyable.

Factors affecting engagement relate closely to those affecting motivation. In fact, engagement and motivation continuously interact. For example, when students feel competent to perform a task, they are more motivated to stay focused on that task (Poulson, Rodger, & Ziviani, 2006), which, in turn, can help them become more competent. In addition, a student’s motivation is often inferred from how engaged or involved they are in their learning activities. Brooks, Freiburger, and Grotheer (1998) identified several factors associated with engaged learning, including remaining on task, displaying effort, being an active listener, participating verbally, and working independently while demonstrating cooperation (as cited in C. E. Smith, 2009, p. 19). Guthrie (2004b) cited perseverance, stamina, and focus as evidence of engagement.

One can be motivated but still disengaged: that is, students want to learn, but have difficulty relating to the material, the tools, and the environment (DEST, 2008). For example, Moll (1990) said that “by focusing on isolated skills and subskills, the essence of reading and writing … as a ‘whole activity’ evaporates” (p. 8). Educational activist Kohn mirrored this idea in observations about the “cult of rigor” emerging in schools that results in a “loss of joy” (Kohn, 2004, para 1, 9). These are powerful reminders of how school factors, situational contexts, and
specific tasks can influence engagement and, hence, learning (Cambourne, 1988; Guthrie & Wigfield, 2000; Springer et al., 2017).

**Cultivating positive reading experiences.** The literature includes more than 35 years of studies confirming that when children have positive early reading experiences with their parents/caregivers or older siblings, they are more motivated to read and enjoy reading more than children who do not have such experiences (i.e., children who do not read with parents, or who are criticized or constantly tested while reading; Baker, Scher, & Mackler, 1997; Bergin, 2001; Bus & van IJzendoorn, 1997; Bus, van IJzendoorn, & Pelligrini, 1995; Clay, 2002; Frosch, Cox, & Goldman, 2001; Holdaway, 1979; Sonnenschein & Munsterman, 2002; Teale & Sulzby, 1986; Yaden, Rowe. & MacGillivray, 2000). Praise, support, positive affect, warm interactions and affection, emotional spontaneity, and physical proximity help learners establish reading confidence and competence, and create the perception that learning to read is fun. Conversely, hostility, criticism, distance, and disinterest had the opposite effect (Baker, Scher, & Mackler, 1997; Bergin, 2001; Bus & van IJzendoorn, 1997; Bus, van IJzendoorn, & Pelligrini, 1995; Clay, 2002; Frosch, Cox, & Goldman, 2001; Holdaway, 1979; Sonnenschein & Munsterman, 2002; Teale & Sulzby, 1986; Yaden, Rowe. & MacGillivray, 2000). Skill-based pedagogical approaches to early book reading also decreased motivation by creating the perception that reading is not pleasure-oriented, but instead a matter of always being judged on “getting it right” (Heath, 1983). When no demands were placed on a child, lively responses and questions authentically surfaced (Doyle & Bramwell, 2006; Holdaway, 1979). Children engaged more when they found the activity enjoyable and when they felt adequate to the task.

Similar effects have been observed in the classroom. Exemplary classrooms ensure students are safe, not only physically but also psychologically. Students learn more readily when
their environment fosters self-esteem and emotional comfort (Hymel et al., 2006); when they can engage free from anxiety (Cambourne, 1995); when they know their ideas are valued, without insult or ridicule (Rose, 1995); and when their emotional needs are honored and met (Boyd, 2002; Hymel et al., 2006; Oldfather, 2002; Paradise, 2007; West, 2002). Conversely, motivation diminishes and students become disengaged and disinterested when their affective needs are not honored, such as when they have low self-worth, are isolated, or not socially accepted; such children fail to receive needed support and collaboration (West, 2002).

When low achievers had the opportunity to help younger children learn, they gained a sense of self-esteem and a belief in their own potential from the younger students’ appreciation and success (Boyd, 2002). Being able to be a “more knowledgeable other” increased their own motivation and engagement. One student in particular decided to become a teacher as a result of this experience (Boyd, 2002).

**Supporting literacy processes and behaviors.** At the heart of reading is a complex process that unites a wide range of physical, emotional, cognitive, and linguistic actions on behalf of the reader (Fountas & Pinnell, 2006). Comprehension is a focal point for all literacy acts (Clay, 1998), whether reading, writing, listening, or speaking. Comprehension is an intricate cognitive process whereby the reader intentionally interacts with text in an effort to derive meaning, using a set of strategic actions to extract and construct understandings from language (Blachowicz & Ogle, 2001; Paris, Lipson, & Wixson, 1983; Snow, 2002). According to Clay, comprehending is not just a literacy task ... it is what a child is doing when holding a conversation with someone, listening to someone reading aloud, or reading on his or her own, at any time or place. It is not an aspect of thinking that emerges only after children have done the reading or passed through the first two years of school. All educators need to hold as their top priority the expectation that learners will understand what they are reading. The reading process the child builds should involve comprehension, for if we train the child to read without involving these powerful thinking strategies from the beginning, it will be more difficult for some of them to think about content later. ...
Comprehension lies in what learners say, what is read to them, and what they read and write; learners should know that all literacy acts involve comprehension. (1998, p. 217)

The mental processes of reading are internal, and cannot be externally viewed (Fountas & Pinnell, 2006). However, they can be inferred by closely observing visible behaviors as children read aloud. Specifically, educators can focus on students talking, writing, and drawing as they work to construct meaning (Clay, 1993).

Fountas and Pinnell (2006) offered a useful framework for viewing students’ reading processes and behaviors that is germane to the literacy processes/behaviors observed in this study. This framework uses three domains: “within the text,” “beyond the text,” and “about the text.” Thinking “within the text” refers to the construction of literal meaning from information found directly in the text (Scanlon, Anderson, & Sweeney, 2010), and includes such actions as decoding, self-monitoring, self-correcting, searching for information, remembering information, and maintaining and adjusting rate and phrasing (Clay, 1993). Thinking “beyond the text” refers to actions a reader takes to assemble evidence for information not explicitly stated in the text (Fountas & Pinnell, 2006; Scanlon et al., 2010), and includes predicting; using prior and content knowledge; making text-to-text, text-to-self, and text-to-world connections; inferring; and synthesizing (Blachowitz & Ogle, 2001; Keene & Zimmerman, 1997). Thinking “about the text” is a more sophisticated analytical process in which the reader seeks to understand how text “works,” examining the details of plot design, structure and content (Scanlon et al., 2010; Yoon, 2015), and includes noticing and evaluating the writer’s craft, language usage, literary devices, and characteristics of genre (Pearson, 2011).

For the proficient reader, these processes work together. However, for the reader who experiences difficulties in literacy processing, the challenges are often numerous, spanning the range from decoding, fluency, and vocabulary issues to sparseness of background knowledge and
critical thinking (D. Fisher & Frey, 2015). For older/adolescent students who have difficulties reading, the problems are often greater. Schools expect teenagers to already have the necessary literacy skills to read for content in a variety of subjects and formats (J. B. Fisher, Schumaker, & Deshler, 2002; Snow & Biancarosa, 2003). Concurrently, reading comprehension instruction in middle- and high school is usually lacking, due to teachers’ high content demands and feelings that they are unqualified or not responsible for this area of pedagogy (Ness, 2009). Older students often find it harder, when addressing school-based reading challenges, to maintain a positive attitude after years of being behind their peers, even though they have the same needs for motivation, self-monitoring, and self-correcting as younger readers. After a certain age, literacy gains become hard (Lee & Spratley, 2010; Moore et al., 1999; Snow & Biancarosa, 2003), creating what researchers call “the literacy achievement gap” in specific groups of older students (Strickland & Alvermann, 2004), calling for techniques that can specifically benefit this population (Snow & Biancarosa, 2003).

Using talk to support thinking. Students with reading and writing difficulties frequently also have trouble speaking (Catts & Kamhi, 1999). Spoken language is generally viewed as a precursor to the more sophisticated tasks of reading and writing, yet speaking and listening have only recently been added to school curricula (National Governors Association, 2010). Also, a strong connection exists between speaking and thinking.

Problem solving. Talking about idea and information is one of the primary ways people learn. This is observable at a very young age: children use talk—to themselves or to another—to orient themselves, to work through options that might not be immediately possible in their physical setting, and ultimately to help solve problems (Lee & Smagorinsky, 2000; Vygotsky, 1978). Vygotsky (1978) even found that children often used self-talk to get through all the steps...
of a difficult task, and, when forbidden to speak, became incapable of proceeding. Children who have difficulty talking will therefore also have fewer opportunities to learn and develop academically and socially. In literacy learning, engaging in talk and dialogue about books and stories is crucial.

**Co-constructing meaning.** Vygotskian scholar Wells (1986, 2000) noted that the co-construction of knowledge through joint language-based activities such as asking questions, talking through ideas, and commenting together created a strong base not merely for information exchange, but also for the evolution of the inner reflective dialogue that helps humans think. Emphasizing the link between speech and this higher-functioning cognition, Wells stated:

Initially, such reflection takes place through conversation—through dialogue with another, more knowledgeable, person. But gradually, if children have many positive experiences of this kind, they begin to be able to manage both roles for themselves. They come to be able to frame questions and interrogate their own experience in the search for an answer. The dialogue begins to be carried on internally. In this way, language becomes a tool for thinking. (1986; p. 65)

Wells reflected Vygotsky’s ideas about the “internalization of higher psychological functions” in which language acts as a tool for transforming one’s understandings from “externally-oriented” and “interpersonal” to “internally-oriented” and “intrapersonal” (1978, pp. 54–57). Researchers found that co-construction of knowledge can occur even from talk that seems unrelated to a topic of concern. For example, a University of California at Berkeley School of Education study showed that “synergistic ideas” that solve research problems arise from extraneous conversations about other topics, or what the researchers called “ideas in the air” (Rogoff, 2003, p. 272).

**Scaffolding.** Using language as a tool also relates to the idea of “scaffolding,” a term introduced by Bruner to describe young children’s acquisition of oral language (Cazden, 1988). Scaffolding is defined as “the process by which one participant in a conversation supports the contributions of another … as when … the teacher works to extend the utterances of a child”
The idea of scaffolding is that the teacher provides dialogue that supports the child when first introducing ideas and then later removes that support as the child becomes more proficient; similar to the physical scaffolding used in the construction of buildings. Cazden (1988) believed scaffolds were critical to early meaning-making because they allowed young children to participate in mature activities (e.g., a child may not be able to read a book themselves, but they can understand and expand on the experience when an adult reads to them, asks them questions, or offers information to get them started). Literacy guides can make intentional use of scaffolding through extended question asking, responding, and building group knowledge to foster collaborative and cooperative learning, thereby giving students many and meaningful opportunities to hear, share, and co-construct their views (Cazden, 1988).

**Selecting books to match a student’s reading level.** Allington (2012) cited a wide range of evidence, indicating that the greatest reading gains are made when readers can read a book independently with 98–99% accuracy. “High success texts” gave readers a sense of achievement and confidence, whereas the small percentage of words that are difficult provide a challenge without being overwhelming. This combination allows a reader to gain proficiency without becoming discouraged.

Clay (1993) defined three levels of reading difficulty: “independent-level,” “instructional-level,” and “frustration-level.” Independent-level texts are those that can be read with 95–100% accuracy, instructional-level texts are read at 90–94% accuracy, and frustration-level (or challenge-level) are read below 90% accuracy (for assessment purposes, these measures rest on what a child can do without assistance). Clay considered instructional-level texts to be ideal for teaching and problem solving; that is, children reading books find them neither too easy nor hard; the books offer an appropriate amount of difficulty for students to feel challenged, but
still keep the reading enjoyable while providing opportunities to solve problems. Allington (2011) advocated the use of independent- and instructional-level texts for “high success reading.” The correct matching of texts to reading level is a key aspect of intervention design that results in literacy growth (Allington, 2011).

In response to the call for leveled books, publishers have produced a wide array of books using various leveling systems. Finding an appropriately matched book for a given reader requires knowing both the reader’s level and the book’s level. Most publishers determine book levels using criteria such as text length, print size, vocabulary, conceptual load, language structures, predictability, genre, and illustrations, and indicate level by a code. Pioneered by Fountas and Pinnell (1996), letter-based codes are most common (such as representing Grades K–8 by letters “A” through “Z”). Each letter represents a small but significant progression in reading skill, with early levels usually being more partitioned (i.e., assigning more letters) than later ones. Beginning-leveled texts also tend to be patterned and predictable, helping to scaffold early reading. The computerized Raz-Kids program uses a letter-based system (Raz-Kids, n.d.), whereas Failure Free Reading books use color codes to define readability (Lockavitch, 2008).

All leveling systems are designed to provide a large library of books at each level, giving students a wide selection of readable texts covering different topics and genres, and motivating them to succeed in reading something that interests them. Leveled texts also provide teachers a way to flexibly meet the developmental needs of their students, enhancing success, minimizing frustration, and increasing motivation to read (Fountas & Pinnell, 2006; Glasswell & Ford, 2010).

**Accessing and reading self-selected materials.** Easy access to books and self-selection of reading material are crucial for motivation and comprehension (Allington & Gabriel, 2012; Guthrie & Humenick, 2004). A key study conducted over 20 years ago by Palmer, Codling, and...
Gambrell (1994) polled 330 third- and fifth-grade students on their reading preferences. The study revealed that books need to be readily available (in bookmobiles and libraries; classroom, school, home, or public), and that independent book choice was essential to increasing students’ interest and sense of ownership. Reading a large number and variety of books is motivating and a recommended practice for building skills (Allington, 2012, 2013; Cunningham & Allington, 2011; Gambrell, 2007, 2011, 2015). Classroom libraries need a rich and diverse selection of reading materials with the widest range of genres, and need to ensure students’ preferred reading materials are included. Accessing and reading self-selected materials in schools also improves the chances students will read outside of school: a major consideration when working to develop lifelong readership (Ivey & Broaddus, 2001; Reis et al., 2007).

**Promoting oral fluency.** Fluency encompasses three critical aspects of reading: rate (speed of reading), automaticity (fast, effortless word recognition), and prosody (expressive interpretation). Fluency is considered to bridge between decoding and comprehension because it allows reading to occur in an effortless manner so mental energy can focus on constructing meaning (Rasinski, Padak, & Fawcett, 2010). Once considered the “neglected goal” of reading (Allington, 1983, 2012, 2013), fluency is one of “the big five” pillars of literacy instruction for all types of students by the National Reading Panel (NRP, 2000). Most classrooms now include specific supports to enhance fluency in their reading programs (Rasinski et al., 2010), especially in the earlier grades (Stahl, 2004).

Readers become more fluent with more practice (Allington, 2009, 2012, 2013). Poor readers in particular need more time to practice reading (Stanovich, 1986) to improve in fluency so they can move on to comprehension. Yet research over the past 3 decades indicated that challenged readers read less overall, and they read significantly less connected text (full stories)
than do competent readers (Allington, 2009; NRP, 2000; Stanovich, 1986; Swanson, 2008). As these readers become discouraged by their lack of skill, they read less than their peers who read on level, and consequently fall even further behind in their reading development. Stanovich (1986) called this downward cycle “The Matthew Effect” from a line in the Biblical Gospel of Matthew where “the rich get richer and the poor get poorer.” The term has endured through the years when referring to this low cycle of literacy.

Breaking the Matthew Effect is a complex challenge that brings many cultural and cognitive factors into play. Several techniques promote fluency, including repeated reading, assisted reading, reading with prepared audiotapes, tutoring, and combined approaches (Rasinski et al., 2010). In particular, educators have used repeated reading in classrooms (Samuels, 1997); however, Stahl (2004), after examining the 16 studies in the NRP (2000) meta-analysis of the effects of guided oral reading, concluded that repeated reading may not automatically lead to improved fluency. Instead, Stahl suggested the key is for students to read connected text aloud, while receiving some guidance and feedback. Classrooms need structures and instructional techniques that give students more time and practice at this kind of oral reading (Rasinski et al., 2010; Stahl, 2004).

Providing time for independent and pleasure reading. According to Allington (2002, 2012, 2013), growth comes from increased reading time and volume. Independent reading of literature that is accessible, interesting and plentiful can dramatically improve a child’s reading motivation and achievement (Cunningham & Allington, 2011; Wilhelm & Smith, 2016). In addition, reading for pleasure can counteract Kohn’s (2004) “loss of joy” and Gallagher’s (2009) “readicide.” Allocating classroom time for students to do independent reading at an appropriate level is vital to help foster reading growth (Allington, 2009, 2011), and educators who provide
this offer students repeated opportunities to read more, an essential component in helping readers succeed (Allington, 2009; Stanovich, 1986). Pleasure reading also suggests a more authentic reading experience where assessment follows from conversations or journal writing rather than from formal tests, reducing stress and making reading more meaningful (Fountas & Pinnell, 1996, 2006). Incorporating the self-selection of books into independent reading time can enhance the effect because “when students, even struggling readers, spend time reading voluntarily, they can become very accomplished readers” (Worthy et al., 2001, p. 98).

**Animal-Assisted Interactions**

Dog-assisted reading builds on the instructional practices described above to support better reading. The use of animals to help people is not new. In the late 1700s, rabbits and chickens were used to help mentally ill patients learn self-control (Netting et al., 1987). In the 1800s, treatment plan in some hospitals incorporated farm animals (such as birds, cats, dogs, and horses; Netting et al., 1987). Florence Nightingale observed that patients felt better with a small animal companion (Garnto, 2014; Jalongo et al., 2004). In the mid-1900s, therapists increasingly used pets to assist in psychotherapy, hospitals, and nursing homes (Friesen, 2012; Jalongo et al., 2004; Le Roux et al., 2014; Levinson, 1972; Paradise, 2007; C. E. Smith, 2009; Treat, 2013). Local and international organizations such as The Delta Society (founded in 1977, now Pet Partners, n.d.) began to spring up, focused on the human–animal bond, and on helping people improve their health, independence, and quality of life through positive interactions with therapy and service animals. These organizations noted that animals also helped promote positive social interactions, especially with people who otherwise felt isolated.

**Animal-assisted nonliteracy studies that impact learning.** In the late 1900s, many researchers began formally researching the benefits of human-animal interaction among various
populations and in various fields, especially physical and mental health (Braun, Stangler, Narveson, & Pettingell, 2009; Coakley & Mahoney, 2009; Friedmann, Katcher, Lynch, & Thomas, 1980; Vormbrock & Grossberg, 1988). Dogs, in particular, have been found to lower blood pressure (Friedmann, Katcher, Thomas, Lynch, & Messent, 1983), reduce stress and anxiety (Barker & Dawson, 1998; Gawlinski & Steers, 2005; Hoffmann et al., 2009; Morgan, 2008), provide a sense of security and increased verbal initiative (i.e., they help people speak up) (Bardill & Hutchinson, 1997; Corson & Corson, 1980; LaFrance, Garcia, & Labreche, 2007), and act as “social catalysts” by encouraging conversation, laughter, empathy, good behavior and caring (Corson & Corson, 1980; LaFrance et al., 2007; Levinson, 1972; Mader, Hart, & Bergin, 1989).

Around 2000, educators began to use animals in classroom settings to enhance learning. A number of universities set up Human–Animal Bond Centers to better study the health, social, and cognitive effects of animals on humans. One such study by Rud and Beck (2000) of Purdue University surveyed hundreds of elementary teachers in Indiana and found that caring for the animals in classrooms motivated students to improve their work and to complete classroom assignments. Getting to spend additional time with the animals was part of the motivation, and as the students showed more concern for the animals, they also showed more concern for their classmates. Rud and Beck noted that animals in the classroom positively affected children’s calm and sense of well-being, helping the children become “more open to engaging in cognitive and social activities” (2000, p. 314). Zasloff, Hart, and DeArmond (1999) observed that the act of caring for and interacting with animals also enhanced children’s self-esteem. These results are consistent with several other researchers who observed that a dog in the classroom produced a general atmosphere of calm, warmth, and acceptance (Friesen, 2012; Garnto, 2014; Heyer &

Paradise (2007) stated that animals in classrooms can also improve students’ motivation to participate in group activities and interact positively with peers and teachers. Therapy dogs encourage respect, decrease antisocial and disruptive behaviors, and improve students’ general attitudes toward school (Beetz, 2015; Black, 2009; Friesen, 2012; Garnto, 2014; Heyer & Beetz, 2014; Jalongo et al., 2004; Kim, Hong, Lee, Chung, & Lee, 2015; C. E. Smith, 2009; Treat, 2013; Walsh, 2014). In addition, Limond, Bradshaw, and Cormack (1997) found that dogs helped children be more attentive, responsive, and cooperative; qualities important to learning and achievement.

The presence of dogs has even been shown to increase cognition. In a series of experiments, children asked to perform selection and categorization tasks worked faster and made fewer errors when working with a dog (Gee, Church, & Altobelli, 2010; Gee, Crist, & Carr, 2010). Gee and colleagues (2010) believed the dog positively affected children’s motivation to complete the work and ability to focus on the specific details of the tasks. The researchers also found evidence suggesting that the “presence of the dog was associated with improved comprehension in the children” (Gee, Crist, et al., 2010, p. 183). The dog helped reduce stress and induce relaxation, thereby enhancing performance.

**Dog-assisted reading studies.** In 1999, the Utah-based ITA pioneered the first dog-assisted reading program in the United States. Called READ, this program gained national attention through the media, won awards for its contributions to literacy, and spawned dozens of
similar programs (Jalongo, 2005). Schools and libraries across the country began providing dog-Assisted reading programs by the early 2000s (ITA, 2015; Jalongo et al., 2004). The READ organization’s data and independent investigators reported favorable findings. According to these studies, the presence of therapy dogs motivates reluctant and challenged readers to read more, thereby enhancing their ability to have more enjoyable reading experiences, be more comfortable and confident about reading, be more focused, attentive, and engaged in the classroom, stay on task better, and show increased willingness to take academic risks and participate in classroom and school activities (Bassette & Taber-Doughty, 2013; Beetz, 2015; Black, 2009; Briggs, 2003; Burns & DiLonardo, 2014; Dunlap, 2010; Friesen, 2012; Garnto, 2014; Griess, 2010; Inklebarger, 2014; ITA, 2015; Jalongo, 2005; Jalongo et al., 2004; Kim et al., 2015; Lane & Zavada, 2013; Lloyd & Sorin, 2014; Pamungkas, 2015; Paradise, 2007; Pillow-Price et al., 2014; Shannon, 2007; Shaw, 2013; Siegel, 2004; Snider, 2007; Truett & Becnel, 2013). Many reports also informally noted that the dogs helped students read better with improved reading rates, accuracy, and comprehension. READ’s annual progress reports are somewhat more formal, showing actual Northwest Evaluation Association/Developmental Reading Assessment reading scores for each participating student, and demonstrating consistent gains in reading level (ITA, 2015). However, rigorous research into the dogs’ impact on formal literacy skills remained sparse until about 2010. Eight formal research studies that yielded particularly definitive results are summarized below.

**Comprehension studies.** Paradise (2007) conducted a seminal 4-year investigation into the effects of dog-assisted reading on comprehension in children who read below grade-level. Paradise found that students who read with a therapy dog and handler team once per week
significantly improved in comprehension scores and higher level thinking skills over students who spent the same amount of time reading with just a teacher and no dog.

These results are mirrored in several later studies: Treat (2013) observed a small group of elementary children with learning disabilities who read with a therapy dog and adult. These students increased their comprehension scores by an average of 1.5 grade-levels; substantially better than similar students who read for the same amount of time with only the adult. In addition, students’ gains were often made while reading higher grade-level passages than students who read with only the adult. In another small study, B. Fisher and Cozens (2014) worked with a single disengaged fifth-grade reader. After eight sessions reading with a therapy dog and handler, the student gained almost 3 years in comprehension scores.

Recent studies have worked to control for the effects of the dog, as well as to explore comprehension. In a large-scale study, Le Roux et al. (2014) studied third-grade students with poor reading skills. Le Roux et al. used multiple control groups: some students read to an adult without a dog, some read to a teddy bear, and some had no reading intervention. The students who read to the dog gained 1.5 to 2 grade-levels in comprehension scores, significantly higher than all control groups, and retained these gains 8 weeks after the intervention ended.

Heyer and Beetz (2014) conducted a particularly innovative study with third-grade children with poor reading skills, half of whom read to a therapy dog and handler, and half of whom read to a handler and a life-sized stuffed dog toy that looked just like the therapy dog. Students who read to the real dog had significantly higher comprehension scores than those who read to the stuffed dog, and the test group’s scores continued to increase over summer holidays, 8 weeks after the dog intervention ended, a time when most students’ skills usually drop off dramatically. This study was also notable for involving the dog in a much more active way than
any other study: the dog was not only a passive listener as the students read, but also an active participant in the entire reading activity, which involved solving detective mysteries as a team. The mystery stories were specially written to include the dog, and to integrate “new detection methods” that were actually new reading strategies into each session.

**Fluency studies.** Fluency studies with therapy dogs have shown similar results to comprehension studies. C. E. Smith (2009) observed elementary students, some of whom had reading difficulties. About half the students read to a therapy dog and handler for 8 weeks, gaining an average of 8 more words per minute (wpm) than students who didn’t read to dogs, with corresponding gains in accuracy. M. H. Smith and Meehan (2010) examined homeschooled elementary-age children, most of whom did not enjoy reading and lacked confidence. After reading with therapy dogs and handlers, the children gained an average of 25 wpm, with the biggest improvements seen in students who read below grade-level. Walsh (2014) studied reading-challenged second-grade students. This study was unique in that an adult handler and a researcher were both present during the dog-assisted sessions, but did not interact with the students. Students gained 7-11 wpm after reading with the dogs, and Walsh believed they would have gained more if the adults had coached them during the sessions. In the B. Fisher and Cozens (2014) investigation mentioned above, the disengaged reader gained 1.5 years in fluency scores in the 8-week period. In the Treat (2013) study, students who read with the therapy dog and handler gained 1.5 years in fluency scores, significantly more than the students who did not read with the dog, again while reading higher grade-level passages.

**Additional results from these eight studies.** Although these studies varied in size, scope, context, and design, and took place in several countries around the world, they all confirmed the less formal reports that a therapy dog was a significant asset in improving literacy learning and
motivation to read. These studies also reiterated the therapy dogs’ positive influence on related behaviors such as focus, engagement, enjoyment, and participation. C. E. Smith (2009) specifically noted that children who read to dogs were calmer, kinder, more cooperative, respectful of teachers and each other, and more optimistic and enthusiastic about school.

Heyer and Beetz (2014) reported that students who read to dogs had an improved self-concept of themselves as readers and as students, whereas Treat (2013) noted students gained self-efficacy, perceived their reading skills as improving, and were eager and able to read harder books. Le Roux et al. (2014) believed “the dogs did not laugh, judge or criticize” (p. 668), helping create a “context where the students could practice their reading skills without the fear of making mistakes” (p. 658). Le Roux et al. also noted that the children could act as teachers for the dogs (“who could not read at all”), which increased their own confidence and motivation. C. E. Smith (2009) touched on Vygotskian social-constructivist principles, reporting dog-assisted reading as “supporting the development of a community of learners, and exposing children to authentic work that is meaningful to them” (p. iv). Overall, these eight studies showed potential for dog-assisted reading to increase literacy-related abilities and behaviors.

Summary

Taken as a whole, the research generally aimed toward early literacy indicated that therapy dogs enhance the effectiveness of instructional literacy practices. The dogs foster motivation and engagement in a number of ways, some of which are uniquely due to their being nonhuman. All these effects might help generate intrinsic motivation: the kind of motivation that leads to a lifelong love of reading.

Dogs can act as living points of reference for text-based comparisons, text-to-world connections, and general conversation, helping bring life to literacy practices such as using
talking to support thinking and various comprehension supports. Dogs respond authentically to
tone of voice, volume, and rate, and are therefore useful partners in promoting oral fluency. In
short, therapy dogs create a meaningful reason for students to self-monitor, self-correct, stay
focused, and pay attention to prosody and volume because students want to avoid upsetting the
dog and are motivated to “help the dog to understand.” Dogs also act as social catalysts, inviting
group communication that inspires more talk between readers about books and ideas. The dogs
help children feel comfortable and safe, encouraging trust and creating a dog-assisted “mentoring
team” that helps students initiate discussions and take more risks when reading and speaking. On
this “team,” students feel supported and may also be motivated by “team spirit” to repeatedly
give their best effort.

A therapy dog’s handler can further enhance effective literacy practices by making
conscious use of these relationships, and by engaging in literacy support themselves. Most
reading-dog handlers are trained in some literacy techniques, including supporting
comprehension and stimulating conversation by cueing, commenting, asking questions, and
using the dog as a focus. Handlers can also encourage varied book choices at levels that fit
students’ reading abilities. Finally, a dog-assisted reading program creates, by its nature, more
time for independent and pleasure reading in the school setting. Taken together, the social
learning group of child, dog, and handler, coupled with the structure of the dog-assisted reading
intervention, supplies a powerful instrument to improve literacy learning skills and behaviors.
Chapter 3: Methodology

For this dissertation, I conducted a case study of three middle school special-education students, exploring the effects of reading on a regular basis with a therapy dog and handler over an entire school year. I observed the students in three contexts: in the classroom without any dog or handler, in an office with one dog/handler team, and in the classroom with different dog/handler teams. Three major research questions guided the work:

1. In what ways are therapy dogs used to support readers at Randall School?
2. In what ways do therapy dogs impact literacy learning (motivation, engagement, and literacy processes/behaviors) of three middle school special-education students at Randall School?
3. In what ways do the therapy dog/handler/reader triad and the social context influence each other at Randall School?

When I began this research, a sizeable body of evidence documenting the benefits of dog-assisted reading for students already existed, especially in grade school. I wanted my research to see if this effect transferred to older students, and to provide data-rich details about what I observed. To this end, I chose case-study methodology (Merriam, 1998, 2009; Stake, 1995; Yin, 2009), designed to support descriptive, multilayered, contextualized investigations. Case study is one of many possible types of qualitative research, and is specific and complex. Case studies depend on when and where researchers conduct the study and who they are observing. Consequently, multiple layers need to be “unpacked” (Stake, 1995). Creswell called case-study research “a qualitative approach in which the investigator explores a bounded system (a case) … through detailed, in-depth data collection involving multiple sources of information … and [then] reports a case description and case-based themes” (as cited in Merriam, 2009, p. 43). To
achieve the depth and description needed to answer the research questions, I used multiple data sources, including observations with videos, descriptive field notes taken during observations, reflective memoranda prepared after observing, interviews with participants, and student-produced artifacts (letters, pictures, and cards). Analysis of data was ongoing throughout the study.

**Phases of Research**

The research proceeded in the nine phases outlined in Table 1. Each phase brought forth new insights, helping answer research questions and understand the behavior of participants in three educational contexts.

**Selection of Sites and Participants**

My interest in studying older readers with school-based reading difficulties led me to a middle school special-education classroom in a site-based program where I worked as a literacy coordinator. From past coaching and training initiatives, I had met a teacher (Miss Barnes), enthusiastic about having a dog-assisted reading program for her students. Her classroom included children with social and emotional issues who were at developmental reading levels ranging from second to seventh grade. In the initial (Phase 1) research observations, I observed Miss Barnes’ students in the classroom without any dogs, and watched students read with a variety of therapy dogs and handlers in the classroom, in the media center, and in an office.
Table 1

**Phases of Research**

<table>
<thead>
<tr>
<th>Research phase</th>
<th>Data sources</th>
<th>Data-analysis process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1 (April-September, 2012): Initial observations in multiple locations of several students with and without therapy dogs and their handlers; selection of participants.</td>
<td>Observations, Videos, Field Notes, Reflective Memos, STAR Reports</td>
<td>Recorded observations in a two-column journal, using videos for backup reference. Wrote reflective memos in research journal. Collected STAR Reading Assessment reports.</td>
</tr>
<tr>
<td>Phase 2 (September, 2012-January, 2013): (a) Observations in office of 3 students with therapy dog and handler, and (b) Observations in the classroom of students without therapy dog or handler.</td>
<td>Observations, Videos, Field Notes, Reflective Memos, Interviews, Artifacts, STAR Reports</td>
<td>Recorded weekly observations in a two-column journal, using videos for backup reference. Wrote reflective memos in research journal. Transcribed interviews. Examined artifacts. Collected STAR Reading Assessment reports.</td>
</tr>
<tr>
<td>Phase 3 (January-June, 2013): (a) Observations in the classroom of students without therapy dogs or handlers, and (b) Observations in the classroom of students with therapy dogs and handlers</td>
<td>Observations, Videos, Field Notes, Reflective Memos, Interviews, Artifacts, STAR Reports</td>
<td>Recorded weekly observations in a two-column journal, using videos for backup reference. Wrote reflective memos in research journal. Transcribed interviews. Examined artifacts. Collected STAR Reading Assessment Reports.</td>
</tr>
<tr>
<td>Phase 4: Analysis of field notes and videos; identification of initial categories.</td>
<td>Field Notes, Videos, Reflective Memos</td>
<td>Read, reread, coded, and analyzed written data; viewed and reviewed videos, and expanded above analysis. Identified 26 categories.</td>
</tr>
<tr>
<td>Phase 5: Analysis of interviews and artifacts.</td>
<td>Interview Data, Artifacts</td>
<td>Read, reread, and analyzed interview data; merged results with previously identified categories. Examined and analyzed artifacts; merged results with previously identified categories.</td>
</tr>
<tr>
<td>Phase 6: Creation of perspective grids; refinement of categories.</td>
<td>Field Notes, Videos, Reflective Memos, Interviews, Artifacts</td>
<td>Distributed data across categories according to each participant’s perspective(s) and identified consistencies and discrepancies. Reduced categories to 7.</td>
</tr>
<tr>
<td>Phase 7: Creation of three-column context matrix for each student; further refinement of categories.</td>
<td>Perspective Grid</td>
<td>Separated all perspectives into 3 contexts: (1) in classroom without dog, (2) in office with dog, (3) in classroom with dog. Reduced categories to 4, with subcategories</td>
</tr>
<tr>
<td>Phase 8: Final refinement of categories.</td>
<td>Context Matrices</td>
<td>Reduced categories to 3 overarching categories, and redefined subcategories.</td>
</tr>
<tr>
<td>Phase 9: Continued data analysis; presentation of results.</td>
<td>All data sources</td>
<td>Developed individual cases and created cross-case analysis.</td>
</tr>
</tbody>
</table>

*Note. STAR = Standardized Test for Assessment of Reading, STAR Reading™ Technical Manual, by Renaissance Learning, 2015, retrieved from https://resources.renlearnrp.com/us/manuals/st/srrptechnicalmanual.pdf*
One handler (Miss Pat), a former special-education teacher, expressed interest in further participation in the study. I invited her and her dog Zena to perform the one-on-one work with the selected case-study students (scheduled for Phases 2 and 3). I then consulted with Miss Barnes and Miss Pat, asking for a recommendation of three students who would be a good fit for the study, and chose three who would constitute a “purposive sample” (Frankel & Wallen, 2003), fitting my research profile of discrepant reading abilities and lesser engagement or motivation levels. Once I selected the three students (Anna, Michele, and Tony), I contacted their parents for permission. I met individually with the three students, described the study, and invited them to participate. All selected parents and students elected to participate. Later, an additional handler and therapy dog (Miss Sharon and her dog Sasha) joined the study, providing an additional dog-assisted team to work with students in group sessions in the classroom (Phase 3). Additional staff members also joined the study (Phase 3) to gain additional perspectives. (Sample consent forms appear in Appendix A).

Although I collected Standardized Test for Assessment of Reading (STAR) reading assessment information during Phase 1, I did not actually use STAR data to help select student participants. All students in Miss Barnes’ class read below grade level according to their reading scores; thus, test scores alone were not definitive. Instead, my selection rested more on students’ reading profiles, which I obtained from observation and from discussion with Miss Barnes and Miss Pat. A description of STAR appears in Appendix B.

Sites

I conducted all observations in one school (Randall School). Initial observations (Phase 1) took place in the media center, in an office, and in Miss Barnes’ classroom. Later observations (Phases 2 and 3) took place in an office and in Miss Barnes’ classroom.
Randall School is located in upstate New York on a busy suburban street, surrounded by businesses and homes. Randall’s old brick building served as an alternative school for middle- and high school children with special needs. Students in the school had a range of profiles: most had a variety of emotional or cognitive issues, whereas a small minority had severe physical challenges. A majority of students qualified for free or reduced-price lunch. At the time of the study, the school had a population of 72 children and a staff of 47. The staff consisted of a principal, special-education teachers, teacher assistants, teacher aides, speech and language pathologists, social workers, a physical therapist, and an occupational therapist.

Colorful murals adorned the walls in Randall’s two main hallways. To create the murals, a decade ago students worked side by side with an artist to create visuals that included mythology, the solar system, popular culture figures, and a graffiti wall. Inspirational quotations were scattered throughout the hallways.

Randall, a part of Upton Educational Services, provided alternative school services and support to meet the needs of local students and school districts. Upton supported district schools through its special-education services, offering a range of class types and settings for districts in need of specialized programs. Randall served as one of Upton’s four dedicated alternative schools; these schools were self-contained and reserved for special-education students who needed the most restrictive school environment. Upton also had 60 less restrictive classroom programs located in neighboring schools throughout the geographic region. The 60 classrooms provided opportunities for students to be mainstreamed at various times throughout the school day.

Miss Barnes’ classroom. On the first floor of Randall School, Miss Barnes’ classroom had a “Meet Our Class” collage at the front that displayed 3x5 color photos of the teaching staff.
and students. The poster showcased the students in various rows: the teacher Miss Barnes; the seven classroom students—Tony, Michele, Anna, Matthew, Jackson, Peter and Kenneth; the teacher assistants—Miss Nadine, Miss Cindy, Miss Judy, and Arthur; the speech and language pathologist Miss Bess; and the social worker, Miss McMann.

The front of the room included a calendar, a weather poster, menus, and a 100-day counting board. Seven desks sat in the middle of the room, placed in three rows of two, two, and three with a whiteboard in front, used for morning meetings. A gray “reading rug,” approximately 6 foot by 10 foot, lay in the front corner of the room with four bean bag chairs placed along the wall at the rug’s perimeter. Behind one of the bean bags stood a low, two-level shelf with approximately 50 older picture and chapter books. Miss Barnes’ pet hedgehog, Spike, lived near the rug in his cage on top of a radiator. Miss Nadine had her own desk adjacent to the reading area, whereas Miss Barnes’ desk and computer were located at the back of the room, along with two classroom computers and a large square table used for lessons, celebrations, and snacks. A refrigerator and a microwave stood near the table, used freely by students and staff. At the side of the classroom closest to the hallway were closets, cubicles, and a sink. The wall above the sink displayed pictures of the classroom’s dog visitors, along with a poster of dog breeds.

Miss Barnes’ class followed a predictable and structured routine. In the morning, students walked down the hallway to the cafeteria to get breakfast, then ate in the classroom at the back table. After breakfast, the students moved to their seats for a morning meeting. During this meeting, the class spent approximately 15 minutes engaged in community thinking and discussion centered around the calendar, a mathematics “problem of the day,” riddles, and announcements. After that, morning work began with “Write Rights,” an exercise to practice the conventions of writing. Journal work followed, with either free-choice or prompted writing,
depending on the student. Next came the longest continuous work block of the day—lasting 90 minutes—during which students engaged in independent work. This block included a mix of reading, spelling, language, and computer-based activities. Two computer programs featured connected text: Raz-Kids, a leveled reading program, and Failure Free reading, a leveled sight word vocabulary-building program. Raz-Kids presented students with a series of interactive e-books for listening or reading, along with comprehension quizzes, whereas Failure Free Reading helped students build a sight word vocabulary through the use of stories with repetitive and controlled language. Miss Barnes assigned Failure Free Reading to the lowest level readers in the class based on required (STAR) assessments and observations. Miss Barnes wanted to add a classroom book club, as she had in previous years, but felt the “discrepant abilities” of the current students, along with their sometimes “high-impact behaviors,” prevented book clubs during the 2012–2013 academic year.

For lunch, students again walked down the hallway to the cafeteria, and returned to the classroom to eat. After lunch, the class shared a 30-minute read-aloud in which most of the students sat at their desks while Miss Barnes read from a chapter book. Some students engaged in other (quiet, self-contained) activities during this time period. The remainder of the day varied in focus depending on the day of the week: 3 days for gym class, and 2 days assigned to social studies and science lessons, in a preset rotation. Most students worked with special service providers at some point during the day. One of the related service providers, Miss Bess, the speech teacher, also taught a whole-class lesson 1 day per week. The classroom schedule remained consistent, even when the therapy dogs entered the classroom.
Media center. Located on the first floor of Randall School, the media center contained a computer laboratory with 12 computers and an overhead projector and screen. The other half of the center housed a library with bookshelves containing a range of books at all reading levels.

Office. For the office setting, I used my office space, located on the second floor of Randall School. At the time the dog-assisted reading study began, students did not generally visit this floor, reserved for administrators and teacher trainers. I shared the office with two administrators with desks separated from mine by a partition. My space included a desk, four chairs, several cabinets, and some bookshelves. One cabinet had a display of Failure Free Reading books on top of it. Other cabinets and bookshelves contained additional children’s books at various reading levels. The entire room was carpeted. The dog-assisted reading area was located between my desk and the Failure Free Reading cabinet. For the reading sessions, the therapy dog, handler, and student would lay or sit on the carpet, and I sat in a chair to one side.

Reading sessions took place once a week for 15–20 minutes with each student. Miss Pat and her dog Zena would pick up the first student from the classroom and the student would hold Zena’s leash to walk up to the office. After the first student’s session concluded, Miss Pat and Zena walked the student back down to the classroom, again with the student holding Zena’s leash. Miss Pat and Zena would then pick up the second student, who would walk Zena back up to the office, and so on. The teacher did not preset the order of the students.

Student Participants and Their Parents

Three students—Anna, Michele, and Tony—participated in the study, reading regularly with the therapy dog and handler. All three students qualified for free breakfast and lunch. I briefly describe each student below and identify their participating parent(s).
Anna. Anna was a Caucasian female, 12 years old and in seventh grade. Anna had a history of behavior and learning challenges, and attended a private special-education school before coming to Randall at the beginning of her sixth-grade year. At the beginning of the study, Anna, was in her second year in Miss Barnes’ classroom. Anna scored as an emergent reader according to the STAR Reading Assessment. Anna’s stepmother Sally, and her father, Donald, shared excitement at Anna’s openness to the dog-assisted program because she previously expressed a fear of dogs.

Michele. Michele was a Caucasian female, 12 years old and in seventh grade. Michele was referred to Randall in the middle of her fifth-grade year, admitted as an emergency placement due to a serious behavior incident at her previous school. At the start of the study, Michele had been in Miss Barnes’ class for a year and a half. Michele, a strong decoder, scored three grade levels below her expected reading level according to STAR Reading Assessments, due to challenges with comprehension. Michele’s mother, Lisa, reported how enthusiastically Michele talked about engaging in the dog-assisted program.

Tony. Tony was a Hispanic male, 13 years old and in eighth grade. Tony, the newest student in Miss Barnes’ class, transferred with 3 weeks left in his seventh-grade year. Tony had been in another Upton Educational Services classroom in the same district, but needed a more restrictive placement due to behavioral problems. Although a fluent and creative reader, Tony scored nearly two grade levels below expected levels on the STAR Reading Assessment due to attention challenges. Tony’s mother, Maria, commented on how much Tony enjoyed reading and sharing his thoughts with the dogs.
Therapy Dog and Handlers

Several teams of therapy dogs and handlers visited Miss Barnes’ classroom throughout the 2012–2013 academic year. I observed four teams during Phase 1, including the team of Miss Pat and her dog Zena. During Phase 2, I observed only Miss Pat and Zena. During Phase 3, I observed Miss Pat and Zena, plus a new team comprised of Miss Sharon and her dog Sasha.

Miss Pat. Miss Pat, a retired special-education teacher, worked for an organization similar to Upton for 35 years. Miss Pat had worked with a range of students, including those identified as developmentally challenged. When her neighbor became disabled, Miss Pat volunteered to take the neighbor’s dog Zena for therapy-dog training. This was a great help to the neighbor, who worried Zena did not get enough stimulation. Miss Pat and Zena obtained certification and became a therapy dog team. Miss Pat volunteered with Zena at several area schools, always using Zena to support reading.

Zena. Zena was an 8-year-old Golden Retriever, calm, gentle, and affectionate. She had been a therapy dog for 4 years, most recently for 1 year at Randall School. As a result of this work, she was already well-known and loved at Randall when the study began.

Miss Sharon. Miss Sharon, a retired teacher and science coordinator, worked for over 30 years in the public school system. As an experienced therapy-dog handler, she had a number of Golden Retrievers certified as therapy dogs over several years. Miss Sharon often worked at schools to support students with behavioral challenges, as well as at a local airport helping to destress passengers.

Sasha. Sasha was a 10-year old Golden-Retriever, friendly, humorous, and playful. She had been a therapy dog for 6 years. Although not a frequent visitor to Randall, the students and staff enjoyed and appreciated Sasha whenever she came.
Staff Participants

Several staff members participated in the study. In the classroom environment, the major participant was the teacher, Miss Barnes. As the study evolved, several other staff members shared their insights and perspectives through interviews: Miss Nadine, a teacher assistant; Miss McMann, a social worker; and Miss Bess, a speech teacher.

Miss Barnes. Miss Barnes was a special-education teacher for 35 years, 31 with Upton. Miss Barnes worked primarily with students who had emotional challenges and behavioral issues. She taught at the elementary and middle school levels. When the study began, Miss Barnes had been at Randall approximately 5 years.

Miss Nadine. Miss Nadine worked as a teacher assistant with Upton for 18 years, with 12 years in Miss Barnes’ class. Like Miss Barnes, Miss Nadine worked primarily with students with emotional and behavioral issues, and mostly at the elementary and middle school levels. For the last 12 years, Miss Nadine and Miss Barnes had worked as a team, first at another Upton classroom and then at Randall school.

Miss McMann. Miss McMann worked as a social worker with Upton for 26 years. She counseled primarily at the middle and high school levels with students who had social and emotional challenges.

Miss Bess. Miss Bess, a speech teacher with Upton for 25 years, worked primarily with developmentally challenged students. For the past 5 years she worked with middle and high school students with emotional and behavioral issues.

My role in this inquiry. As a literacy coordinator, I worked as a coach for teachers in many of Upton’s classrooms in the special-education division. I worked alongside teachers, helping them build on their instructional strengths, with a goal of making literacy more authentic
and motivating. Each year, administrators identified assessment and instructional priorities, often assigning me to work with new teachers or experienced teachers in need of specific literacy-related support. Administrators also encouraged teachers to contact me when they wanted assistance or collaboration.

The year before this study, I had worked in Miss Barnes’ classroom for 2 months, providing support for Writing Workshop. Miss Barnes and I collaborated on a writing project designed to motivate students to write for pleasure. During that time, I worked with Miss Barnes and her teaching assistants, and met Anna and Michele. Class members became used to my presence. Additionally, and more importantly to this study, I began coordinating therapy-dog visits for reading and therapeutic support at Randall and other Upton schools and classrooms. Miss Barnes’ students came to associate me with the dogs and treated me like a trusted confidante, sharing news and inviting me to class parties and special events. The students always asked me about the dogs during my visits, even when I visited the classroom for a different reason.

My role and participation changed over the course of this study (Merriam, 2009; Patton, 2002). My initial intention during the data-collection phases was to be an “observer-as-participant” (Merriam, 2009), whereby I would be visibly present and have access to people and information, but I would not directly participate in the dog-assisted reading activities. Instead, I would sit on the side of the room behind my video camera, quietly taking notes. As the study progressed through Phases 1, 2, and 3, my role sometimes shifted to “participant-as-observer” (aligned with Merriam, 2009), when I engaged in conversations, commented on story plots, made book suggestions, and pet the dogs during dog-assisted reading interventions. Whenever I conducted interviews, I tended to engage participants informally, acting more like a participant-
as-observer. When I gathered artifacts, I tended to be more of an observer-as-participant, asking
the children to create the writing or artwork, and then sitting quietly while they produced the
requested output.

Throughout the study, I reread and refined my research questions, immersed myself in
literature from the field, and documented my evolving understandings of dog-assisted reading. I
used my writings to direct early data analysis and to adjust the course of the study when needed.
For example, early journal entries led me to expand on my initial group of participants when I
concluded that the voices of the teacher assistant, speech teacher, and social worker would help
me gain a more complete understanding of events.

Data Collection, Sources, and Schedules

I collected case study data during the first three phases of the study. I used multiple data
sources to elicit in-depth information and to enable eventual data triangulation. Sources included
(a) observations with videos and descriptive field notes, (b) reflective memoranda, (c) interviews
with participants, and (d) artifacts. Tables 2, 3, and 4 provide the progression of data collection
for observations, interviews, and artifacts.

Table 2

Observation Schedule

| Phase 1: 4 visits with associated dogs and handlers: | Visits with therapy dog and handler | Visits without therapy dog and handler |
| - | 1 in classroom (all Miss Barnes’ students), | 3 visits in classroom (all Miss Barnes’ students, |
| - | 2 in media center (1-Anna, 2-Michele, 1-Kenneth) | with the following attendance: |
| - | 1 in the office (1-Anna, 1-Michele) | 3-Anna, 3-Michele, 2-Tony) |
| Phase 2: 14 visits with Miss Pat and Zena in the office: | 14 visits in classroom (all Miss Barnes’ students, | 14-Anna, 11-Michele, 8-Tony) |
| - | (12-Anna, 13-Michele, 10-Tony) | with the following attendance, |
| Phase 3: 15 visits with Miss Pat and Zena in classroom: | 16 visits in classroom (all Miss Barnes’ students, | 14-Anna, 11-Michele, 9-Tony) |
| - | (13-Anna, 15-Michele, 11-Tony) | with the following attendance: |
| - | 7 visits with Miss Sharon and Sasha in classroom: | |
| - | (6-Anna, 5-Michele, 2-Tony) | |

51
Table 3

Interview Schedule

Student interviews (one on one)
Phase 2:  6 interviews (2-Anna, 2-Michele, 2-Tony)
Phase 3:  10 interviews (3-Anna, 4-Michele, 3-Tony)

Staff interviews (one on one)
Phase 2:  1 interview (Miss Barnes, teacher)
Phase 3:  4 interviews (1-Miss Barnes, teacher; 1-Miss Nadine, teacher assistant;
1-Miss McMann, social worker; 1-Miss Bess, speech teacher)

Handler interviews (one on one)
Phase 2:  1 interview (Miss Pat)
Phase 3:  2 interviews (1-Miss Pat, 1-Miss Sharon)

Parent interviews (one on one except for Sally and Donald who were interviewed together)
Phase 2:  2 interviews (1-Anna’s parents, Sally and Donald; 1-Michele’s mother, Lisa)
Phase 3:  4 interviews (1-Anna’s parents, Sally and Donald; 1-Michele’s mother, Lisa;
2-Tony’s mother, Maria)

Table 4

Artifact Schedule

<table>
<thead>
<tr>
<th>Artifacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2:  6 artifacts (2-Anna, 2-Michele, 2-Tony)</td>
</tr>
<tr>
<td>Phase 3:  13 artifacts (4-Anna, 4-Michele, 5-Tony)</td>
</tr>
</tbody>
</table>

I collected standardized test (STAR) data as part of Randall School’s data-collection process. I obtained STAR results according to the schedule shown in Table 5. These computerized tests reflect students’ reading levels through cloze passages, whereby students replace missing words from the texts.
Table 5

**STAR Test Results Schedule**

<table>
<thead>
<tr>
<th>STAR test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1: September (beginning of Phase 1)</td>
</tr>
<tr>
<td>Phase 2: January (beginning of Phase 2)</td>
</tr>
<tr>
<td>Phase 3: May (end of Phase 3)</td>
</tr>
</tbody>
</table>

**Observations With Videos and Descriptive Field Notes**

In Phase 1, I observed several of Miss Barnes’ students together or individually reading with a therapy dog and handler in the classroom, in the media center, or in an office, conducting observations over several months. I used a video camera and field notes during this Phase. I focused primarily on observing how the dogs supported reading in a general sense, so I aimed the camera on the dog, and did not focus on specific students, because I had not yet selected case-study students. In Phase 1, I refined the direction of my study. I began Phase 2 in the office context, where I could better understand the building of the relationship between the student, handler, and dog, in a more private setting.

In Phases 2 and 3, I observed students reading with a therapy dog and handler on a weekly basis. In Phase 2, I observed each of the three selected case-study students in the office, whereas in Phase 3, I observed each of the three selected students plus, if they opted to get involved with the dog-assisted reading session, other students in Miss Barnes’ classroom. I sat behind the video camera, capturing footage and taking field notes. The students and handlers sometimes interacted with me. Over the course of the study, depending on the student and the context—in the office or in the classroom—I participated in conversations about the books, general comments regarding the students’ quality of reading, and remarks about the dogs. I also joined in petting the dogs. The students noticed the camera, sometimes making faces or waving
at it. When this occasionally happened, the handler reminded the students to keep their focus on the reading, and the students complied.

In Phases 1, 2, and 3, I also made weekly observations of students in their classroom without any therapy dogs present. For these observations, I took field notes. I observed all students at the same time because no dog-assisted reading team was present on which to focus. These observations became a “baseline” to compare how the dogs affected the students. I collected nondog data over the entire 15-month period, which provided a reference for which student behaviors changed with time and which stayed the same, as well as which changed when dogs were present.

My field notes (as suggested by Merriam, 2009; Patton, 2002) consisted of two columns. In the first column, I described the events and interactions I observed. In the second column, I noted my impressions, questions, and thinking, specifically noting behaviors associated with students reading to the dogs. I noted my impressions, questions, and thinking during and after observations. Table 6 provides an excerpt of a typical log entry.
### Table 6

**Research Journal Excerpt**

<table>
<thead>
<tr>
<th>Observations; Date: February 12, 2013</th>
<th>Impressions/Questions/Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30: M lies on the rug with Z beside her. M’s right arm is wrapped tight around Z. Miss P, in an upright position, sits on the other side of the dog. M with face close to Z, kisses her. Jackson and Tony arguing from other side of room; M does not respond to noise.</td>
<td>M continues to bond with Z.</td>
</tr>
<tr>
<td>M smiles, holds new book sent to her from Joan (handler), <em>Toby and Tutter: Therapy Dogs</em>, by K. DeBear. M asks to read it instead of <em>Follow My Leader</em>.</td>
<td>M’s focus is on the book, rather than the classroom behaviors.</td>
</tr>
<tr>
<td>Miss P agrees, “I’m looking forward to hearing the book. Zena will like it too.” MP encouraging, and brings Z in as an audience member—social group is supportive.</td>
<td></td>
</tr>
<tr>
<td>12:35: M miscues on “occupational therapist,” MP supplies word.</td>
<td>M self-initiates the reading of the book, which appears to be at her independent level. Motivation for self-selected materials and the therapy dog topic. Wondering how often M has opportunity to self-select and explore high interest topics (ask Miss B). (Note: picture book.)</td>
</tr>
<tr>
<td>M laughs when reading that Tutter steals all the attention from Toby. M reads at a reasonable pace, with clear audible voice, all the while with her arm around Z, stroking her while she reads.</td>
<td>MP never explains the role of an occupational therapist.</td>
</tr>
<tr>
<td>M looks at photo and comments that Toby lays down same way Z does. M stops reading, looks at Z and comments, “You look comfortable.”</td>
<td>M reacts—she is reading for meaning.</td>
</tr>
<tr>
<td>M laughs at description of Tutter’s eyes as “googly eyes.”</td>
<td>M’s fluency is improving in this context.</td>
</tr>
<tr>
<td>12:45: M reads that Tutter had trouble sharing his toys with people, and M asks MP if Zena has toys and shares.</td>
<td>Connection to Z.</td>
</tr>
<tr>
<td>M points to a picture of a girl in the photo and tells MP, “She looks like she has Down’s Syndrome.” M stops reading, tells MP about her cousin with Down’s and a mile-long buddy-walk that she did to help her cousin. “I was the only one who didn’t complain.” MP jokes, “That’s hard to believe,” and they both laugh.</td>
<td>M aware of Z. M seems to relax as she sees Z relax, interrupts herself but goes right back to the book.</td>
</tr>
<tr>
<td></td>
<td>M shows an interest in interesting language—wonder if she would respond well to poetry?</td>
</tr>
<tr>
<td></td>
<td>More connections, connections lead to questions, help M enter story.</td>
</tr>
<tr>
<td></td>
<td>Text-to-self connection leads to conversation.</td>
</tr>
</tbody>
</table>
Observations; Date: February 12, 2013

<table>
<thead>
<tr>
<th>Observations</th>
<th>Impressions/Questions/Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>As M reads about an obstacle course for dogs, she comments that she likes the tube (part of obstacle course).</td>
<td>M noticing details of the text.</td>
</tr>
<tr>
<td>M laughs at the basket that little Toby was lying in and says, “So cute.”</td>
<td>M noticing details of the text—emotional response.</td>
</tr>
<tr>
<td>12:50: M continues to stroke Zena and pauses to look at her. She quietly says to Zena, “Are you falling asleep?” and smiles at her.</td>
<td>M noticing Z in a motherly kind of way; temporarily loses her reading focus.</td>
</tr>
<tr>
<td>M points to some of the words as she reads, and reads slower so she can notice all the photos. When she sees photo of Tutter and Toby cuddled together, she says, “Oh, that’s the part I like.”</td>
<td>M goes right back to reading book, M noticing details of the text—emotional response.</td>
</tr>
</tbody>
</table>

Note. Participant key: M = Michele, Z = Zena, MP = Miss Pat.

After each weekly session, I reviewed the video footage. This process helped expand my impressions, questions, and thinking beyond the original observations. The field notes became foundational data when writing reflective memoranda.

**Reflective Memoranda in Research Journal**

I created reflective memoranda (aligned with Bogdan & Biklen, 2003; Glesne, 1999) after each weekly observation and throughout the investigation to capture my changing understandings of dog-assisted reading. Glesne (1999) discussed the importance of this process to “write down feelings, work out problems, jot down ideas and impressions, clarify earlier interpretations, speculate about what is going on, and make short and long term plans for the days to come” (p. 53). Through reflective memoranda, I clarified my thinking and gained insights. I usually reflected on all three students in one memorandum, although at times my memoranda focused on individual students. Here is a sample of a reflective memorandum:

February 15, 2013: What role does the literature play in this interaction? From the beginning of the study, Michele had a fascination with books that had dogs in them. Last summer, with my support, Michele created a dog library that became “her library.” This year, Michele readily agreed to read a chapter book that featured a German Shepherd—a breed she emotionally connects with, since her first therapy dog was a German Shepherd. For Anna, the dog theme was not as necessary—Anna craved high success books—books that she could read—books that had chapters and helped her to feel like a reader. The Paulsen dog book was too hard for her—she tried but was frustrated. When allowed to
read the controlled readers in the office, she soared, and showed the pictures to Zena. Tony liked all kinds of books, and especially the book called Dogfessions—he would plead to read it. The humor, coupled with the dog pictures, was very appealing to him. Additionally, the short vignettes were appealing to him, allowing him ample time to talk with Miss Pat about what he’d read.

Interviews

I interviewed participants to understand their perspectives (as suggested by Patton, 2002; Seidman, 2006) and learned more details about their dog-assisted reading experiences. I conducted all interviews with students, staff, handlers, and parents in the office on the second floor of Randall, and audio-recorded and transcribed the interviews for later analysis.

I interviewed each student five to six times over the course of the data-collection period to capture changes in their thinking, as well as repetitions or patterns of thinking (aligned with Seidman, 2006). Interviews provided opportunities for each person to tell their unique story (as suggested by Merriam, 2009). I developed semi-structured interview questions—open-ended—which permitted flexibility on my part. I designed the first interview to be the most extensive with more questions to understand students’ perspectives. Follow-up interviews included fewer questions and helped me detect changes and patterns in response. Appendix C shows student interview questions.

I conducted two interviews each with the classroom teacher, the primary dog handler (Miss Pat), and each of the students’ parents—once at the beginning of the study and once at the end—to gain their perspectives over time. Early analysis indicated that dog-assisted reading significantly impacted the three case-study students in reading engagement and in motivation. Therefore, I determined it would be helpful to gain the perspective of additional staff members, as well as the second handler. Later in the school year, I conducted one interview each with the teacher assistant, the social worker, the speech teacher, and the second dog handler (Miss Sharon, who participated only during Phase 3 of the study). These voices, collectively helped me better
understand the impact of dog-assisted reading on the case-study students. Appendix D shows the adult-participant interview questions.

**Artifacts**

At several points in the study—usually immediately after completing interviews—I asked students to either draw a picture or write a letter to express their feelings about reading with Zena and Miss Pat. Students could dictate the letters if they preferred. I provided a selection of colored markers, crayons, and pencils, for students to use to create their artifacts. In a few instances, students wanted more time, and completed their work later in the day. As with interviews, these artifacts helped me capture changes in students’ thinking over time. Appendix E shows sample artifacts from each of the case-study students.

**Researcher Bias**

I came to this study knowing that many researchers before me had consistently found dog-assisted reading to be beneficial, especially for grammar-school students. In addition, I have been a dog enthusiast all my life: I love dogs and have personally witnessed and experienced their therapeutic effects on people in a variety of situations. Recognizing that my feelings and expectations about dogs would influence my data collection and analysis, I did my best to minimize the effects of my prior knowledge during this study: while making observations, I tried to stay quiet as much as possible, keeping my interactions low key and curbing my natural effusiveness about the dogs. I tried to be objective in my observations, writing down only what I saw. I recognized also that my presence in the room as a researcher, with my notebook and video camera, would impact participants’ feelings and behaviors. During interviews and artifact-gathering, I was genuinely interested in what the participants wanted to express, rather than anticipating or seeking certain responses. During analysis, I used additional methods to reduce
bias including using established, rigorous methodologies for data collection and analysis. These methodologies are discussed further in the section on “Credibility” at the end of this chapter.

**Case-Study Analysis**

Researchers consider analyzing case-study data as the most difficult part of case-study research (Patton, 2002; Yin, 2009). Through the analysis I engaged in the process of consolidating a vast amount of information from diverse sources, some of which might not easily mesh together, reducing that data, and then interpreting the results in ways that make sense. Researchers answer their study questions with the discovery/development of categories, themes, and findings that emerge from the collected data (Stake, 2010).

No single correct way exists to approach analysis of a large qualitative data set, and often many complementary approaches build one upon another to triangulate findings (Namey, Guest, Thairu, & Johnson, 2007). I began my data analysis using an inductive-coding process, whereby I sorted data into sets of topics, themes, and important issues, allowing findings to emerge (Stake, 2010). I sorted the data (field notes, interviews, and artifacts) into three sets based on context: (a) in the classroom without the therapy dog, (b) in an office with the therapy dog, and (c) the classroom with the therapy dog. I coded the field-note data by highlighting and underlining information that seemed significant; then writing keywords in the margins to facilitate finding important information. I continually read and reread my data, looking for answers to all of my research questions. For each of the three contexts, I developed categories such as “fluency,” “confidence,” and “focus.” To ensure the accuracy of my interpretations, I member-checked field-data analyses with students, staff, and dog handlers. The initial categories derived from the field-note data appear in Table 7.
Table 7

*Early Categories for Field Data*

<table>
<thead>
<tr>
<th>In office with therapy dog (19 categories)</th>
<th>In classroom with therapy dog (21 categories)</th>
<th>In classroom without therapy dog (8 categories)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog-touching</td>
<td>Dog-touching</td>
<td>Student-specific activity</td>
</tr>
<tr>
<td>Relationship</td>
<td>Relationship</td>
<td>Student isolation</td>
</tr>
<tr>
<td>Self-control</td>
<td>Self-control</td>
<td>Social group interactions</td>
</tr>
<tr>
<td>Motivation to read</td>
<td>Motivation to read</td>
<td>Adult-based support</td>
</tr>
<tr>
<td>Perseverance</td>
<td>Focus</td>
<td>Work-avoidance</td>
</tr>
<tr>
<td>Focus</td>
<td>Confidence</td>
<td>Task preferences</td>
</tr>
<tr>
<td>Confidence</td>
<td>Word-decoding</td>
<td>Distractions</td>
</tr>
<tr>
<td>Word-decoding</td>
<td>Fluency (accuracy, rate, prosody)</td>
<td>Focus</td>
</tr>
<tr>
<td>Fluency (accuracy, rate, prosody)</td>
<td>Comprehension</td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>Reading enjoyment</td>
<td></td>
</tr>
<tr>
<td>Comprehension</td>
<td>Reading engagement</td>
<td></td>
</tr>
<tr>
<td>Reading enjoyment</td>
<td>Book-agency</td>
<td></td>
</tr>
<tr>
<td>Reading engagement</td>
<td>Book talk</td>
<td></td>
</tr>
<tr>
<td>Book-agency</td>
<td>Social group interactions</td>
<td></td>
</tr>
<tr>
<td>Book talk</td>
<td>Cooperative learning</td>
<td></td>
</tr>
<tr>
<td>Dog as audience</td>
<td>Dog as audience</td>
<td></td>
</tr>
<tr>
<td>Room atmosphere when dog present</td>
<td>Room atmosphere when dog present</td>
<td></td>
</tr>
<tr>
<td>Dog as extrinsic incentive</td>
<td>Dog as extrinsic incentive</td>
<td></td>
</tr>
<tr>
<td>Dog as distracter</td>
<td>Dog as social connector</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dog as literacy connector</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dog as distracter</td>
<td></td>
</tr>
</tbody>
</table>

These early categories demonstrate the complexity of case-study data: they cover a wide range of behaviors, are not always consistent in type, and are sometimes contradictory. The data did reveal some general patterns that helped guide my later thinking: e.g., “with the dog” usually showed a positive impact on the students’ reading experiences and “without the dog” usually showed reading as an isolated activity.
I used the same inductive process with my interview data: reading, rereading, and coding the interview transcripts into categories, shown in Table 8. I used the constant-comparison-analysis method (suggested by Merriam, 2009) by comparing the newly-constructed codes and categories with the ones previously produced from the field notes. I continued to member-check with relevant participants to ensure my interpretations were accurate.

Table 8

*Early Categories for Interview Data*

<table>
<thead>
<tr>
<th>Student interviews (11 categories)</th>
<th>Staff interviews (10 categories)</th>
<th>Handler interviews (7 categories)</th>
<th>Parent interviews (6 categories)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog-touching</td>
<td>Dog-touching</td>
<td>Dog-touching</td>
<td>Dog-touching</td>
</tr>
<tr>
<td>Motivation to read</td>
<td>Motivation to read</td>
<td>Focus</td>
<td>Confidence</td>
</tr>
<tr>
<td>Reading enjoyment</td>
<td>Focus</td>
<td>Book-agency</td>
<td>Reading enjoyment</td>
</tr>
<tr>
<td>Confidence</td>
<td>Confidence</td>
<td>Dog as audience</td>
<td>Social interactions</td>
</tr>
<tr>
<td>Book-agency</td>
<td>Risk-taking</td>
<td>Relationship</td>
<td>Time for reading</td>
</tr>
<tr>
<td>Dog as audience</td>
<td>Book-agency</td>
<td>Collaboration and partnership</td>
<td>Reading at home</td>
</tr>
<tr>
<td>Room atmosphere when dog present</td>
<td>Social interactions</td>
<td>Time for reading</td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>Collaboration and partnership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handler supports reading</td>
<td>Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time for reading</td>
<td>Time for reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading at home</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* All categories reference the students’ observed responses.

Most categories from the interviews and field-note categories reinforced the importance of certain patterns. Also, some new categories proved significant. Students and the handlers remarked on students’ enthusiasm for choosing their own books, whereas students and parents noted that students extended their in-school reading experience into increased reading at home. The students also expressed their awareness of the support they received from the handler. This later led to the handler’s role becoming a major category. Additionally, the staff and parents
noticed an increase in students’ social interactions, and all interviewees reiterated the importance of the listener/audience on reading enjoyment. This outcome eventually led to another major category relating to the role of the community in the learners’ literacy experience.

I continued analyzing my final collected data set: the artifacts. I studied each artifact for content and wrote detailed descriptions about what I was viewing or reading. I member-checked my interpretations with each student. From this process, I coded seven categories, shown in Table 9, with no new categories noted.

Table 9

*Early Categories for Artifact Data*

<table>
<thead>
<tr>
<th>Artifacts (7 categories)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog-touching</td>
</tr>
<tr>
<td>Motivation to read</td>
</tr>
<tr>
<td>Confidence</td>
</tr>
<tr>
<td>Book-agency</td>
</tr>
<tr>
<td>Reading enjoyment</td>
</tr>
<tr>
<td>Dog as audience</td>
</tr>
<tr>
<td>Relationship</td>
</tr>
</tbody>
</table>

At this point, I took a more deductive stance, extensively revisiting the data sets to seek additional evidence to support established sets of categories (Merriam, 2009). I read and reread my various notes, and worked to further analyze my findings. The amount of data felt too large. I created three perspective grids, one for each student. The grids provided a way to analyze all the data sets and participant voices simultaneously. A sample page from a perspective grid appears in Appendix F. The perspective grid process resulted in 11 categories, shown in Table 10.
Table 10

*Progression of Categories Through Perspective Grid*

<table>
<thead>
<tr>
<th>Perspective grid (11 categories)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation to read</td>
</tr>
<tr>
<td>Focus</td>
</tr>
<tr>
<td>Fluency</td>
</tr>
<tr>
<td>Comprehension</td>
</tr>
<tr>
<td>Dog as audience</td>
</tr>
<tr>
<td>Handler as audience</td>
</tr>
<tr>
<td>Social interactions</td>
</tr>
<tr>
<td>Book talk</td>
</tr>
<tr>
<td>Creative language</td>
</tr>
<tr>
<td>Storyworld-entering</td>
</tr>
<tr>
<td>Storytelling performance</td>
</tr>
</tbody>
</table>

Although not yet final, these categories helped me see that I needed to analyze literacy processes/behaviors still further, separating the handler and classroom pieces of the story. I created yet another type of grid called a context matrix for each case-study student. This sorted my findings by the three instructional contexts throughout the phases of the study: (a) in the classroom without the dog, (b) in the office with the dog, and (c) in the classroom with the dog. A sample page from the context matrix appears in Appendix G. Creation of the context matrix served as a major turning point, enabling me to analyze key finding from all data sets and reduce the data into three major themes, shown in Table 11.
Once I had these three themes, I went back to my previous categories and distributed them as shown in Table 12. I focused on the categories that had sufficient evidence for each of the students.

Table 12

<table>
<thead>
<tr>
<th>Student reading behaviors</th>
<th>Role of handler (using Zena as bridge)</th>
<th>Literacy as a social practice (Zena as bridge)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation to Read (all students)</td>
<td>Word-Decoding (Anna)</td>
<td>Book Talk (all students)</td>
</tr>
<tr>
<td>Perseverance (Anna)</td>
<td>Background Knowledge/Vocabulary (Anna)</td>
<td>Cooperative Learning (reading partnerships, literacy club—all students)</td>
</tr>
<tr>
<td>Focus/Engagement (Michele, Tony)</td>
<td>Focus/Sustained Reading Time (Michele, Tony)</td>
<td>Storyworld Sharing (Anna, Tony)</td>
</tr>
<tr>
<td>Fluency (Anna, Michele)</td>
<td>Fluency Support (Anna)</td>
<td>Storytelling (Tony)</td>
</tr>
<tr>
<td>Book Talk (Anna, Tony)</td>
<td>Comprehension Support (all students)</td>
<td>Community-Building (all students)</td>
</tr>
<tr>
<td>Book/Genre Agency (all students)</td>
<td>Relationship-Building (all students)</td>
<td>Book Talk (all students)</td>
</tr>
<tr>
<td></td>
<td>Handler as Audience (all students)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dog as Audience (all students)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Book Talk (all students)</td>
<td></td>
</tr>
</tbody>
</table>
### Table 13

**Final Themes**

<table>
<thead>
<tr>
<th>Final themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Learner: Discovery Space</td>
</tr>
<tr>
<td>The Guides: Instructional Practices and Intentional Supports</td>
</tr>
<tr>
<td>The Community: Connecting with Others in Literacy Events</td>
</tr>
</tbody>
</table>

I then distributed the categories across these three themes, shown in Table 14. As with the themes, I changed the naming to be more descriptive and specific to each student.

### Table 14

**Final Categories in Themes for Each Student**

<table>
<thead>
<tr>
<th></th>
<th>Anna</th>
<th>Michele</th>
<th>Tony</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Learner</strong></td>
<td>Motivation to read Perseverance with challenging text Agency with high-success books Ability to read instructional-level text Participation in book-related talk</td>
<td>Motivation to read with or to a dog Agency with dog books Reading focus and engagement Fluency and self-monitoring</td>
<td>Motivation to read to a dog Agency with self-selected books and storytelling/ performance Book-related talk Reading engagement</td>
</tr>
<tr>
<td><strong>The Guides</strong></td>
<td>Provided word-level support Raised awareness of audience Built background knowledge and vocabulary Provided comprehension support Modeled prosody</td>
<td>Built relationship and raised awareness of audience Provided comprehension support Engaged in book-related talk and conversation Provided sustained and focused reading time</td>
<td>Helped maintain relaxation and focus Built relationship and raised awareness of audience Provided comprehension support Contributed text-related connections Guided narrative development and coherence</td>
</tr>
<tr>
<td><strong>The Community</strong></td>
<td>Engaged in group readings and discussions Brought others into the storyworld and shared favorite texts Developed reading partnerships Joined the “literacy club”</td>
<td>Became comfortable reading aloud and interacting with peers Engaged in more talk, enjoyment and cooperative learning Participated in spontaneous paired and choral reading with peers</td>
<td>Engaged in group readings and discussions Brought others into the storyworld and shared storytelling performances Became a “more knowledgeable other” for peers</td>
</tr>
</tbody>
</table>
Credibility

To ensure that this would be a credible investigation, I tried to make my research design and implementation robust by using established, rigorous methodologies for data collection and analysis, including (a) accounting for personal biases; (b) keeping meticulous records to ensure data accuracy and to foster clarity of thought during data analysis and interpretation; (c) recording “rich and thick” descriptions of participants’ accounts to support robust findings; (d) performing member-checks, inviting participants to comment on interview transcripts and on whether the final categories and concepts reflect the phenomena being researched (this also helped reduce personal bias); and (e) triangulating the data by analyzing different methods of data collection together. Multiple methods produced a more complete set of findings (aligned with Noble & Smith, 2015) and minimized the limitation of any single approach (as suggested by Patton, 2002).

I applied these strategies to my investigation in the following ways: I acknowledged my bias toward using therapy dogs to support students with reading challenges and worked to limit the impact of bias on my observations. I tried to minimize any influence my participation in the study had on the participants during data collection. I collected a large amount of information over a 15-month period, including field notes, memoranda, videos, student artifacts, STAR test scores, and interviews with a wide sampling of participants. The large data sets permitted “rich and thick” descriptions of events. I performed systematic analyses using a variety of techniques to reduce the data. I cross-checked my records using data triangulation. I conversed with participants in all phases of the study, using member-checking techniques to ensure my interpretations were accurate. I worked with my dissertation committee, regularly meeting with my advisor who provided feedback and asked clarifying and probing questions that helped me
think deeply and provide comprehensive findings. Finally, when I began writing this dissertation paper, I invited a trusted friend who is not in the literacy field but has a scientific background and is an avid reader to review and critique the findings. Strategies used throughout aimed to create a sound and credible study for the literacy field (Merriam, 2009).

**Summary**

I wanted to explore the effects of dog-assisted reading on literacy learning for three middle school special-education students, with special attention to the ways therapy dogs impact motivation, engagement, and literacy processes/behaviors. I observed students reading to dogs in the contexts of the office and the classroom, comparing the results to the observations of students in the classroom when no therapy dogs were present. I used multiple data sources to explore my research questions, including observations, videos, descriptive field notes, reflective memoranda, interviews over time (with handlers, students, parents, teachers, and support staff), student artifacts, and standardized (STAR) test data. Analysis of the data began in the field and continued over the course of the research: I performed a variety of data sorts, looking at my data in different ways to understand what had actually occurred. This process included category sorts by context, perspective grids (participation sorts by category and student), and context matrices (context sorts by student). This analysis helped reveal the ways the presence of dogs supports reading and how reading with a dog-assistance team impacted learners. Additionally, the analysis led me to a much clearer understanding of the importance of the handler. As a result of this investigation, I gained new insights into dog-assisted reading and its implications for the field. I discuss these understandings in the remaining chapters.
Chapter 4: Ways Educators Used Therapy Dogs at Randall School

This chapter answers my first research question: In what ways are therapy dogs used to support reading at Randall School. Throughout the study, I regularly observed two dog-assisted reading teams: Miss Pat and her Golden Retriever Zena and Miss Sharon and her Golden Retriever Sasha. In the early phase of the study, I also observed Miss Joan and her German Shepherd Max, Miss Denise and her Cairn Terrier Frankie, and Miss Sylvia and her German Shepherd Bryce. Miss Pat and Zena had the most prominent role in the study. Each of these teams read with one or more students in the classroom, the media center, or the office. The students included Miss Barnes’ entire class, not just Anna, Michele, and Tony, who were eventually selected for my study. During this time, I observed the dogs supporting literacy as (a) audience members for oral reading, (b) bridges to personalize and discuss stories, (c) focusing and calming agents, and (d) literacy motivators.

Audience Members for Oral Reading

Dogs became audience members for the students. The dogs sat in proximity to the students, watching attentively as if listening. Sometimes they looked directly at or into the books as if reading along or observing the pictures. In addition, the handlers often spoke for their dogs, reinforcing the dog’s role as interested listener. The teachers and handlers also explicitly told the students the dogs were there to listen to them read.

Dogs Sat in Proximity to Students, Watching Attentively

Throughout the study, the dogs sat close to whichever student read, unless the student became uncomfortable. If there was a group of students, the dogs often shifted position as needed to turn toward each new reader, naturally attentive to voice. In addition, the dogs looked at the students while the students read, or rested casually near the reader. In the media center,
Zena often sat directly next to Anna and offered her paw while Anna read (May 22, 2012). In the office, while reading, Tony appeared upset when Zena had fallen asleep. Miss Pat commented that Zena was just listening in a relaxed state, enjoying the sound of Tony’s voice (November 20, 2012). The close physical contact between students and dogs reinforced the dogs’ role as social-group members.

**Dogs Looked Directly at or Into Books**

Most of the dogs periodically directed their gaze at book text or pictures while the students read, and particularly if the students held the books up for the dogs to see. Bryce looked intently at book pictures with the voice command “Watch” (May 27, 2012). Max regularly lay on the floor next to Michele and simultaneously chewed his ball while looking at the book. While reading in the office, Michele noticed, laughed, and commented, “Look at Max. He likes the book” (May 25, 2012). Looking directly at or toward the book strengthened dogs’ role as an audience member.

** Handlers Often Spoke for Dogs, Reinforcing Dogs’ Role as Interested Listeners**

Throughout the study, all of the handlers regularly asked their dog for his or her thoughts about the books being read, and then “spoke” for the dog. One afternoon, while reading from a mystery, Miss Pat asked Anna what she thought of a particular character, then turned to Zena and asked, “What do you think Zena” (January 15, 2013)? Another time Tony read from a horror story and his voice escalated to near-scream. Miss Pat commented, “You’re scaring Zena.” Tony instantly apologized. Miss Pat responded, “The tail’s wagging so she knows you don’t mean it, but Zena needs you to keep your voice soft” (October 22, 2012). The handlers served as the dogs’ voice, inviting the dogs to be active group members, alongside the students.
Teachers and Handlers Explicitly Told Students Dogs Were There to Listen to Them Read

Miss Barnes routinely started dog-assisted reading sessions by telling each student that the dog was there, and if they wanted to spend time with the dog, the student needed to “make sure and bring their book.” The handlers reinforced this with their actions and words. Miss Pat told Tony, “Keep your voice nice [and soft] for Zena but loud enough so she can hear you” (October 2, 2012). Another afternoon, when Tony began reading silently, Miss Pat cleared her throat and pointed to Zena, telling Tony, “Zena can’t hear you reading” (December 11, 2012). Staff members and handlers explicitly reinforced the dogs’ role as audience members and listeners, helping the students to understand the purpose of the dog visits.

Bridges to Personalize and Discuss Stories

Dogs supported students by becoming real-world links to story events and plot points (often augmented by reading dog-related books), and by providing springboards for social talk and connection. Specifically, all handlers used their dogs as points of reference for story actions and characters, and general conversation enhancers.

Dogs as Points of Reference for Story Actions and Characters

Using the dogs as text-to-self and text-to-world connectors served to build understanding in a way that was personal and immediately meaningful for the students. All handlers engaged the students in conversations that linked story events to the therapy dogs. Specifically, the handlers used the dogs for example and comparison, spoke for the dogs’ reactions to story events, and asked the students to speak for the dogs.

Dogs as examples and comparisons. The handlers routinely made text-to-self and text-to-world connections using the dogs to help put story events into a perspective the students could understand. One afternoon, Tony read from Revenge of the Lawn Gnomes by Stine. As Tony
read about a lawn ornament that was 4 feet tall, Miss Pat commented, “That’s twice the size of Zena” (On February 27, 2013). Two months later, a group of students read *Dogfessions* by Moustaki with Miss Sharon and Sasha. In the book, one of the dogs confessed to a love of tennis balls, and Miss Sharon told the group how Sasha’s teeth had gotten worn down from chewing tennis balls. The students listened and watched as Miss Sharon showed them Sasha’s teeth, and Michele wondered if she ought to stop letting her own dog play with tennis balls (April 8, 2013). The handlers spoke for the dogs by having the dogs “comment” on or react to story events, making connections to their own dog lives.

**“Dogs” reacted to story events.** All the handlers playfully incorporated dog “comments” into their interactions. Miss Joan skillfully “talked” for Max. While Michele read *Dogs* by Fleet, Michele wondered when she would find a picture of a dog who resembled Max. As Michele continued to read, a German Shepherd appeared in the book, and Miss Joan spoke for Max, adding, “There I am.” Later in the session, Michele read from a story about a boy whose dog becomes ill. As Michele read, Miss Joan again spoke for Max by saying, “I hope I don’t cry” (May 18, 2012). The handlers spoke for the dogs, inferring the dogs’ feelings about story events, leading the students to engage further with the stories.

**Students asked to speak for dogs.** Sometimes the handlers encouraged the students to follow the handler’s lead and consider how the dog might react to story events. When Anna read a book with a hot dog in it; Miss Pat asked Anna, “What would Zena do with a hot dog?” (September 25, 2012). Miss Pat encouraged Tony to incorporate Zena into his plots when Tony created original narratives. Tony did, turning the dog into a super-hero friend with numerous special powers. Miss Pat guided Tony’s creativity by asking questions to flesh out Zena’s character, and Tony merged fantasy with his own experiences of Zena (May 28 and June 11,
The handlers reinforced the dog’s role as audience members, asking the students how the content of a story might affect the therapy dog, in turn encouraging the students to engage in more conversation.

**Dogs as General Conversation Enhancers**

Dogs in the room acted as catalysts for social talk. The handlers did not need to “do” anything to get their dogs to be “used” this way; it happened spontaneously. However, the handlers also took advantage of social talk by often redirecting the talk to book-related topics, or broadening text-to-self and text-to-world connections. When Anna read *My Birthday Surprise* by Barrie, Miss Pat told Anna that Zena’s birthday was in April, and asked Anna when hers was, sparking a social conversation about Anna becoming a teenager (September 25, 2012). When Miss Sharon and Sasha sat with Anna and Michele, Anna read while Michele stroked the dog. Afterwards, Michele and Miss Sharon got into a long conversation about therapeutic touch for dogs (inspired by Michele’s touching of Sasha), canine free-style dancing, the webbed feet of retrievers (Miss Sharon showed Michele Sasha’s toes) and a few funny stories about Sasha and cats. The conversation evolved organically as one topic led to another (April 22, 2013). The handlers used the books and dogs as springboards to engage students in general discussions, enhancing opportunities for social talk.

**Focusing and Calming Agents**

Students used the dogs to help calm and focus themselves. The handlers encouraged a sense of calm through touch-based interactions, taking dogs for walks, and using voice and hand obedience commands.
**Touch-Based Interactions**

Students spent time stroking, petting, brushing, and cuddling the dogs. Handlers encouraged agitated students to touch the dogs using slow easy strokes, and students often spontaneously patted, hugged, and curled up with the dogs while reading. One afternoon, Tony became visibly agitated when he started reading. Miss Pat placed her hand carefully on Tony’s shaking leg and instructed him to stop reading and instead brush Zena using long slow strokes. After Tony had done this for a while, he became calmer, and Miss Pat redirected him back to reading (October 12, 2012). Similarly, Miss Pat often instructed Anna to begin her reading sessions by brushing Zena for 2 to 3 minutes (September 2012–January 2013). Though students often initiated the petting, often the handlers encouraged touch, especially when the students were anxious.

**Taking Walks**

Teachers asked students to walk the dogs as a means to focus the students’ attention. The walks to and from the office, before and after reading sessions, became part of the routine that went with dog-assisted reading and helped the students collect themselves in preparation for actual reading. Tony made a drawing of himself walking Zena to the office, showing himself with a speech bubble saying “Awesome” and Zena with a thought balloon saying “Fantastic!” (November 16, 2012). The handler integrated walks into the dog-assisted reading routine and provided structure and focus.

**Obedience Commands**

Students issued obedience commands (like “stay,” “sit,” and “lie down”) to the dogs by using voice or hand signals. To be successful, these actions required focused attention and targeted intention by the students.
One afternoon, Anna wanted to read but Zena wanted Anna to pet her. Miss Pat reminded Anna to take control, asking, “How do you tell her to lay down?” Anna responded by verbally stating “down” and simultaneously using the hand signal of pushing her palm down. Zena responded by lying down and becoming quiet (January 15, 2013). Miss Pat said she believed the obedience commands taught the students leadership and focus (Conversation, May 22, 2012). Handlers and students integrated commands into most sessions.

**Literacy Motivators**

In this study, dogs motivated students in several ways, providing: enjoyment around reading, including a positive classroom atmosphere, comfort through touch, and self-confidence. In addition, handlers provided dog-related incentives associated with reading.

**Enjoyment Around Reading, Building a Positive Classroom Atmosphere**

A therapy dog in the schoolroom provided an instant focus of attention and a basis for friendly conversations and interactions. The effects happened spontaneously when the dogs entered the room. People wanted to pet the dogs, smiled and laughed around the dogs, and engaged in social talk.

One afternoon, Miss Denise and Frankie arrived for a group reading session. Frankie began prancing around the room, going from one child to another for pets. The quiet room immediately filled with laughter and smiles as each child interacted with the dog. The students then settled down to read together, engaging in social talk around the dog, and responding to each other’s reading with laughter, story questions, and requests to see pictures (May 12, 2012).

Another afternoon, Zena and Miss Pat entered the room and everyone immediately went to greet them. Miss Pat said that Zena knew how to play “patty-cake,” and demonstrated this for the class. Everyone in the class began to smile and laugh, and a recent conflict between Tony and
another student was for the moment, forgotten (May 24, 2012). Additional fun and playfulness was enhanced through costumes and celebrations. Zena sported a Santa jacket for Christmas week. Another dog wore antlers. On St. Patrick’s Day, a dog wore a coat decorated with shamrocks. On dogs’ birthdays, the class had celebrations, giving presents and having refreshments. The dogs became a catalyst for fun and celebration around reading. Handlers enhanced these effects by interacting with the students in a light-hearted, informal, and relaxed way.

**Comfort Through Touch**

In addition to helping students gain calm and focus, touching the dogs provided comfort for some students, improving their classroom engagement. Michele routinely stroked Zena’s head and ears while she read, often began reading sessions asking to brush Zena, and loved lying on the floor cuddling Zena while she read. Zena sometimes even climbed on top of Michele’s stomach as Michele lay prone on the floor (February 12, 2013). During another session, Zena pulled Miss Pat over to a crying Tony after an argument with another student. Miss Pat asked Tony if he would like to come to the rug to read with Zena. Tony came over but continued to sob. Miss Pat instructed Tony to pet Zena until he was ready to begin reading. Tony stroked Zena for about 2–3 minutes, talking with Miss Pat about his feelings, then joined the reading session (May 28, 2013). The dogs provided comfort to the students, allowing students to overlook their troubles, keeping their energies on reading.

**Bolster Self-Confidence**

The dogs helped students feel more confident in their reading. Students routinely showed pictures to the dogs, explaining story events in their own words. Anna regularly showed pictures to Zena, commenting that Zena was “smiling” and “laughing.” Michele was initially
uncomfortable reading aloud to her peers. However, when she could pet and stroke the dog during group readings, Michele read louder and became more interactive with other students (February–June, 2013). The dogs permitted students to be “the more knowledgeable other,” providing support during vulnerable times.

**Handlers Provided Dog-Related Incentives Associated With Reading**

To emphasize the reading aspect of the dog intervention, several handlers provided computer-made books and bookmarks, personalized with photographs of their dogs, along with each dog’s biographical information. The students used the bookmarks while they read (to point at or underscore words). The handlers also provided holiday gifts such as pencils and Barnes & Noble gift cards to students who read with the dogs. These items served as literacy-related motivators designed to enhance reading.

Miss Joan brought the students bookmarks with information about her dog Max. On the front of each bookmark was a picture of Max in his TDI bandana, with the phrase “Thank you for spending time with me!” On the back of bookmark was biographical information including Max’s birthdate, birthplace, favorite activities, and favorite foods, plus trivia about his name. The students readily accepted this gift and Michele regularly used the bookmark to help keep her place while she was reading (May 25, 2012). Similarly, Miss Pat distributed Zena bookmarks that showed Zena wearing a pair of glasses and reading a book. Michele, Anna, and Tony used these bookmarks regularly to keep their places while reading. Miss Pat often chimed, “Look who’s keeping track of your place” (September, 2012–June, 2013)!

Finally, Miss Pat constructed a special Zena-related crossword puzzle for Tony using a combination of words related to Zena and vocabulary from Tony’s favorite *Goosebumps* books by Stine. Before constructing the puzzle, Miss Pat sat with Tony and asked him to provide her
with vocabulary he associated with Zena. Tony responded with “golden,” “awesome,” “soft” and others. Overall, the dog-related gifts provided additional motivation to read, and to view reading as a fun activity. The students regularly used these literacy incentives throughout the study.

Summary

Throughout this study, the therapy dogs supported readers by serving as (a) audience members for oral reading, (b) bridges to personalize and discuss stories, (c) focusing and calming agents, and (d) literacy motivators. As audience members, the dogs sat in close proximity to the students, looked into the books, and gained a “voice” through the handler’s comments. As bridges to personalize and discuss stories, the dogs became points of reference for story actions and characters, helping the students make connections, enhancing meaning, and providing a real world “hook” for conversations that often attracted other class members. As focusing and calming agents, the dogs supported touch interactions, helping students regulate their behaviors, feel more confident, and stay on-task reading. As motivators, the dogs provided a positive and enjoyable reason to read more, to gain self-confidence, and to stay focused, enhancing and expanding the social atmosphere for individuals and the group. The dogs supported literacy learning, motivation, and engagement at Randall School in multiple ways.
Chapter 5: Anna

The Learner: Discovery Space

_There’s nothing I don’t like about it. At first I was afraid to read, but now I like to read and would like to read every day with Zena._

—Interview, Anna, December 17, 2012

Anna loved Disney movies, Christmas, and Christmas music. Anna, friendly and outgoing, talked freely with students, staff, and visitors during social times and transitions. Although Anna could be difficult to understand due to severe articulation challenges, she continued to converse informally with others. Anna got along well with members of the class. Staff and fellow students liked Anna.

Observations Without the Therapy Dog

Anna began the school year as an emergent level reader (STAR Reading Assessment data, September, 2012). She said that previous schools had never taught her to read (Conversation, September 25, 2012). Anna worked 2 to 3 days per week with leveled books on Raz-Kids, a computerized reading program. In the classroom, while sitting at her computer, she read stories at her independent level, reading aloud and then answering multiple-choice comprehension questions. On September 27, 2012, when Anna read the Raz-Kids Level C (early first grade) reader, _Yummy, Yummy_ by Roberts, she read word-by-word and tracked with her finger. She used little expression and ignored punctuation. When Anna came to an unknown word, she looked at picture cues for support (Observation, September 27, 2012).

Comprehension questions challenged Anna. Miss Nadine, a teacher assistant, often read the questions aloud so Anna could understand (Observations, September–October, 2012). Anna also worked, with Miss Nadine’s support, to improve her word recognition through two programs: a Wilson multisensory language program, and Failure Free Reading, a sight word
program featuring repetitive and predictable stories. These two programs involved computer-based and noncomputer-based interactions (Observations, September–December, 2012). After reading, Anna answered literal and inferential assessment questions through Raz-Kids and Failure Free Reading. In the classroom, students had free time in which they could self-select their activities. Anna used this time to listen to music or to skim books without actually reading them (Observation, September 20, 2012).

**Observations With the Therapy Dog**

During the course of the dog-assisted reading study, Anna developed as a reader in the following areas: increased motivation to read, perseverance with challenge-level text, agency with high-success books, improved ability to read instructional-level text, and participation in book-related talk.

**Increased motivation to read.** Although Anna participated in classroom reading activities, when she became involved in the dog-assisted reading program her interest in reading really ignited. In the beginning of the study, “reading” for Anna consisted mostly of decoding words, and she enthusiastically embraced this activity, processing as many books as she could in the time allotted. Later, she began to read more for content.

When Anna read Failure Free Reading and Raz-Kids computer-based books in class, she showed minimal enthusiasm for the work, and often lost focus and gazed around the room (Observations, November 19, 2012; April 29, 2013). In contrast, Anna engaged when reading with the therapy dogs. On her first visit to the office on September 25, 2012, Anna brought in a stack of easy readers—self-selected from the media center—petted Zena briefly, and then immediately began reading. She wanted to read as many of her selected books as possible, stating, “These books are easy. I could read a couple more.” This pattern continued throughout
October, 2012. Anna often stopped me in the hallways asking when she would be reading with
Zena, and requested to read with every dog who visited the program (Observations, September–November, 2012). According to Miss Barnes, “Anna is my ‘got to read to every dog that walks through the door’ [student]” (Interview, November 30, 2012).

From September to December, 2012, Anna asked for time to read Failure Free Reading books. Although she read these books on the computer in her classroom (Observations, September, 2012–June, 2013), she did not show interest in the books until she read them in the office with Miss Pat and Zena, and looked through the complete collection on my shelf. Anna browsed the book rack and asked to read specific Failure Free texts (Observations, October 2, 9, November 6, 27, December 4, 11, 17, 2012; January 8, 15, 2013). Miss Pat often left time at the end of sessions for Anna to read these books. On December 11, 2012, Anna selected a new book, smiled, laughed, and announced in a loud voice to no one in particular, “I love reading.”


Anna spoke several times about Zena’s presence as a “calm” animal. Anna found decoding difficult, and Zena’s calm seemed to help her accomplish it. In all of Anna’s interviews,
she expressed her appreciation for the reading time with Miss Pat and Zena (Interviews, November 9, December 17, 2012; April 13, May 2, 17, 2013). On November 9, 2012, Anna said of Zena, “Other kids should read with her because she is the most calming dog.”

Over the course of the school year, Anna’s motivation to read improved with a dog present. Zena’s quiet disposition helped Anna relax and focus on the process of reading. Anna eventually progressed to moving beyond solely decoding texts to enjoying the stories in increasingly difficult texts.

**Perseverance with challenging text.** Anna preferred early readers—simple, short picture books—because they offered her success. However, when Miss Barnes encouraged Anna to read harder, instructional-level texts, Anna willingly took risks with Miss Pat and Zena in the privacy of the office. While Miss Pat explained words or concepts, Anna usually kept her eyes on the page, anxious to keep reading, focusing on word recognition.

Anna came to the office on October 9, 2012, with *My Life in Dog Years* by Paulsen, a book at Anna’s challenge/frustration level. Anna worked on this book for five sessions (Observations, October 9, November 6, 13, 27, December 4, 2012). On the first day, she sat next to Miss Pat, with Zena lying at her feet. Anna studied the cover of the book with her eyebrows furrowed. She asked Miss Pat, “What does that say? I can’t read it.” Miss Pat read the cover for her. Anna had difficulties with many of the words in the story, especially multisyllabic words. She would point to a difficult word, and Miss Pat would supply it, after which Anna would repeat it. With Miss Pat’s support, Anna worked to actively figure out the words. When she came to “unabashedly,” she smiled at Miss Pat and laughed, “I can’t read that word.” Miss Pat chunked the word into parts and Anna pronounced it. When Anna paused at the word “rescue,” Miss Pat offered a semantic clue, saying, “When you save somebody, you ‘blank’” and Anna
chimed in “rescue them.” When Anna stumbled and lost her place, Miss Pat read some of the sentence for her, and Anna continued. Anna removed two layers of sweatshirts while simultaneously reading the story. She did not want to stop reading. Toward the end of the session, Anna sighed, laid her head on the table and looked ahead to see when the chapter would be finished, but continued reading.

After several sessions with *My Life in Dog Years*, Miss Pat selected *Magic Treehouse 1: Dinosaurs Before Dark*, by Osborne, as a better fit for Anna. Anna began reading this book in the office on December 11, 2012, and transitioned to the classroom in late January, 2013. On February 26, 2013, Anna sat in a chair at the classroom reading rug with her shoulders relaxed and her legs crossed at the ankles. She focused on the story, attempting challenging words such as “pteradon” and “examine,” figuring out “boney” on her own. Anna barely looked up while reading. Similarly on May 7, 2013, while reading *Magic Treehouse 2*, Anna continued to read despite difficult words such as “cobblestone” and “awe.” Anna made sure to repeat every unknown word Miss Pat provided, and listened to her quick vocabulary explanations. Anna read, occasionally tracking with her finger, until she completed the chapter. Throughout these interactions, Zena usually stayed quiet, curled up next to Miss Pat, available if needed but not intruding.

Even with a book at the frustration level, Anna persisted in trying to process it. Over time, she transitioned from waiting for Miss Pat to supply hard words to independently working through the words on her own. Anna’s willingness to take risks with more sophisticated text enabled her to eventually begin to read for meaning.

*Agency with high-success books.* Although Anna willingly tried to read the chapter books at her challenge level, Failure Free Reading books, with their easier themes and syntax
structure, supported Anna. She accessed these books before and after reading harder texts, and repeatedly asked to take Failure Free books home to read with her family. I printed copies from the program’s electronic library for this purpose. Anna took several home each week.

On October 9, 2012, as soon as she had read the required amount of text from *My Life in Dog Years* by Paulsen, Anna went over to the display in the office and selected a few Failure Free Reading books to take home. Only a few minutes remained in the session, and Miss Pat asked Anna if she would like to brush Zena, but Anna answered that she preferred to read *Trip to the Mall* by Lockavitch, one of the Failure Free Reading books she had previously started. Anna focused as she read, and did not need to track with her finger. She mispronounced “unleaded,” reading it with a long “e” sound, and Miss Pat corrected her. Anna read the book with little assistance, and smiled when she finished. Then she got up, put the book away, went up close to the camera, grinned and laughed.

The pattern of asking to read the Failure Free Reading books continued throughout Anna’s time in the office (Observations, October, 2012–January, 2013). She lingered over the display of the readers, and consistently asked how many she could take home to read to her younger siblings. On December 4, 2012, Anna, instead of reading *My Life in Dog Years*, went to the Failure Free shelf, stating that these were the books she wanted to read. I suggested she read one of them as a “warm-up,” and Anna smilingly selected *Going to the Park* by Lockavitch. She read it smoothly. Then Miss Pat reminded Anna to continue reading from *My Life in Dog Years*. Anna’s reading became slow and choppy and she had difficulty with many words. Her body looked tense, and she often sighed and yawned. When Miss Pat offered to do a shared reading, suggesting they alternate paragraphs, Anna announced, “I don’t want to read it no more.” She instead returned to the Failure Free Reading display and pulled another title which she read as
fluently as *Going to the Park*. She showed disappointment when the time was up. Referring to the Failure Free books, she asked, “Can you make me copies of these? Can I take these home? Can you take me to make copies? Can I see if my teacher can take me down to make copies?”

According to Anna’s father, Donald,

[Anna] wasn’t reading until recently. We were surprised. She reads good. When she reads to her little brother, they sit close together and she does all the reading. All of the [Failure Free Reading] books are together in a tote in the living room. (Interview, January 24, 2013)

By winter, Anna made it clear she wanted to read books at her independent level. Failure Free Reading books supported her independent practice and home reading. Throughout these sessions, Zena remained calmly next to Anna. Interestingly, when Anna read Failure Free books, she often sat on the carpet right next to Zena and showed Zena the pictures rather than sitting in a chair when she read the more difficult books.

**Improved ability to read instructional-level text.** *Magic Treehouse 1: Dinosaurs Before Dark* by Osborne became the breakthrough book that satisfied Anna and Miss Barnes. The familiar topics, short chapters, and accessible vocabulary fit Anna’s instructional level. Through regular readings with *Magic Treehouse* books, Anna progressed as a reader, reading at a faster pace, improving her word recognition and her fluency, and eventually reading aloud in a classroom setting.

Miss Pat introduced the *Magic Treehouse* books on December 11, 2012, saying, “I have a new book you might like to try. It’s one of my favorite books. It’s [part of] a series about Jack and Annie called the *Magic Treehouse*. Want to give it a try?” Anna nodded her head, and noticed the dinosaurs on the cover. Miss Pat noted the short chapters, and added, “We’ll never run out [of books], and as fast as we read, that’s how fast I’ll supply them.” Anna began reading, looking ahead to see how long before she finished the chapter. She smiled when she discovered
that she had almost read an entire section. Miss Pat asked, “Do you like this book?” Anna said “Yes,” adding, “I might ask my dad to buy me this book. Where did you got it from?” Miss Pat told Anna that when they finished reading the book, Anna could have it to take home. Anna responded to this with another smile. She said she might have to hide it from her brothers who liked dinosaurs. Miss Pat suggested reading the book to her brothers, and Anna agreed.

Anna read most of the book on her own, tracking with her finger. She made occasional miscues which Miss Pat corrected. Over the next several sessions in the office, Anna continued with *Magic Treehouse 1*. Now, with the right book fit and success in reading, Anna relaxed into the reading routine (Observations, December, 2012–January, 2013). Throughout these sessions, Zena either watched Anna or slept quietly. Zena and Miss Pat always worked as a team, with Zena interacting more with students who wanted or needed more interaction, while remaining calm and nonintrusive for a reader like Anna, since Anna engaged deeply with the reading.

When Anna first moved from the office into the classroom (January–February, 2013), she read *Magic Treehouse 1* with a softer voice and a more tense body posture. During initial group readings on the rug, Anna read her book silently, sitting off to one side (Observations, January–February, 2013). However, with sustained practice, Anna’s confidence grew (Observations, March–June, 2013). By the final session on June 11, 2013, Anna read from *Magic Treehouse 2: The Knight at Dawn*, also by Osborne, with focus, expression, and at an appropriate pace. She read out loud to Miss Pat and Zena on the reading rug. When other students came to the rug, Anna did not become distracted. Miss Nadine observed, “Anna is willing to read in front of the others because of the dogs. Her confidence is up, and she will ask what a word is” (Interview, June 11, 2013). According to Miss Pat, “Anna was shyer downstairs [in the classroom], but got
more into the [Magic Treehouse] chapter book. Her phrasing improved and she seems to feel better about herself and have a better self image” (Interview, June 14, 2013).

Although Anna initially continued to request Failure Free Reading books for independent reading, she stated in later interviews that she liked reading the Magic Treehouse books, preferring the series to easier books (Interview, May 17, 2013). Reading texts at an instructional level helped Anna improve her decoding, fluency, and comprehension, with the added benefit of increased confidence.

**Participation in book-related talk.** Anna began the study discussing illustrations and photographs in books. Miss Pat asked questions to help Anna make connections and clarify storylines. Later in the study, conversations became more motivated by the plot text, opening the door to increased dialogue and meaning-making. Anna, accustomed to reading on her own with the computer, now had the opportunity to talk with a partner about the books she read, with Zena often used as a reference or a prompt.

On September 25, 2012, Anna read *My Birthday Surprise* by Barrie, the story of a young girl who receives a puppy for her birthday. Anna noticed the birthday cake on the cover. Miss Pat asked Anna the month of her own birthday, and told her that Zena’s birthday was in April. Anna talked about turning 13 and shared her excitement about this. Miss Pat joked that Anna would become a teenager, and the two laughed together. As Anna read, Miss Pat, who could not see the book, asked, “Was the girl’s dad under the table?” Anna immediately turned the book toward Miss Pat, pointing to the puppy in the illustration, saying, “See, she gets a new puppy for her birthday.” Miss Pat thanked Anna for the clarification.

Anna read the Failure Free Reading book *Going on a Train Ride* by Lockavitch on December 4, 2012, sharing the illustrations with Zena. Anna volunteered that she would like to
take a train ride to Florida for the warm weather. At one point, her brow furrowed and she said, “They put this picture upside down.” Miss Pat explained that there was a shadow. Anna asked, “What’s that picture of?” Miss Pat said it was a factory. Anna looked at another picture, commenting, “That’s a cute baby.” Miss Pat asked, “Where do you think the sister goes?” and Anna responded “Day care.” The two discussed day care and crying babies. Miss Pat joked, “Bet you cried on your first day of school,” but Anna disagreed, saying, “I like school!”

While reading *My Life in Dog Years* by Paulsen on November 13, 2012, Miss Pat asked, “Do you know what it means to ‘run’ dogs?” Anna responded, “To raise them?” Miss Pat described sled dogs and the Iditarod Race. Miss Pat paraphrased a section of the story, helping Anna understand that the companionship of a dog was essential out in the rugged, remote Alaskan wilderness. When Anna read the sentence “I was alone when I made a mistake that nearly killed me,” she stopped reading and exclaimed, “He’s dead?” Miss Pat clarified, “No, he said the mistake *nearly* killed him. If he was dead, could he write the book?” Anna considered this and responded, “Well, maybe he could have wrote it before he did die. Well, he might have died later. Yup.” This conversation showed Anna attempting to make meaning, and defending her own interpretation.

Conversations during Anna and Miss Pat’s reading sessions helped Anna think more about the plots of the books she read. Although early discussions often started from pictures, they later focused more on the text. Anna readily contributed to the conversations and, in the process, moved beyond reading solely as a decoding task.

**The Guides: Instructional Practices and Intentional Supports**

Anna is much more motivated to take risks with one-on-one sessions, and persevere.

—Interview, Miss McMann, April 16, 2013
Anna’s classroom instructional team included her teacher Miss Barnes, and teacher assistant Miss Nadine, while Miss McMann, social worker, supported Anna with counseling sessions. In the dog-assisted reading study, Anna’s guides included retired special-education teacher Miss Pat and her dog Zena. Each of these team members worked with Anna in different ways.

**Observations Without the Therapy Dog**

In Anna’s classroom, Miss Barnes and Miss Nadine assisted Anna through a range of individualized programs and tasks, including completing worksheets, researching information on the computer, and answering comprehension questions. According to Miss Nadine, “Anna is motivated by one on one—it helps her confidence” (Interview, June 11, 2013).

In a typical classroom reading session on December 7, 2012, Anna worked in a language arts workbook, and did not know how to rewrite a sentence that contained several intentional errors. Miss Nadine reminded Anna of the rules of capitalization and punctuation, and provided a few cues so Anna could complete the task. During a research assignment on December 11, 2012, Miss Barnes used the computer to help Anna locate information on Christmas celebrations around the world. She read Anna the articles aloud, paraphrasing so Anna could better understand the content, and directed Anna to highlight particular pieces of information. On January 10, 2013, Miss Nadine asked scripted questions designed to help Anna recall basic information from her Failure Free Reading text. As Anna answered the questions, Miss Nadine offered prompts to help Anna remember story details.

**Observations With the Therapy Dog**

In contrast, when Anna read with a dog, she read for the pleasure of the story. When Miss Pat and Zena worked with Anna, they read without worksheets or computerized tasks and tests.
Miss Pat offered comments and queries that helped bring comprehension into the personal realm, and gave Anna a chance to dialogue about the subject matter. Initially Miss Pat read with Anna upstairs in the office (September, 2012–January, 2013) and later moved into the classroom (January–June, 2013). Miss Pat listened carefully, helped with difficult words, asked leading questions, and responded to Anna’s other needs as a reader. Miss Pat viewed her role as one of “support.” She wanted to help Anna increase her reading ability while enjoying reading:

Anna is a good reader but [she] doesn’t like reading harder things. Given a choice, she likes picture books with three or four words on a page. She doesn’t like to get into anything heavy: she doesn’t think she can do it, she doesn’t have confidence. The teacher wants her to read a chapter book, but I’d like to see her reading what she enjoys. (Interview, November 28, 2012)

Providing targeted assistance, Miss Pat offered supports to Anna related to authentic reading. Specifically, Miss Pat provided word-level support, raised awareness of audience, built background knowledge and vocabulary, provided comprehension support, and modeled prosody, using Zena as needed or as convenient to assist with these supports.

**Provided word-level support.** Miss Pat used a variety of word-level techniques designed to support Anna without interrupting too often. Sometimes Miss Pat supplied Anna with an unknown word; other times she offered strategic cues and prompts to help Anna decode the word herself. Miss Pat provided wait time when Anna hesitated at words that Miss Pat thought Anna could read independently. Miss Pat praised Anna when she independently read unknown words.

Miss Pat supported Anna through the “Snowball” chapter of *My Life in Dog Years* by Paulsen (Observation, November 27, 2013). The text contained an abundance of multisyllabic words, and Anna tracked using her “Zena bookmark,” focusing on the task of breaking the code. Anna’s reading was slow, sometimes moving word by word and sometimes in short phrases. Anna pointed to each difficult word, and Miss Pat provided a small amount of wait time, then supplied the word so Anna could move on and continue reading.
In the same session, when Anna read “locker” for “local,” Miss Pat provided the correction, and Anna repeated the correct word. Miss Pat held Anna’s hand over the syllable chunks in “insure” to aid word identification, knowing that with a small scaffold, Anna could figure out the word on her own. When Anna came a second time to the word “surplus,” Miss Pat preset Anna by saying, “There’s that word again,” and helped Anna chunk the word so she could successfully read it. Anna paused before “entire,” and Miss Pat gave Anna time to process it. When Anna read it independently, Miss Pat gave her the thumbs up. These types of supports helped Anna read more than she would have been able to if left on her own.

As the year progressed and Anna transitioned to Magic Treehouse books in the classroom, she continued to need support with word recognition on more challenging domain-specific words like “pteradon,” “tyrannosaurus rex,” and “medallion” (Observation, March 12, 2013). Miss Pat continued to supply the unknown words to Anna, who repeated them and then continued reading. With Miss Pat’s support, Anna’s word recognition improved noticeably over the course of the study, and Miss Pat focused on areas beyond word recognition. Zena provided a calming presence, not interacting with Anna much except at the beginning and end of sessions when Anna would pet the dog before reading. Anna gained confidence as a reader, and began to move into books at her instructional level.

Raised awareness of audience. Miss Pat and Zena provided Anna with opportunities to share the reading experience with others. Anna readily responded, relating directly to Zena and to Miss Pat. With Zena, Anna also took on more of a teacher role, a new experience for her at school.

Anna regularly shared pictures with Zena when reading early leveled and Failure Free Reading books, especially when she thought a story or illustration had special interest for Zena.
When reading the Failure Free book *In the Barn* by Lockavitch, Anna shared the pictures of the kittens with Zena because she assumed Zena would have an interest in kittens (Observation, October 2, 2013). During *Going On a Train Ride* by Lockavitch, Anna patted Zena and showed her each picture, explaining to Zena that one of the pictures was a baby (Observation, December 4, 2012). At one point, Anna became concerned that Zena was asleep, even though she could see a little bit of Zena’s eyes. Miss Pat responded, “She’s listening: your voice is soothing her.” Miss Pat often told Anna that Zena listened and enjoyed the sound of her voice (Observations, September–December, 2012). During these times, Anna regularly checked Zena’s eyes to see if Zena had fallen asleep, and then showed Zena pictures from the books she read, holding them up before Zena’s eyes.

Miss Pat also served as an audience member for Anna, reacting to the stories with comments and laughter (Observations, September, 2012–January, 2013). Sometimes Miss Pat would make a text connection to Zena; other times Miss Pat would speak for Zena, personifying the dog’s reactions; still other times Miss Pat would talk directly to Zena about the book. In the Failure Free book *Eating Lunch* by Lockavitch, Anna read about a boy who was eating a hot dog. Miss Pat wondered aloud, “What would Zena do with a hot dog?” (Observation, October 2, 2012). In *Magic Treehouse 1: Dinosaurs Before Dark* by Osborne, when Anna read about pteranodons (flying reptiles), Miss Pat asked, “Would you have a hard time petting that?” After Anna responded, Miss Pat said, “What do you think, Zena?” (Observation, January 15, 2013).

In the classroom, Zena often panted and paced in response to the loud noises and shouting. Miss Pat reminded Anna that the tone and volume of her reading voice would soothe Zena. On April 23, 2013, after a classroom behavior incident, Anna focused and followed Miss Pat’s directive to read to help Zena relax. As Anna read, Zena began to settle, and soon in a calm
state. Miss Pat pointed this out to Anna, saying, “You see? Your voice is calming Zena down.” Anna smiled.

Anna made positive comments about reading with Zena in all of her interviews (Interviews, November 9, December 17, 2012; April 13, May 2, 17, 2013). She stated she liked reading books “to her” and “with her” (Interviews, November 9, December 17, 2012). Anna also appreciated Miss Pat as an audience member, and independently wrote a thank-you note to express her appreciation for their reading time (Artifact, June 11, 2013).

Anna enjoyed reading with Zena and Miss Pat. Having two audience members with whom to interact provided a social group for Anna, and she became more story-oriented with them. Anna also began to “play the adult” with Zena, explaining details to the dog and helping Zena calm down. Anna gained confidence as a reader and as a group member, which later translated to her having greater confidence when reading in the classroom with peers.

**Built background knowledge and vocabulary.** Miss Pat worked to help Anna build her knowledge base and learn new vocabulary. When Anna read stories, Miss Pat quickly defined unknown words, Miss Pat helped Anna learn other words, connecting them to words and concepts Anna already knew, using Zena as a reference as needed.

*My Life in Dog Years* by Paulsen presented a challenge for Anna, because understanding the story depended on background knowledge she did not have. Miss Pat worked to fill in these gaps (Observations, October–December, 2012). Miss Pat explained the Iditarod and the concept of running sled dogs. She included connections to Zena whenever possible, building on Anna’s growing knowledge of dogs. Miss Pat supplied most of the unknown words quickly so Anna could read without too much interruption, adding a brief definition when Anna came to vocabulary words particularly important to the story. When Anna attempted to read the word
“companion,” Miss Pat asked, “What is a companion?” Anna did not know. Miss Pat said, “I have a companion and her name is Zena. A companion is someone who is with you” (Observation, October 8, 2012). She interjected with immediate, brief, and targeted prompts.

When reading from the instructional-level text *Magic Treehouse 1* by Osborne, Miss Pat provided cues, hints, and prompts. When Anna stopped at the word “crest,” Miss Pat pointed to the dinosaur’s crest on the front cover and said, “It’s the same as the toothpaste.” For the word “snort,” Miss Pat made a snorting sound as she provided the word. When Anna came to the word “cautious,” Miss Pat interjected, “What does a yellow light mean? It means you need to be ‘blank,’” supporting Anna to figure out the meaning of the word (Observation, January 15, 2013). Because Miss Pat’s interventions integrated seamlessly into the flow of the reading, Anna used the majority of her time with Miss Pat and Zena for actual reading. With Miss Pat’s supports, Anna read instructional-level and even frustration-level texts with greater flow and understanding.

**Provided comprehension support.** At the beginning of the study, Anna’s struggles with decoding interfered with comprehension. As the study progressed, Miss Pat recognized Anna needed to enjoy the process of reading more, and the two of them worked with books at various levels of difficulty, including easy. Anna relaxed into the process and began thinking about meaning. Miss Pat provided cues and prompts to assist, using Zena as a reference as needed.

When Miss Pat and Anna began the study, Miss Pat let Anna choose her own materials, including the early leveled readers and the Failure Free Reading books Anna understood and enjoyed (Observations, September–December 2012). Anna said, “I like to read those [Failure Free] books: they’re ‘mad-easy’ for me” (Interview, December 17, 2012).
Anna began reading the chapter book, *My Life in Dog Years*, by Paulsen in October, 2012. Anna struggled to understand the book (Observations, October–November 2012). Overemphasis on word recognition interfered with Anna’s understanding and enjoyment. Still, Anna attempted to personally relate to the story, especially when Miss Pat paraphrased for her. After a discussion about the dog, Cookie, Anna commented, “I am pretending this story is about Zena” (Observation, November 6, 2012). During a November 13, 2012 observation, Miss Pat explained that in certain areas of the country, people ate dogs for food. Anna groaned, contorted her face, said she could not believe this was true, and declared that she would never eat a dog. Although Anna persisted in trying to read the book, Miss Pat commented, “I don’t think she is enjoying the chapter book she is reading. The words are too hard for her. But … the teacher wants her at the challenge level” (Interview, November 28, 2012).

By late November of 2012, Miss Pat asked Miss Barnes if they could switch books for Anna. Miss Barnes agreed, with the condition that Anna read a chapter book rather than an easy reader. They selected *Magic Treehouse 1: Dinosaurs Before Dark* by Osborne, and began reading it on December 11, 2012. Miss Pat took every opportunity to help Anna process the text, relate to the characters, and use text-based information for this instructional level text. Miss Pat led Anna to understand how the characters might feel around dinosaurs by asking Anna how she had felt the first time she went to pet Zena (Anna had been frightened of dogs). To help Anna better understand the size of the dinosaurs in the story, Miss Pat encouraged Anna to compare the dinosaurs to a small school bus. When Anna asked, “Does the dinosaur eat people?” Miss Pat brought Anna back to the text by saying, “What does it say it eats?” Anna returned to the text and read, “It eats plants and no meat.” Miss Pat guided Anna to think about the details she read and encouraged conversation while reading (Observations, January 8, 15, 2013).
In the classroom, Anna continued reading the *Magic Treehouse* book. On February 27, 2013, Miss Pat told Anna she only had three chapters left, and that when she finished, she could bring the book home to share with her siblings. Anna smiled at this, and read with focus. Miss Pat referred to Zena’s pacing to illustrate the rising action, stating, “Zena is getting excited about the end of the story.” Anna smiled again. Miss Pat asked Anna if she thought the main characters would make it home. Anna wasn’t sure, and started previewing the last chapter on her own, looking at the illustrations. Then she said, “Yes, I think they will make it home because, look here, it says ‘Home Before Dark.’” Miss Pat identified the strategies Anna used including reading ahead and using the pictures. A week later, on March 5, 2013, Anna finished *Magic Treehouse 1*— her first chapter book. “This is the last page,” she said with a big smile. “Congratulations!” said Miss Pat, “You finished the book.” Miss Pat then confirmed Anna’s prediction. “You were right: they got home safely.”

Miss Pat also helped Anna understand how books in a series worked. After Anna completed *Magic Treehouse 1*, Miss Pat showed Anna additional *Magic Treehouse* books, explaining how the series used common characters, and that stories in a series often had a predictable structure. She read from the back cover of Book 2 to inspire Anna to read that book next (Observation, March 5, 2013). In a later session, Anna asked Miss Pat how many books were in the series, and Miss Pat answered, “Many.” Miss Pat helped Anna read Osborne’s name in a short description on the back cover of the book, then suggested Anna look at the front cover. Anna made the connection and said, “Oh, she wrote the book” (Observation, June 11, 2013).

With Miss Pat’s continuing encouragement and support, Anna completed her first chapter book, and became interested in additional reading of series books at her instructional level. This
helped Anna become invested in the storylines and the recurring characters, increasing Anna’s overall reading comprehension.

**Modeled prosody.** Miss Pat began gently raising Anna’s awareness of prosody as the school year progressed. As Anna’s comprehension increased through the *Magic Treehouse* books, Miss Pat began to focus Anna’s attention on the text’s meaning while reading. Miss Pat used a range of strategies geared to improve Anna’s volume, tone, and expression in an effort to help Anna’s reading sound natural and smooth.

Miss Pat regularly modeled reading words with emotional expression (Observations January–June 2013). On May 7, 2013, she specifically explained how a reader’s voice can help written text make sense. When Anna came to the word “tremble,” Miss Pat changed her timbre, and read the word with a trembling voice. Similarly, Miss Pat changed her expression, tone, and volume with words like “shudder” and “neigh.” Through Miss Pat’s example, Anna came to understand that reading a word involved not only knowing how to pronounce it, but also knowing what it means, and conveying that through vocal changes.

In a different session, Anna came to the sentence “Let’s stay, I want to visit the castle.” She read it with the assertiveness expected of the book’s main character, and with added emphasis on the word “stay.” Later, Anna also read the word “no” with conviction, raising her voice and changing her tone to one of anger (Observation, April 23, 2013). After the session, Miss Pat shared she noticed Anna’s confidence and fluency in her reading as she started to use punctuation marks, and read expressively (Conversation, April 23, 2013).

Miss Pat also reinforced Anna’s fluent reading with specific feedback. During the April 23, 2013 observation, Miss Pat brought me into the discussion by asking, “Did you notice the exclamation marks when Anna read? You can hear them when Anna is reading.” Miss Pat asked
Anna to read the sentence again so I could notice her expressiveness. Anna reread the sentence and smiled.

Given Anna’s gains in other areas, Miss Pat spent the final months of the study supporting Anna in her prosody. Anna’s more fluent and expressive reading helped her enter the storyworld more deeply, and made her reading more enjoyable for listeners and for herself. When Miss Pat assisted Anna in these areas, Zena lay quietly next to Anna as a calm and calming presence.

The Community: Connecting with Others in Literacy Events

Anna has really come out of herself. Kenneth [another student] would really help her. I like to praise them for that. With groups, they tend to help each other. I encourage that with the children.

—Interview, Miss Sharon, June 13, 2013

Anna’s community at school consisted of the other students in the classroom, her teacher and teacher assistants, and the therapy dogs and their handlers. The latter included Miss Pat and her dog Zena, as well as (occasionally) retired science coordinator Miss Sharon and her dog Sasha. Classroom readings with Miss Pat and Zena mirrored the experience in the office, with each student having their own individual time on the rug, although sometimes other students got involved as well. During classroom sessions with Miss Sharon and Sasha, students often had the opportunity to come together spontaneously if they wished.

Observations Without the Therapy Dog

Whole-class literacy events involved after-lunch read-alouds and integrated content-area lessons. During read-alouds, students sat at their desks while Miss Barnes read from a chair. During integrated content-area lessons, students sat at a table in the back of the room, exploring lesson topics with teachers or visiting “experts.” During these larger group sessions, Anna let her more verbal peers dominate the conversations. Anna’s speech teacher, Miss Bess, noted, “Anna
is very cooperative in all settings, but in a large group she is quiet and reluctant to participate” (Interview, June 11, 2013).

On December 11, 2012, I engaged with the class in an integrated lesson about Hanukkah. As the class sat around the back table, I showed a variety of Hanukkah artifacts and retold the Hanukkah story. Anna asked, “Do you get presents every night during Hanukkah?” and “Are there songs for Hanukkah like there are for Christmas?” Even though other students spoke more than she did, Anna’s eye contact and questions demonstrated continuing interest. Observations during read-alouds revealed a less engaged Anna: during readings of *Hatchet* by Paulsen and *The Cay* by Taylor, Anna laid her head on her desk, did not join in the conversations, and did not answer any literal or inferential comprehension questions (Observations, April 18, June 10, 2013).

**Observations With the Therapy Dog**

From January to June, 2013, Anna began reading in the classroom with therapy dogs and their handlers. Over this period, Anna engaged in group readings and discussions, brought others into the storyworld, shared favorite texts, developed reading partnerships, and joined the “literacy club.”

**Engaged in group readings and discussions.** The entire class enjoyed the visits of the dogs and their handlers. Students and staff stopped what they were doing and greeted the dogs with excitement and smiles. Students gathered voluntarily on the reading rug and took turns reading their books, listening to each other, and engaging in discussions. Staff members would also come to the rug, pet the dogs, and listen to the stories. These sessions, with book talk as well as social talk, helped to build a stronger community connection among class members.
Miss Pat and Zena’s first classroom reading visit was on January 22, 2013. Anna came to the rug along with Michele and Kenneth. Miss Barnes came over to pet Zena, and suggested the students choose their own books for this new event. Anna chose *The Perfect Ride* by McCrady. Other students listened attentively as Anna read. Miss Nadine, from her desk, commented, “That’s a good book.” Then Anna listened as other students read. She moved closer to Kenneth to see the illustrations in his book on gemstones. Arthur, a teacher assistant, came over to pet Zena. Peter, a quiet student, came over to pet Zena, then sat and listened as Anna and Michele read. Matthew, also a quiet student, watched attentively from his desk. This inaugurated the dog-reading visits as a lively community event (Observation, January 22, 2013).

During a February 12, 2013 observation, Anna read Osborne’s *Magic Treehouse 1: Dinosaurs Before Dark* with Miss Pat and Zena. Tony came over to the rug and listened. He asked Zena if she was afraid of dinosaurs, and he and Anna laughed. Kenneth joined them and listened to Anna read. Then Kenneth read and Anna listened. Upon completion of the session, the group discussed how to train dogs to become certified as therapy dogs. Miss Pat and Zena’s presence created opportunities for students to engage together through book- and dog-related dialogue. Both talking and listening enhanced the sense of community.

Students also read with Miss Sharon and Sasha. During this less structured time, students could choose their own books from the small classroom library. Miss Sharon and Sasha’s visits helped Anna be part of shared conversations sparked by students’ self-selected stories and open-ended questions posed by Miss Sharon. On February 11, 2013, Anna came to the rug with Michele and Kenneth. Anna listened as Michele read *Toby and Tutter: Therapy Dogs* by DeBear, and reacted with laughter when the dog’s eyes were described as “googly.” When Kenneth read from *The Ultimate Encyclopedia of Dogs: Dog Breeds and Dog Care* by Larkin and Stockman,
Anna took a picture book from the bookshelf and sat in the corner looking through the illustrations. Then she played with Sasha, laughing at the way the dog “smiled,” and laughing some more when Sasha licked her face. Kenneth asked Anna to quiet down so he could read and Anna moved over to join Kenneth, Michele, and Miss Sharon. Miss Sharon asked if anyone knew why firemen used Dalmatians as fire dogs. Anna participated in the conversation, and became attentive as the other students spoke. According to Miss Sharon,

Anna started out shy with Sasha, but warmed up. Now she’s the first one to go and get a book; she searches that book rack. She loves reading and talking with the others. Her self-confidence has increased in a short period of time. (Interview, June 13, 2013)

Dog-assisted reading in the classroom fostered a sense of community in a normally individualized environment. As Anna read, listened, and discussed books with others, she began to integrate the social aspects of reading, and strengthen her connections with the group.

**Brought others into the storyworld and shared favorite texts.** Anna loved to laugh, and particularly loved books that made her laugh. When she had the opportunity to choose—which happened when reading with Miss Sharon and Sasha—she selected books at an instructional-level with humorous themes. This helped Anna enter the storyworld and read for the sheer pleasure of the story. *Sleepy Nicholas* by Brande, became a favorite of Anna’s. Each time she read, she responded with great amusement and delight.

Anna read *Sleepy Nicholas* for the first time on April 22, 2013. She started by reading to Miss Sharon and Sasha alone on the reading rug. Her enjoyment of the book was contagious, enticing other students to join them on the rug and engage with the book as well. Anna laughed as she read that Nicholas said goodnight to his toe. She ran to Miss Nadine to show her the page. Kenneth came to the rug, where he stroked Sasha and listened with the others. Miss Sharon supplied the word “trousers” and quickly explained that trousers are pants. Anna turned to Kenneth, asking, “Did you read that he puts his pants over his head and he said goodnight to his
toe? He’s crazy!” Kenneth and Anna laughed together. Later, Anna announced loudly, “He’s sleeping at the dinner table.” Michele, working on a puzzle, overheard Anna and also came to the rug to pet Sasha and listened to the story, joining in the laughter. At the completion of the story, Anna announced, “This book is funny. I like this book.”

Anna asked to reread the book two more times, gaining fluency with each reading. She enjoyed the multiple opportunities to share the book with others. On May 20, 2013, Anna especially asked to read *Sleepy Nicholas* to her reading partner, Zena, standing with the book in her hand and asking in a loud voice, “Can we read yet?” On June 3, 2013, Anna reread the book to Miss Sharon and Sasha, joined by additional members of the class. *Sleepy Nicholas* became Anna’s favorite book, repeatedly pulling her in with its hilarious content, and inspiring her to share it with others. The book served Anna as a conduit for talking and laughing in the group, and creating mutual engagement with its entertaining storyworld.

**Developed reading partnerships.** Throughout the study, Anna read with two classmates in particular: Kenneth and Tony. They supported Anna’s engagement with reading in different ways. Kenneth and Anna had known each other for nearly 2 years. They enjoyed playing and joking with Sasha. The two regularly came to the reading rug together and talked and laughed about Sasha’s antics (Observations, January–June, 2013). During reading, Kenneth spontaneously supported Anna by supplying unknown words for her, and by sometimes holding the book up for her. Anna frequently chose humorous texts and she and Kenneth would laugh together at the funny parts.

On March 11, 2013, Anna read a humorous Christmas story, *The Biggest Snowball Ever* by Rogan. Kenneth petted Sasha and simultaneously leaned over to supply Anna with difficult words such as “drawers,” “summit,” and “plight.” As Anna continued reading and enjoying the
story, Kenneth held up the book for her while she tracked with her finger. Anna laughed at the
plot, and Miss Nadine, from her desk, reminded Anna to sit up when reading and not to be silly.
This did not discourage Anna, who continued to enjoy descriptive language such as “small and
fat,” and who laughed loudly when the children in the story got wrapped into a snowball.
Kenneth and Miss Sharon also responded with laughter.

Tony, although not a consistent reading partner, also supported Anna. Tony liked to listen
to Anna read, and enlivened the experience with his theatrical interjections. On June 3, 2013,
Tony suggested Anna read first because it was her birthday. Anna reread *Sleepy Nicholas* with an
audience of Kenneth, Tony, Miss Sharon, and Sasha. Tony moved closer to Anna, and began to
add humorous comments and sound effects. He made a joke about Nicholas’ boots and Anna
laughed loudly. When Anna read the word “bump,” Tony made the sound effect and Anna
laughed. This encouraged Tony to continue with sound effects and act out other words such as
“snore” and “lick.” Anna enjoyed all of Tony’s comments and exploits.

Kenneth, a consistent reading partner for Anna, interacted and provided words and
vocabulary support. Tony’s animated comments heightened Anna’s comprehension and pleasure
as she read. Anna enjoyed reading with Kenneth and Tony, who functioned as “more
knowledgeable others” for her. Collaboration with these classmates lessened Anna’s dependence
on adults, increased her motivation to read, and raised her overall confidence as a reader.

**Joined the “literacy club.”** Anna wanted to see herself as a reader. At the beginning of
the study, Anna’s difficulties with the technical aspects of reading interfered with this self-view.
The dog-assisted reading program provided Anna with repeated opportunities to join with others
in spontaneous conversation about shared books. This greatly enhanced Anna’s sense of
belonging to the “literacy club,” increasing her self-esteem as a member of the reading community.

Throughout the year, Anna worked on individualized classroom reading tasks. However, during group read-alouds without a dog present, Anna sat with her head on her desk, disengaged, not participating in discussions (Observations, April 18, June 10, 2013). Anna recognized her low reading level. Classroom reading focused on decoding, without much opportunity for collaborative meaning-making. When the dogs came into the room and a group gathered on the rug, Anna shifted her focus from decoding to comprehension, and from individualized tasks to mutual support and sharing (Observations, January–June, 2013).

Zena’s birthday celebration brought the class together on April 30, 2013, and offered an unexpected “literacy club” gathering. The class that day prepared gifts, cards, and refreshments for Zena’s birthday. After the party, Anna, Michele, Tony, and Kenneth stayed at the rug with Miss Pat and Zena. They wanted to read together, despite the expected pattern of reading individually with Miss Pat. Anna read from *Magic Treehouse 2: The Knight at Dawn* by Osborne. Tony and Kenneth immediately chimed in, stating they had read books from the *Magic Treehouse* series and really liked them. Tony asked Anna if she was reading the first in the series, and Anna responded, “No, this is the second one.” Miss Barnes overheard the conversation from her desk, and walked over to briefly discuss the *Magic Treehouse* series, naming her favorite stories from it. Anna smiled and said she had really liked the first book.

The group listened as Anna read. Tony made humorous comments. He listened, laughed, and moved closer to Anna, reading silently as she read aloud. When Anna read about a trumpet announcing the knights, Tony made a trumpet sound and Anna laughed. Miss Pat explained that the horn announced dinner. Kenneth added, “Horns are also used to announce enemies.” Later
Anna became disgusted when she read that the main course included peacocks with feathers. Tony said peacocks are beautiful. Miss Pat reminded Anna and Tony that “peacocks are birds, and you both eat chicken and turkey.” Anna declared she would not eat birds anymore. Miss Pat smiled. Through this Magic Treehouse reading, Anna became part of a conversation that connected her to a community of readers joined by a common book, and she expressed her own ideas in that community. According to Miss Barnes, Anna was becoming “willing to jump in and be a part of the reading” (Interview, May 22, 2013).

On the last day of the study, Anna and Miss Pat had nearly finished Magic Treehouse 2 (Observation, June 11, 2013). Miss Pat gave Anna Magic Treehouse Books 2 and 3 to take home, and asked her to finish 2 in the next few weeks, and then read 3 during the summer. Anna kept her new books close to her. When Miss Pat asked Anna to predict whether Jack and Annie, the main characters, would get out of the castle in Book 2, Anna paused and said, “Yes.” Because Miss Pat had explained that a book series is “like a soap opera—the main characters need to be there for the other books,” Anna could confidently predict that Jack and Annie would make it through their predicaments. Tony looked at the back cover of Book 3: Mummies in the Morning and joked, “Jack and Annie don’t need another mummy because they already have one mom breathing down their neck.” Anna laughed. Kenneth came over to pet Zena and told Anna which of the series books were his favorites. Miss Barnes joined in and said the Magic Treehouse books take readers on great adventures and are excellent for learning social studies and history. Anna enjoyed reading a chapter book closer to her peers’ reading and interest levels.

Through the support of a popular series book, Anna read texts familiar to her classmates and teachers, and gained greater understanding of how a series book works. Classroom dog-assisted reading sessions gave Anna opportunities to talk with other students about the books she
read, and listen as other students contributed to discussions. Both helped broaden Anna’s thinking and establish her identity as a member of the “literacy club,” increasing her confidence and inspiring her to read more books.

Anna did not interact with the dogs as much as some of the other students. When Anna read, she was very intent on the work, and not so interested in the dogs. Anna did seem to connect a little more with Sasha during group readings, often noticing and laughing at Sasha’s silly postures or expressions. While reading, Anna focused on reading and usually only engaged the dogs if prompted by comparisons or questions.

**Summary**

Anna enthusiastically worked to become a reader, stating that her former schools had never taught her to read. In the classroom, reading included a mix of isolated skill work, phonics, sight-word programs, and individualized computer-based reading and testing sessions with her teachers. Through reading to Miss Pat and Zena, Anna engaged in a more authentic reading experience where she read and discussed books with an audience and made connections. This support, first in the privacy of the office, and later in her classroom, increased Anna’s motivation to read.

Anna initially wanted to read easy, independent-level books, content to decode words without attention to meaning. Anna’s teacher chose a challenge-level chapter book for Anna to read with Miss Pat and Zena in the office. Anna worked for several sessions to read the book, despite difficulties with vocabulary and text content. Eventually, Anna found the reading level too exhausting. She and Miss Pat then requested more accessible material. Anna’s comprehension and confidence increased, and she began to discuss stories with Miss Pat and act as a “more knowledgeable other” for Zena. With the appropriate-level text, Anna became
motivated to read for pleasure, asking repeatedly to take books home and read them to her younger siblings.

Throughout the study, Miss Pat and Zena supported Anna in a range of ways to grow as a reader. Miss Pat routinely supplied words, shared background knowledge, and discussed vocabulary as needed, using Zena for text-based connections. Miss Pat provided cues and prompts to help Anna become more independent. She listened to Anna read, reacted to the story, and sometimes “spoke” for Zena to help Anna make meaning. Miss Pat also asked questions designed to enhance Anna’s comprehension, and explicitly modeled fluent reading to teach Anna how to read with expression.

When the study moved to the classroom space, with Zena or Sasha to support her and catalyze community exchange, Anna grew comfortable reading, interacting, and talking with her peers about stories. She repeatedly attracted students to the reading rug with her humorous reactions to self-selected favorite books. Anna preferred to read with two particular classmates in collaborative partnership, reducing her dependence on adults. Reading became a social event, and Anna began to see herself as a member of the “literacy club,” sharing book talk in a larger community. By the end of the study, Anna displayed confidence and looked at reading as a pleasurable and interesting activity.
Chapter 6: Michele

The Learner: Discovery Space

She wants to spend time with the dog. She’s reading—the reading is like payment for the dog.
—Interview, Miss Pat, November 28, 2012

Michele loved animals, especially dogs and horses. She requested time with every dog that visited the classroom. Michele could be energetic and outspoken, and on those days she engaged visitors in conversation or showed them a photo, talking about a wide range of subjects and laughing and smiling. Other days Michele sat quietly by herself and twirled her hair, legs vibrating with nervous energy, unresponsive to staff and fellow students.

Observations Without the Therapy Dog

Michele began this study reading 3 years behind her expected reading level (STAR Reading Assessment data, September, 2012). She consistently rushed through text and ignored punctuation. Although she could answer comprehension questions accurately, she read with minimal expression and a voice so soft it was sometimes inaudible. Michele, unmotivated to read for longer than a few minutes, became easily distracted. Miss Barnes, Michele’s teacher, said “the ability is there,” but characterized Michele as a “reluctant learner” (Interview, May 22, 2013). According to Michele’s mother, Lisa, “Michele needs to read in increments. Michele is a child who can’t sit still for too long” (Interview, January 18, 2013). Michele identified her reading as “already good” at the beginning of the study (Interview, March 20, 2013). In the classroom, Michele read leveled books in the computerized Raz-Kids reading program two to three times per week. She read mostly on her own, and relied on Miss Barnes or teacher assistant Miss Nadine to supply unknown words.
Observations With the Therapy Dog

During the year-long dog-reading study, Michele developed as a reader in the following areas: increased motivation to read with or to a dog, increased motivation to read dog books, increased reading focus and engagement, and increased fluency and self-monitoring.

Increased motivation to read with or to a dog. In the spring of 2012, Michele read 1 day per week with a German Shepherd named Max and his handler Miss Joan. Miss Barnes noted that being with the dog increased Michele’s willingness to read, and dramatically decreased her depressed moods. This inspired Miss Barnes to suggest it would be good for Michele to have regular reading time with therapy dogs and handlers.

At the beginning of the study, Michele primarily read to spend time with a dog. She petted, stroked, curled up against, and talked to Zena as much as possible, and only read reluctantly when prompted (Observations, September–November 2012; Interview, Miss Pat, November 28, 2012). Sessions with Zena and Miss Pat lasted approximately 15 to 20 minutes, and Michele initially kept her eyes on the clock, unmotivated to read more than the required time, touching Zena continually while she read. Michele also tired quickly, at which point she would rest her head on Zena and comment on the dog’s looks and actions (September 25, October 2, 9, and 22, 2012). Miss Pat observed, “She’s just paying to be with Zena” (Interview, November 28, 2012).

However, as Michele began to recognize that more reading meant more time with the dog, her interest in reading increased. On October 2, 2012, Michele stroked Zena’s head as she read *A Job for Wittilda* by Buehner and Buehner. Michele had no reaction to the story and made no comments while reading. She continued stroking Zena, who moved her own head closer and closer to Michele. Michele read quickly and without expression, but with accurate word
recognition. Miss Pat asked Michele a question about the story and Michele provided an accurate but clipped response. Michele announced she would not read more than one book. However, she appeared to be enjoying her time with Zena, evidenced by the constant stroking, and suddenly said she had changed her mind and wanted to read a second book. Michele went to the bookshelf, chose another book, and began reading.

On December 3, 2012, Michele tired of reading her chapter book and lay down next to Zena, resting her head on Zena’s torso. Miss Pat suggested they read *Dogfessions* by Moustaki, a series of humorous dog-related vignettes. Michele agreed, and smiled and laughed while reading, reacting to several photos. On December 11, 2012, Michele again began to tire and procrastinate, noticing Zena’s fur and patches of color, hugging her and talking to her. I showed Michele a copy of a book called *Doga: Yoga For Dogs* by Brilliant and Berloni. Miss Pat suggested, “Pick a pose, read it, and we’ll see if we can get Zena to do it.” Michele read for seven additional minutes, simultaneously reading and trying to adjust Zena into the poses.

Michele’s interest in dogs extended to other literacy tasks such as writing. By the start of September, 2012, Max and Joan had moved out of the area. Michele, initially upset, stated they had become “family” (Interview, November 9, 2012), and voluntarily wrote letters to them at their new address (Observation, September 10, 2012). In September, 2012, when asked to write a letter or draw a picture for Zena and Miss Pat, Michele refused because she felt she was not close enough to Zena to do so (Conversation about Artifact, November 9, 2012). Later, however, after she became comfortable with Zena and Miss Pat, Michele willingly created artifacts for them as well (Artifacts, December 18, 2012; March 20, April 30, May 1, 23, 2013). According to Miss Barnes, “For Michele, it’s not so much the reading as the emotional connection she wants” (Interview, May 22, 2013). In a June 19, 2013 interview, Michele’s mother, Lisa, stated, “The
attention that the dog gives her is very important. She doesn’t interact with other kids but does with animals. With the dog, the connection is there for her.”

Michele’s desire to spend more time with Zena helped increase her motivation to read as well as her reading stamina. Her mom also noted a shift at home, where Michele began to read to her dog for 30 to 45 minutes at a time, especially when she was upset (Interview, Lisa, June 19, 2013). Reading for Michele evolved into a motivating therapeutic activity.

**Agency with dog books.** When given the option, Michele invariably chose books about dogs, usually easy readers. If an educator chose a book for her, Michele responded with more excitement when such books included dogs, often sharing her favorite texts with the therapy dogs and their handlers. Michele drew on her enthusiasm about dog books to create a dog library at her school.

Throughout the spring and summer of 2012, Michele consistently chose stories about dogs to read to Joan and Max (Observations, April–June, 2012). She perused the shelves in the office, selecting books that had pictures of dogs or were dog-related. Conversations about dogs always engaged Michele, even on days when she appeared otherwise unresponsive (Observations, September 10, November 21, December 4, 2012; April 29, 2013). Michele regularly took classroom guests to the dog poster hanging on the wall and discussed the different breeds of dogs it depicted (Observations, September 10, 2012; January 10, 2013). Additionally, Michele believed Zena was listening to her read (Interviews, November 11, December 18, 2012; Artifacts March 20, April 30, May 1, 2013), and thought dogs would enjoy stories about other dogs (Conversation, May 30, 2012). Therefore, she chose books about dogs to appeal to herself and to Zena. When I approached Michele about starting a “dog library” at her school, she eagerly helped. She consistently asked Miss Barnes for time to collect and organize the books in the
library. Whenever she could choose a book on her own, Michele always selected one from this library (Observations, September 2012–May 2013).

Michele’s first session with Zena and Miss Pat was on September 25, 2012. We met in the media center instead of the office, and Michele sat and stroked Zena. Miss Pat asked Michele to choose books from the shelves, and Michele chose three easy, short, picture books about dogs from her dog library. While reading and after completing each book, Michele looked at Zena and stroked her fur. After reading the third book, Miss Pat told Michele she could read a fourth book. She handed Michele the leash and suggested Michele take Zena along to the book shelves to choose a story. Michele chose another book from the dog library, and Miss Pat commented, “Something tells me you are into dog books.” The two laughed. Michele’s mother, Lisa, confirmed that Michele preferred books about animals, especially dogs and horses (Interview, January 18, 2012). Michele, motivated to read dog-related literature, enjoyed and connected with the subject matter, and believed Zena related to it as well. Michele’s interest in dogs enabled her to read more by using dog-related books.

**Increased reading focus and engagement.** Initially, Michele spent more time playing with Zena than reading. As the school year progressed, Michele anticipated visits from Miss Pat and Zena, and began to become more invested in the reading process. Although she continued stroking and touching Zena, she became less focused on that and more interested in the storyworld. She became less distracted by her surroundings. Michele also began to request additional time for reading, and moved from oral to silent reading.

Michele transitioned from easy readers to a chapter book on October 9, 2012. Miss Barnes suggested *Follow My Leader* by Garfield, a book about a newly blinded boy named Jimmy, who learns to live with his disability with the help of a seeing-eye dog. Miss Barnes
predicted the dog would interest Michele. Although Michele noticed the dog on the front cover, she initially read too quickly and quietly, with little investment in the story.

When Michele entered the office on November 13, 2012, she immediately patted and played with Zena. She noticed a stuffed monkey and placed it on Zena’s back, simultaneously talking and laughing with the dog. Miss Pat encouraged Michele to begin reading *Follow My Leader* and Michele placed the book on Zena’s back, tracking with her finger as she read. Miss Pat attempted to converse with Michele and ask questions about the story, but Michele did not respond. She finished reading a chapter and immediately went back to playing with Zena.

By February 27, 2013, Miss Pat learned that Michele had read ahead between her visits. During the session, Michele read and Zena pawed at her for attention. Michele turned to Zena and smiled, “I’ll pet you when I’m finished.” Michele continued to read and Miss Pat had to notify her when their time was up because Michele wanted to keep reading. On April 23, 2013, Michele asked, “Can I go first? I am really in the mood to read today.” Michele focused on the text and read at an appropriate reading rate. Although Zena interrupted Michele, stepping on her lap and licking Michele’s ear, Michele continued reading. The classroom phone rang, the answering machine picked up and Miss Barnes took the call, and Michele still continued reading. When she finished the chapter, Michele turned to Miss Pat and said, “If Anna is still busy maybe I can keep reading.” Michele read for a full 30 minutes that day.

During two May observations, Michele continued to focus and engage with reading. On May 14, 2013, Michele heard a sound in the room like the whistling of a tea kettle. Michele stopped, said it was the monitor on the computer, went to show another classmate how to turn it off, and then went right back to reading. On May 23, 2013, Michele silently read ahead two
times, indicating engagement. Miss Pat commented, “This is the second time you’ve read ahead. The book is really heating up isn’t it?”

Sometimes Michele’s touching and stroking of the therapy dogs, in the office and in the classroom, seemed to calm and center her, decreasing anxiety so she could better engage in learning activities. According to Miss Nadine,

The therapy dog visits are relaxing for Michele: She enjoys the petting. You can see in her eyes she anticipates their visits. I can see the difference. The routine is steady, she gets her work done, she reads more, and is less obsessed. (Interview, June 11, 2013)

Michele’s increased engagement continued through the rest of the school year. As Michele spent more time reading to and with Zena, she became less fixated on the dog and more focused on the story. Michele began to read at a more appropriate pace and began requesting more reading time, often silently reading ahead.

**Increased fluency and self-monitoring.** Early in the year, Michele read quickly, with little regard for meaning. She read words accurately, but read quickly and very quietly, ignoring punctuation and using little expression. By winter, Michele started to pause to give emphasis to the meaning. Michele gradually began to self-monitor and self-correct, stopping for support with difficult words. Listeners could now hear her normally soft voice, and she started to read at an appropriate pace rather than rushing through the text.

During observations on October 9 and October 22, 2012, Michele read *Follow My Leader* by Garfield very quickly, simultaneously stroking Zena. She occasionally used her finger as a guide while she read. By November 27, 2012, still reading from *Follow My Leader*, Michele’s usually soft voice grew louder, and her regular fast pace became slower. Michele still patted Zena while reading and looked at her and smiled. When Michele read the word “furniture” as “furnace,” Miss Pat quickly interjected, “What’s that word?” and Michele self-corrected.
During a February 27, 2013 observation, Michele read from her book, initially stroking Zena as she read, reading at a moderate rate, audible, and with some expression. Michele read the word “dog” as “doctor,” then paused, got a confused look on her face, and self-corrected. Miss Pat and Michele both laughed at the miscue. When Michele came to the words “smart-aleck,” she paused, and Miss Pat supplied the word.

As Michele relaxed into a reading routine with Zena, she read more deliberately, elicited support when needed, and began to read for meaning. Miss Pat recognized the transition, stating that Michele “actually asked for help with a word she did not know, rather than skip over it or mumble a guess as she usually does” (Conversation, December 11, 2012). The changes in fluency and self-monitoring continued across the year as Michele actively engaged in the reading process, helping to increase her comprehension as well.

The Guides: Instructional Practices and Intentional Supports

Michele resists, but loves the one on one, so I read with her. I get her to process the different information—it’s not enough to just know all the words. I spend time with her almost as a therapy ... [in addition to] a learning time.

—Interview, Miss Barnes, November 30, 2012

Michele’s classroom instructional team included her teacher, Miss Barnes, and teacher assistant, Miss Nadine. In the dog-assisted reading study, Michele’s guides included retired special-education teacher, Miss Pat, and her dog, Zena. Each of these team members worked with Michele in different ways.

Observations Without the Therapy Dog

In the classroom, students read computer-based books and completed exercises usually followed by tests. Michele focused on computerized tasks designed to demonstrate technical skills, such as spelling, punctuation, grammar, and comprehension. Miss Barnes and Miss Nadine worked to support Michele in these skills, helping Michele complete worksheets,
research information on the computer, and answer comprehension questions. Miss Barnes also
worked with Michele in a personalized one-on-one way, often sitting next to Michele at the
computer and discussing the stories with her before having Michele take the tests. Michele had
been placed for a second year in Miss Barnes’ class and the home school district planned for
Michele to stay for 2 more years. Michele strongly desired to return to a regular-education
setting for high school, and Miss Barnes supported that goal, delaying her own retirement to
teach Michele.

In the classroom, during computerized reading and skill work, Michele sometimes
focused on her tasks; other times, she would stare into space, touch her face, and twirl her hair
(Observations, September 17, November 29, 2012; January 10, 2013). Whenever Michele read
one on one with Miss Barnes, she became focused and engaged in the work. Miss Barnes used a
playful tone and a conversational style to fill in missing background knowledge, make comments
and connections, or ask Michele various kinds of questions. On January 21, 2013, Michele read
aloud from *Barack Obama* by Burrice, a Raz-Kids Level S (third-grade) text, with Miss Barnes
sitting next to her. Michele read rapidly. Miss Barnes stopped Michele and smiled, “You know,
there’s something called a period.” Michele laughed and stopped at the punctuation. When
Michele came to the word “Indonesia,” Miss Barnes had Michele turn to the map, and the two
discussed the country and its customs. Miss Barnes explained difficult concepts such as
“equality” and asked recall questions such as “What continent did Obama’s father come from?”
Michele made a connection to Rosa Parks, stating, “Civil rights must be why Arthur [an African-
American teacher assistant] is here.” At the 15-minute mark, Michele started to yawn, but Miss
Barnes continued, “Do you know what poverty is? This piece talks about ‘poverty of ambition.’
Let’s talk about that phrase.” Immediately afterwards, Michele answered comprehension questions on the computer.

**Observations With the Therapy Dog**

When Michele read with a dog, she focused on reading for the pleasure of the story, and discussing and making connections to the text. No formal tests followed reading with a dog. Michele started working with Miss Pat and Zena in the office in September, 2012. Because Michele cared about the personal connection, it took her a while to “warm up” to Miss Pat. However, in the privacy of the office, with time for regular reading and time with Zena, Michele gradually became comfortable with Miss Pat and began to engage and interact with her (Observations, September, 2012–January, 2013). When Miss Pat and Zena moved into the classroom, Michele went through a period of transition before she grew comfortable reading in the group setting. Miss Pat listened carefully while Michele read, often reacting to the plot, asking questions about the story, and sometimes relating plot details to personal events in her or Michele’s life. According to Miss Pat,

> My job is to keep Michele focused on the reading, and to get her to slow down and see if she is getting something from the book. She’s such a good reader … [but there is not] enough time to get into meaty details. … [There is] enough of a chance for W questions [who, what, where, when, why]. (Interview, November 28, 2012)

Miss Barnes and Miss Nadine instructed Michele through individualized programs and materials, providing targeted assistance. Additionally, Miss Barnes gave Michele one-on-one computerized reading sessions, guiding Michele to discuss specific teaching points. Miss Pat also offered one-on-one support to Michele, similar to Miss Barnes. However, Miss Pat engaged Michele in authentic reading experiences, helping Michele develop in a number of ways. Specifically, Miss Pat built relationship and raised awareness of audience, provided
comprehension support, engaged in book-related talk and conversation, and provided sustained and focused reading time.

**Built relationship and raised awareness of audience.** Knowing Michele’s affinity for dogs, Miss Pat made sure Zena had a prominent role before and during each literacy event. Before reading, Miss Pat provided time for Michele to stroke and embrace Zena. Miss Pat used this time to talk about and for Zena. During book reading, Miss Pat reacted as an audience member and continued to speak for Zena, including Zena as an audience member too. Michele responded to Miss Pat with just a smile or a laugh, but the interactions helped build the relationship among Miss Pat, Michele, and Zena while keeping Michele’s attention on the story.

On September 25, 2012, Michele stroked Zena before reading. Miss Pat talked to Michele about several of Zena’s obedience commands because they would be reading a book about dog school. Miss Pat looked at Zena and said, “Do you remember the time when you wanted to steal French fries and what did I tell you? *Leave it.*” Michele laughed and smiled as she continued to pet Zena. Michele began reading the book *Clifford Goes to Dog School* by Bridwell, in which Clifford goes to obedience school to help build better habits. Miss Pat interjected several times during the reading, commenting “Look, Clifford uses the same commands we do” and “Zena doesn’t chase cars, but she likes to chase rabbits—she thought she had one this morning.” Later in the session, Michele read *A Dog Called Mischief* by Wood, the story of a dog consistently getting into trouble. As Michele read about the dog stealing its owner’s lunch, Miss Pat turned to Zena and said, “You wouldn’t do that, would you Zena?” Miss Pat laughed at other bad dog behaviors and Michele joined in. At the end of the reading, Miss Pat turned to Michele and said, “Yes, Zena *would* do some of those things.”
During the December 11, 2012 reading of *Follow My Leader* by Garfield, Miss Pat continued to react to the text and to talk and react for Zena, again using Zena to personalize the storyworld. When Michele read about the main character, Jimmy, who was adopting a guide dog, Miss Pat responded, “Zena thinks guide dogs are very talented. Do you think Zena would make a good guide dog?” Michele responded with a smile. During a February 27, 2013 reading of the same book, Jimmy received a letter stating that he was approved for the guide dog. At that point, Zena coincidentally pushed toward Michele and interrupted her reading by putting a paw on Michele’s face. Miss Pat joked, “Zena’s excited about the letter,” and Michele burst out laughing.

Michele often held up her book for Zena to see and showed the pictures to the dog (Observations, September 25, 2012; January 22, 2013; February 12, 2013). Near the end of the study, Michele expressed her appreciation for Zena and Miss Pat as audience members in a letter: “Dear Zena and Pat—I enjoy reading to you both. Every Tuesday. The one thing I like about Zena is that she will listen. I just like reading with you both because you are very nice. Love, Michele” (Artifact, May 23, 2013). Miss Pat’s humorous and dog-centered comments helped engage Michele and remind her that she was reading to an attentive audience. This also developed the relationship among Michele, Zena, and Miss Pat, making reading more comfortable, pleasurable, and interactive.

**Provided comprehension support.** When Miss Pat introduced *Follow My Leader* by Garfield, much of Michele’s focus was on Zena. While Michele willingly read, she showed little affect, reading quietly and quickly without expression, making it difficult to know if she comprehended what she read. Miss Pat began sessions with quick summaries of previous chapters, gently encouraging Michele to participate. While Michele read, Miss Pat reacted to the story, made comments and connections, or asked various kinds of questions in a conversational
style. Michele’s early responses were perfunctory. By later in the year, Miss Pat’s supports helped Michele actively engage and construct meaning.

During an October 22, 2012 observation, Michele played with Zena, and Miss Pat asked Michele, “Remind me where we were in the story.” Michele stayed silent, stroking Zena. Miss Pat volunteered, “Someone is lying on the ground unconscious, right?” Michele nodded in agreement and began reading.

Similarly, on November 13, 2012, Michele played with Zena until Miss Pat asked, “Where were we?” Michele skimmed through her book without success. Miss Pat reminded Michele, “Jimmy came home from the hospital—” Michele found her place and began. During this session Miss Pat actively questioned Michele. When Michele read about a new character, Miss Pat asked, “Who’s Caroline?” and Michele answered, “Jimmy’s sister.” As Michele read the word “apron,” Miss Pat observed, “This must be an old book if they’re wearing aprons—I doubt they wear aprons anymore, do they?” Michele shook her head “no.” Later Miss Pat asked, “Why do you think Mike is having trouble with his friends?” Michele sat for a minute and said, “He’s a bully.” Miss Pat responded, “That must be why everyone is ignoring him. Do you think Jimmy and Mike are going to end up being friends?” Michele shrugged her shoulders “I don’t know.”

On January 15, 2013, Miss Pat gave Michele a Braille book to help her understand Jimmy’s challenges in the story. Miss Pat asked, “Can you imagine running your fingers against this and trying to read?” Michele immediately engaged with the book, closing her eyes and running her fingers across the raised print. She showed no sign of wanting to stop.

Michele actively participated by the March 12, 2013 observation. Miss Pat summarized, “Remember Jimmy had just gotten the letter,” and Michele volunteered, “We already read about
the dog grabbing the cane.” Miss Pat skimmed her copy, continuing to summarize parts they had read: “Hmmm, we read about the comfortable walking shoes, raincoat, going shopping. Is that where we are?” Michele took about 30 seconds to skim and found exactly where she and Miss Pat had left off. Michele began reading with a series of starts and stops, due to Zena trying to get more affection from her. Michele joked, “This story is about a smart dog, and you’re not one of them.” Michele wanted to keep reading.

During a May 7, 2013 observation, Michele read that Jimmy reached for his toothpaste before going to bed, but something did not taste right. Miss Pat stopped Michele, asking, “What do you think it is?” Michele took some time, then answered “shaving cream.” She was correct, and had used previous information to draw a conclusion.

Throughout the year, Miss Pat consistently used summarizing, text-to-self connections, questioning, and clarifying. Miss Pat wanted to help Michele move from indifference to active participation with the material she read. This process increased Michele’s reading comprehension and moved her focus from Zena to the storyworld.

**Engaged in book-related talk and conversation.** Michele began the year without engaging in much conversation with Miss Pat. Miss Pat used Zena as a way to help Michele relax and talk more. Miss Pat used dog books and dog-related topics to connect with Michele and draw her into conversation. By the time Miss Pat and Zena moved to the classroom, Michele followed Miss Pat’s lead and participated by making connections, offering comments, and asking questions herself.

On September 25, 2012, Michele read *Phil and Fletch* by Trumbauer, tracking with her finger periodically. The book referred to puppies, and Miss Pat let Michele know that Zena had had puppies. Michele immediately asked, “Where are they?” Miss Pat answered, “They got
adopted.” Michele wanted to know if all of the puppies had been adopted, and Miss Pat told her that every single one from two of Zena’s litters had new homes. Michele sat quietly petting Zena with a thoughtful expression and Zena moved closer and put her head on Michele’s lap.

On December 11, 2012, Miss Pat suggested Michele read from *Doga: Yoga For Dogs* by Brilliant and Berloni, and then choose potential poses for Zena. Michele selected several different postures and, talking back and forth with Miss Pat about each one, gently moved Zena’s body as needed. Zena, for the most part, lay somewhat inertly, prompting Miss Pat to ask, “What do you think she might work for?” Michele said, “Treats,” and took one from Miss Pat’s bag while simultaneously reading about another posture. “I bet she might do this pose,” she said, showing Miss Pat the book. Miss Pat laughed, “Yup—the ‘corpse pose,’ that might work.” Michele said, “Relax Zena, you can do it.” When they got Zena to lie down in the posture, Miss Pat asked, “Now what was the name of that pose?” Michele smiled and answered, “Corpse pose.” Then she turned to Zena and said, “I knew you could do it.”

During a February 12, 2013 classroom observation, Michele lay with her right arm wrapped tightly around Zena, while Miss Pat, in an upright position, sat on the other side of the dog. Michele was not distracted even with the noise in the room. She had a new picture book, *Toby and Tutter: Therapy Dogs* by DeBear, sent from Joan, the handler of her favorite dog, Max. Michele asked if they could read the picture book and Miss Pat agreed. Miss Pat laughed when Michele read that Tutter stole all the attention from Toby, and Michele joined in. Michele noticed one of the photos and commented that Toby was lying in the same position as Zena. When Michele read that Tutter had trouble sharing his toys, she asked Miss Pat if Zena had toys, and Miss Pat briefly described Zena’s stuffed animals. Later, Michele pointed to a picture of a girl, saying, “She looks like she has Down’s Syndrome.” She stopped reading and told Miss Pat
about her cousin with Down’s, and a mile-long buddy-walk she had participated in to help her cousin. Michele said, “I was the only one who didn’t complain.” Miss Pat joked, “That’s hard to believe,” and they both laughed. When Michele came to a photo of Tutter and Toby cuddled together, she said, “Oh, that’s the part I like.” She told Miss Pat how the color of the Italian Greyhound reminded her of Zena’s color, and asked Miss Pat, “What is a mixed breed?” As the two finished the story, they had a short discussion about breeding practices.

During an April 19, 2013 session, Miss Pat and Michele sat on the classroom rug reading *Follow My Leader* by Garfield. Michele sat on the bean bag and Zena curled up almost on top of her. Michele held and stroked Zena’s paw while reading. Miss Pat laughed loudly when Jimmy’s older roommate suggested he place his shaving tools on the bathroom counter. Miss Pat asked Michele if she understood why she was laughing. Michele answered because it would be hard for a blind boy to shave, but Miss Pat said she laughed because 11-year-old boys are too young to shave. Michele laughed and Miss Pat complimented Michele on her “good thinking.” Miss Pat used her own reactions, comments, and questions to gently encourage Michele to talk about the books she was reading. Eventually, this helped Michele read for meaning, relate to the characters, and engage in more extended dialogue within and beyond the text.

**Provided sustained and focused reading time.** Although Miss Pat encouraged Michele to discuss her reading, Miss Pat did not interrupt too often. When Michele arrived at sessions, Miss Pat provided a few minutes to play with and talk about Zena before asking Michele to begin reading. During the reading, Miss Pat listened closely, laughed at humorous parts, supplied an occasional word or quick vocabulary explanation, or contributed a question. Miss Pat expected Michele to read, and Michele did, with Zena on top of her, at her side, or in other close positions.
At the beginning of the study, Michele liked to stroke or pet Zena while she simultaneously read. During a November 27, 2012 observation, Michele immediately began petting Zena. Zena lay in front of Michele, putting her head onto Michele’s lap. Michele patted and caressed Zena for 3 minutes. Miss Pat picked up her copy of *Follow My Leader* by Garfield and said, “She’s going to sleep there while you read. Are we on Chapter 3?” Michele picked up her copy and caressed Zena for another full minute before reading. Miss Pat waited, with her book open before her. Michele began to read *Follow My Leader*, simultaneously petting Zena. Zena lifted her head and looked at the book as Michele read, causing Michele and Miss Pat to laugh loudly. Miss Pat did not discuss the plot with Michele, instead using the time for reading.

On April 23, 2013, Michele played with Zena at the start of the session, and several class members came over to quickly pet Zena, laughing and talking. After 4 minutes, Miss Pat told Michele, “Go ahead, you start, I’ll find the place.” Michele immediately began reading. Arthur, a teacher assistant, came over to pet Zena, and Michele continued reading. She read fluently, petting Zena. Miss Pat followed along in her copy, intervening only to let Michele know when she had skipped a line, and to explain a vocabulary concept. Michele focused on the book, despite Zena’s several attempts to sit on her lap and engage in play. By the end of the session, Michele had read for 25 minutes. She stated, “I better stop. It’s Anna’s turn.”

By the final months of the study, Michele focused less on Zena while she read, instead staying focused on her book. Miss Pat observed, “Michele upstairs played more with Zena. Downstairs in the classroom, she was more grown-up and really got into the reading, saying ‘Can we read the book? It is getting interesting’” (Interview, June 14, 2013). Miss Pat provided sustained time for reading, and in turn Michele focused on her book, developing confidence,
fluency, and stamina. Coupled with the use of dog-related books, the sustained reading time also helped increase Michele’s motivation and engagement with reading.

The Community: Connecting with Others in Literacy Events

Now Michele will read in front of people. Reading to others is good for her. By having Zena in the classroom, there is more involvement with the other kids. ... [Zena] is connecting with everyone, and that is good for everyone.

—Interview, Miss Barnes, May 22, 2013

Michele’s community included the other students in the classroom, her teacher and teacher assistant, and the therapy dogs and their handlers. The latter included Miss Pat and her dog Zena, as well as (occasionally) retired science coordinator, Miss Sharon, and her dog, Sasha.

Observations Without the Therapy Dog

Whole-class literacy events included read-alouds and integrated content-area lessons. During these events, without a dog present, Michele often sat apart from the other students in the room. During read-alouds, Michele worked on jigsaw puzzles, used therapeutically to help her relax and concentrate. She rarely contributed comments and had difficulty answering comprehension questions. With dogs in the classroom, Michele became more interactive with her peers.

On December 11, 2012, I sat with the students at the community table and shared Hanukkah artifacts such as the dreidel and menorah, providing information about the holiday along with personal experiences. Michele sat quietly and played with her fingers and hair. She did not participate in the conversation or interact with the artifacts.

During the spring, I observed two read-alouds in which no dog was present. On April 18, 2013, Miss Barnes read from Hatchet by Paulsen. Four classroom students sat at their desks listening to the story. Michele stood by Miss Nadine’s desk, approximately 12 feet away from the rest of the class, working on her jigsaw puzzle. Michele kept to herself, looking down,
working on the puzzle, silent throughout the reading. Similarly, on June 10, 2013, Miss Barnes read from *The Cay* by Taylor. Michele again stood with Miss Nadine, separate from the group, and together they quietly worked on her puzzle. Miss Barnes read in an animated voice, stopping occasionally to ask a vocabulary question. At one point, Miss Barnes asked, “‘Steel in arms.’ What do you think that means?” Michele did not look up from her puzzle or respond.

Michele shared her preference for working on her own, stating, “When I do stuff, I like to do it alone without other students” (Interview, November 9, 2012). Miss McMann, Michele’s social worker, observed, “Michele is hard to engage when I have my girls’ group. There is a lot of parallel interaction [i.e., no interaction]. When Michele and Janet [a student from a different classroom] worked together on jewelry, they never said a word to each other” (April 16, 2012).

**Observations With the Therapy Dog**

The therapy-dog program moved from the office to the classroom in January, 2013, at which point group literacy events became more routine. All case-study students read regularly in the classroom with the dogs and their handlers, and other students sometimes joined them. During this time, Michele: became comfortable reading aloud and interacting with peers; engaged in more talk, enjoyment, and cooperative learning; and participated in spontaneous paired and choral reading with peers.

**Became comfortable reading aloud and interacting with peers.** At the beginning of the study, Michele preferred to read on her own or one-on-one with an adult. She did not interact with her peers. When a dog was present in the classroom, this behavior softened. Persistence on the part of the teachers and dog handlers helped Michele gain confidence and increased interest in socializing with other students through reading.
According to Miss Barnes, Michele had difficulty participating in group reading activities except with a dog present (Interview, May 22, 2013). Throughout the beginning of the study, Michele remained isolated from other students during classroom activities and did not participate in group readings. During the same time period, Michele had no difficulty reading aloud in the office to an adult with a dog present (Observations, September, 2012–January, 2013). When Zena entered the classroom on January 22, 2013, Miss Barnes expected Michele to continue reading aloud with the dog. Michele resisted and focused only on playing with Zena, ignoring the other students. Miss Pat brought Zena to the reading rug. Michele, Anna, and Kenneth all came to the rug to greet Zena and spontaneously remained at the rug for a group reading. Michele moved next to Zena and began to pet her as Anna started reading. Michele focused on Zena and did not engage with Anna. Michele told Miss Pat she did not want to participate in the classroom reading, but she would read with Olsen, a Bernese Mountain Dog that she read with on a weekly basis in the media center. Miss Barnes overheard this, and insisted Michele select a book to read to Zena and the group. Michele reluctantly chose a familiar, easy, picture book, *Shoo, Fly Guy* by Arnold, from the class library. Michele held up the book for Zena to see and kept her attention on Zena, ignoring the other students on the rug. After the session, Miss Barnes discussed with me her concerns that Michele would not read in front of her peers, seemed to have anxiety about it, and also had difficulty sharing the dogs with other students (Observations and Conversation, January 22, 2013).

As dog visits in the classroom continued and group readings became routine, Michele’s motivation to read aloud in the group improved. During an observation on February 11, 2013, Miss Sharon and her dog Sasha went to the reading rug, Michele, Kenneth, and Anna joined them. Michele unexpectedly asked to read first. She selected *Toby and Tutter: Therapy Dogs* by
DeBear, a book sent to her as a gift by Joan, a handler with whom she had worked previously.

Michele read expressively with a strong voice and at an appropriate rate. She stumbled when reading “occupational therapist,” and Miss Sharon provided the word. All the students, including Michele, shared a laugh at the word “googly” used to describe Tutter’s eyes. Michele consistently smiled and laughed as she read aloud to the group. She made regular eye contact with her peers. Miss Sharon told Michele, “You’re doing great.” Sasha licked both the book and Michele as Michele read and all the children laughed. Michele did not become distracted by other students joining the group or by their interactions with the dog. Michele’s willingness to take risks with oral reading transferred to her home as well. She began reading aloud to her dog, Charlie. According to Michele’s mother, Lisa, “Once or twice a week Michele takes Charlie into her room and reads orally to him for about 45 minutes” (Interview, June 19, 2013).

Although Michele’s teacher, mother, and social worker—as well as Michele herself—had expressed Michele’s preference to work on her own, Michele socialized with and interacted comfortably with her peers when she had a dog’s support. She laughed, joked, and actively wanted to read to fellow students with a dog in the classroom, and she began to share the dog with other students without apparent anxiety or discomfort. These social changes mirrored Michele’s improved reading and confidence when she read with a dog.

**Engaged in more talk, enjoyment, and cooperative learning.** As Michele began reading aloud to her peers, opportunities increased to positively interact with the school community through book-related events. Michele grew comfortable engaging in social activities around literacy events when a dog was present. She responded to texts and talked more with peers and adults. Michele’s voice became louder as she read, and she often laughed along with
her classmates. The other students also responded positively to Michele and became resources for learning.

Miss Pat and Zena began reading in the classroom on January 22, 2013. During that session, Michele ignored her peers, preferring to play with Zena. Michele did not engage in conversation, nor did she want to read when her turn came. As the study progressed, Michele became more comfortable with group activities.

Zena had a birthday celebration on April 30, 2013. The session started with students and staff gathering on the rug and presenting handcrafted cards to Zena. Michele had designed a brightly colored card with a picture of Zena on the cover (Artifact, April 29, 2012). Inside, Michele had drawn a picture of herself with a big smile, reading to Zena and Miss Pat, with the caption: “I like Reading with you and Zena—Happy Birthday Zena.” Michele presented her card to Miss Pat and stayed attentive to other students while they presented their cards. Afterwards, Anna began reading a selected book while other students continued to visit during the reading event. Michele listened to Anna while she read, simultaneously stroking Zena and laughing at Zena’s behaviors. When it was Michele’s turn to read, she smiled and read fluently. Tony listened to Michele read, and helped her with a difficult word. When it was Tony’s turn to read, Michele listened to him. Kenneth joined them on the rug, also listening and petting Zena. Michele did not object to this interaction and stayed at the rug until it was time for Miss Pat and Zena to leave.

Three weeks later, on May 20, 2013, Michele read Ripley to the Rescue by Randall to Anna, Kenneth, Miss Sharon, and Sasha. Michele read clearly and accurately with a strong voice. Arthur, a teacher assistant, came over to the rug to pet Sasha. Michele did not become distracted by this. In the story, Randall compares Ripley to a vacuum cleaner, and when Michele read the
description, the group, including Michele, laughed loudly. Michele commented that her dog, Charlie, also liked to eat everything that fell onto the floor, and Kenneth made a vacuum sound that sparked more laughter in the group. Michele pointed to a picture of Ripley and asked Kenneth, “What kind of breed do you think that is?” Kenneth responded that he thought it was some kind of hound. Miss Sharon talked about beagles being used to smell seizures and alert the owners of an oncoming incident. Kenneth said, “Cool,” and Michele nodded her head in agreement while stroking Sasha.

At an observation with a different tone, Michele sat at the rug with Miss Pat when fellow student Tony began screaming. Michele comforted Zena, who appeared concerned about the noise. Michele wanted to begin reading her chapter book, but Zena pulled Miss Pat over to Tony, who cried at his desk. Miss Pat invited Tony to read with Michele, and he eventually accepted the invitation. Michele read aloud from *Follow My Leader* by Garfield, and Tony listened. Jimmy, the main character in the story, flew in an airplane going back to his home, ready to start a new life with his therapy dog. Tony wondered if you can feel fear even when you cannot see something that is frightening. Michele responded, “You can feel fear even if you can’t see it. Sometimes you feel it in your back” (Observation, May 28, 2013). This conversation showed Michele moving beyond the text, making a text-to-self connection that indicated higher level thinking. In addition, it represented a significant interaction for two students often isolated from their peers. Reading with therapy dogs in the classroom helped Michele become more motivated to interact with the other students. With the support of a dog reading partner, Michele began to enjoy reading, talking, and connecting socially with her classmates.

**Participated in spontaneous paired and choral reading with peers.** As Michele participated in group reading events, she became increasingly comfortable learning in a
classroom community. She voluntarily began to read alongside her peers in paired and in choral fashion. Additionally, Michele began to accept help from her peers.

During an April 8, 2013 visit with Sasha and Miss Sharon, Michele read *Dogfessions* by Moustaki, a familiar favorite of the students. Sasha sat in the middle of the rug with Miss Sharon, Kenneth, and Michele around her. Michele and Kenneth spontaneously read together, each taking turns, passing the book back and forth to each other. Michele occasionally tracked the story with her finger. The group laughed loudly at one of the dog’s improper confessions as Michele read, “When no one’s watching, I eat poo.” Sasha licked Kenneth and everyone laughed, including Michele. Michele paused when reading the word “deliberately,” and Kenneth told her the word. Kenneth moved closer to Michele and Michele held the book so he could see the pictures. Tony, at the back table working with Legos, heard the laughter and joined the others on the rug. He petted Sasha while kneeling down to listen to Michele and Kenneth. Tony unexpectedly joined in reading with Michele and Kenneth. Kenneth stopped reading, letting Michele and Tony read from the book together with some paired and choral reading. Kenneth told Michele she missed a vignette, and Michele went back and reread it.

Michele, who earlier in the year preferred to work alone, now read with others in a positive and relaxed manner, and accepted support from them. The choice of a familiar dog-centered book enhanced the activity. The dog-assisted reading experience showed that Michele could, when supported by a therapy dog and handler, engage with other students and enjoy reading with her classmates.

**Summary**

Michele viewed herself as a “good reader.” However, she did not want to read in school. For Michele, classroom reading included a mix of isolated skill work and individualized
computer reading and testing sessions. She had little opportunity to read for pleasure, even when Miss Barnes joined Michele to read Raz-Kids, a computerized reading program. During sessions with Miss Pat and Zena, Michele relaxed into the reading experience and expanded her reading abilities, first in the privacy of the office, and later in the classroom.

At first, Michele chose short, easy books and read for limited periods, wanting mostly to spend time with the dog. As the study moved forward, Michele willingly read a chapter book, motivated by the dog-related book topic, simultaneously building stamina for reading. Michele became engaged in the story, and while she continued stroking and touching Zena, she became less focused on the dog and more interested in reading. Michele’s reading volume increased, her reading rate slowed, and she began to self-correct. Michele’s new habit of reading to a dog continued at home, where she began reading to her own pet.

Throughout the study, Miss Pat helped Michele engage with reading by reacting as an audience member, and by speaking to and for Zena. These interactions gradually built their relationship and helped Michele better enjoy the reading experience. Miss Pat consistently integrated chapter summaries and questions in a conversational style, improving Michele’s focus and comprehension. Miss Pat also remained mindful of providing Michele with ample time for sustained and focused reading.

In the classroom space, Michele initially preferred not to read aloud in front of her peers. As she became used to the new classroom routine with the dog at her side for support, Michele became comfortable reading with the other students, laughing with them, listening to them read, and dialoguing about the books. By the end of the school year, Michele, who had initially said she preferred to work alone, now read with partners, accepted help from other students, and viewed her classmates as resources for learning.
Chapter 7: Tony

The Learner: Discovery Space

It makes me really enthusiastic to be reading to someone [(Zena)] who has helped people, and maybe do something for them in return for all the good things they have done. ...
Sometimes I’m not really into the mood for reading a lot, and right there, it gets me into the mood so much.

—Interview, Tony, November 16, 2012

Tony loved videogames, dramatic language, jokes, and puns. He also enjoyed talking and telling stories using expressive voices and accents. Tony created stories about imaginary battles and duels, sharing them with any staff members or students who happened to be nearby. He talked with an extremely loud voice in a fast rhythm. Tony often discussed the magic powers of various videogame characters, and drew their pictures, giving each of them special names. His pictures were colorful, bright, and well-formed, framed with large, scrawled handwriting.

Observations Without the Therapy Dog

Tony came to the study with many strengths as a reader: he read fluently, using his extensive background knowledge and vocabulary as he read (Observation, June 4, 2012). Miss Barnes and Miss Nadine both commented on Tony’s talent for dramatic reading, and his rich connections, inferences, and reactions during class read-alouds (Interviews, Miss Barnes, November 30, 2012; Miss Nadine, June 11, 2013). In spite of these strengths, Tony began the school year reading nearly 2 years below his expected grade level (STAR Reading Assessment data, September, 2012) mostly due to focus and attention problems when performing tasks he did not self-select such as tests and classroom work (Conversations, Miss Barnes, November 19, 2012, May 22, 2013). Instead of reading silently during independent reading time, Tony talked, laughed, and joked to himself and others (Observations, November 19, 2012; February 11, May 14, 2013). Similarly, when working with the computerized Raz-Kids and Vocabulary Spelling
City programs (a game-based learning program for vocabulary, spelling, phonics, and writing), Tony made comments on the programs and began self-selected tasks rather than completing the required skill work (Observations, November 20, December 7, 2012). During structured group events such as read-alouds and integrated content-area lessons, Tony enthusiastically participated (Observations, December 11, 2012; April 18, 19, May 13, 2013); however, due to frequent behavior incidents, Tony often needed to leave the classroom, separating him from the other children (Interview, Miss Barnes, November 30, 2012) and greatly reducing his opportunities for creative collaboration around reading activities. However, more than any of the other students in the classroom, Tony seemed to need a social group to be motivated to read in school.

**Observations With the Therapy Dog**

During the year-long dog-assisted reading study, Tony developed as a reader in the following areas: increased motivation to read to a dog, agency with self-selected books and storytelling/performance, increased book-related talk, and improved reading engagement.

**Increased motivation to read to a dog.** Although Tony actively participated in classroom read-aloud discussions, his interest in independent reading did not blossom until he became involved in the dog-assisted reading program that. At the beginning of the study, Tony’s classroom reading consisted mostly of computerized programs, and he often worked alone, away from his peers, due to behavior incidents. However, Miss Barnes noticed Tony’s attentive and positive behavior with the visiting therapy dogs. She encouraged Tony to join in with Anna’s dog-assisted reading sessions in the media center (Conversations and Observations, April–August, 2012). Miss Pat, the handler who read regularly with Anna, confirmed Zena’s positive influence on Tony, stating, “He came along with Anna to the library and I was amazed with the
intense focus, especially because he had just had a behavior incident that was a 10. With Zena he came down to a 4” (Interview, November 28, 2012).

When the study began in September 2012, Tony delighted in having a regular reading spot with Zena. He chose his own books with the dog in mind. He petted and talked with her, and then began reading, usually sitting on a chair next to Miss Pat, with Zena on the floor in front of him. On September 25, 2012, Tony entered the office for the first time and showed Zena the cover of his selected book, *A Night in Terror Tower* by Stine—one of the *Goosebumps* series of books, a favorite of Tony’s. Tony read the title to Zena, and Miss Pat joked, “It’s going to be a long night.” As if in response, Zena lay down. Tony laughed appreciatively. On October 2, 2012, Tony read further from *A Night in Terror Tower* using a range of different accents for different characters. He read with enthusiasm, not wanting to stop when the session ended. Tony confirmed Zena’s motivating effect:

> It actually helps me adapt [to the new context of reading out loud versus reading on the computer] because I know I am reading to someone who does listen. You know, it’s fun when you have someone who listens every time—every time, through each and every part. (Interview, November 16, 2016)

On November 20, 2012, Tony, recovering from a cold, came to the office still sniffling and coughing, but eager to read. Zena immediately went up to him and placed her paw on his lap. Tony petted Zena while he read from *A Night in Terror Tower*. He read loudly and fluently, using accents and interesting voices, intermittently discussing the text with Miss Pat. Suddenly, Tony stopped reading and gazed down at Zena, looking visibly upset while asking, “Is she sleeping?” Miss Pat quickly reassured Tony that Zena listened, just in a relaxed state, enjoying his voice, saying, “See? I see her blinking.” Miss Pat’s answer appeared to satisfy Tony, and he resumed reading aloud to Zena. His session that day extended to 30 minutes, which Tony seemed to enjoy, petting Zena and declaring, “It’s hard to say goodbye.”
Tony created drawings showing himself and Zena happily reading together with captions of “Awesome, “Fantastic,” and “No matter what height of ground I would have to be on, I’d read to you: My favorite dog Zena” (Artifacts, November 16, December 18, 2012; January 4, March 16, 2013). As Tony became more motivated to read with Zena, he also became more invested in reading at home. According to Tony’s mother, Maria,

He loves that dog. He enjoyed the program immensely. It helped him. He would talk about the books at home. I wanted him to read more, and he would read more at home. Reading to a dog supported him by making him more interested in reading. On days ... [when he’s read] with Zena, he will spend most of the afternoon and into dinner and before bed reading. (Interview, June 13, 2013)

Tony loved reading to Zena. Her calm attentiveness satisfied his desire for an audience, and her presence and actions inspired his imagination. Reading, for Tony, evolved into a highly motivating activity with a special friend, and transferred to more independent reading at home.

**Agency with self-selected books and storytelling/performance.** As Tony became more motivated to read, he also became more vocal about his choice of texts. Initially, Tony requested chapter books from the *Goosebumps* series (thriller/horror/mystery genre), and read from them as much as possible throughout the study. When Tony discovered a book of short, humorous, dog-related vignettes, he began asking to read often from that book as well. Later in the study, Tony insisted on creating and performing his own narratives based on familiar videogame and movie characters and scenarios: a sort of personal “fan fiction.”

Tony came to the study enjoying the Stine *Goosebumps* series of books and movies. He self-selected the familiar favorite, *A Night in Terror Tower*, to share with Zena, stating,

I wanted to try and read something to Zena [that I thought she would like] ... I came to the conclusion that *A Night in Terror Tower* would be a good pick. It’s full of mystery. You never know what is going to happen. You always find out something. It’s so surprising. (Interview, November 16, 2012)
Tony also had an interest in the series’ author. On November 13, 2012, he began reading the biography of Stine on the back cover of *A Night in Terror Tower*, excitedly interrupting Miss Pat’s conversation with someone else, to share the information. The two then discussed the details of the biography for several minutes.

Tony discovered a new favorite book during a November 6, 2012 observation when Miss Pat suggested he read a few pages from *Dogfessions* by Moustaki. The book contains a series of humorous and touching postcards from dogs and their owners, revealing their deepest and most secret thoughts. *Dogfessions* instantly engaged Tony, who loved its humor and made running commentaries as he read. He repeatedly shared the illustrations with Zena, holding the pictures before her eyes. Tony requested this book repeatedly thereafter, and commented on how much he liked it in an interview on November 16, 2012. After one of the readings, Miss Pat asked Tony to think of a confession for Zena. Speaking for the Golden Retriever, Tony joked, “I never told anyone this, but I seriously do retrieve for gold.” Miss Pat burst out laughing.

On January 8, 2013, Tony advocated for a change in genre, stating, “We’ve been reading *A Night in Terror Tower* a long time. I want to tell a story of my own today.” This marked the first time Tony used a session to create and perform his own fiction. He began by addressing Zena, declaring, “In every child’s mind, there is an imagination. In every place, there is a dream. And yes, in most dreams, there is Jackie Chan kickboxing with Godzilla.” He laughed and continued his tale, with Miss Pat asking questions to help guide the narrative. Tony appeared delighted to have this opportunity to create his own story.

Four months later, on May 14, 2013, now in the classroom, Tony surprised Miss Pat by reporting that he had read ahead and completed their current *Goosebumps* book on his own, and that he instead wanted to use his time with Zena to create his own narratives, which he called
“mind stories.” Tony happily explored storytelling for the three remaining sessions of the study (Observations, May 14, 28, June 11, 2013), and humanized Zena in his final May artifact, drawing himself as one of the characters and Zena as a blond-haired girl, with the caption, “Whatever form we’re in, I’d still read to you” (Artifact, May 22, 2013). Tony expressed his enjoyment for fantasy:

It’s a small world, but way out there is a bigger world. It’s awesome out there. You make your own rules. Mind stories is a chance to do that … I like both reading and the mind stories, but in mind stories, me and everyone is how I make it. Zena can sense my emotions in the mind story. It feels like we are in the story. Zena supports me in battles—a very good duelist, never gave up. She had a sense of romance and a bit of a temper. Having Zena in class is the best thing ever. It’s good to have the dog in with the action. The dog can have the same fun I am having … It makes me feel like I have someone who listens to everything: she knows when things get good. They [dogs] have the ability to sense when things are getting better. (Interview, Tony, June 19, 2013)

Throughout the study, Tony directed the book choice and sometimes advocated for original storytelling. Choosing books and genres of his own liking helped to drive Tony’s motivation, engagement, and enjoyment for a range of literacy experiences.

**Increased book-related talk.** Tony enjoyed talking about books, but lacked opportunities to work with a reading partner in the classroom. The other students usually did not want to work with him because his loud voice and dominant ways made them uncomfortable (Interviews, Miss Barnes, November 30, 2012; Miss McMann, April 16, 2013; Miss Bess, June 11, 2013). In the dog-assisted study, Tony found compatible reading partners in Miss Pat and Zena. He began to engage with them in book-related talk and commentary, using his own prior knowledge to make predictions and connections, often adding dramatic flair.

On September 25, 2012, Tony read with Miss Pat and Zena from *A Night in Terror Tower* by Stine. In the book, Sue and her younger brother, Eddie, are part of a group touring London by bus. As Tony read aloud about the double-decker bus transporting the group, he stopped and made a connection to the knight bus in *Harry Potter*. He and Miss Pat briefly discussed this other
bus and book series. Later in the session, when Tony read, “Behind the wall, the Terror Tower rose up darkly,” he paused and concluded, “Probably from the sounds of people dying.”

Tony continued with Night in Terror Tower on October 2, 2012. When he read about the children’s tour guide leading the group into one of the rooms in the castle, he used a unique accent for the guide’s dialogue, pronouncing “the torture chamber” as “ze torchure shamburh.” Miss Pat joked that his accent sounded like a combination of German and French, and Tony explained, “I’m trying to think of this black-phantom guy—he has a French accent.”

In later sessions, Tony began to regularly talk to the characters and further enter the storyworld. On October 22, 2012, when Sue and Eddie were being chased by a masked executioner, Tony yelled out, “Don’t stop! Keep going, Sue! Hurry!” On November 13, 2012, when Sue imagined that she and her brother were safe from their pursuer, Tony responded mockingly, “Yeah—locked inside, really.” This led to Tony and Miss Pat discussing a secret passageway that might be coming up later in the story.

As Tony read in the comfort of the office, he could engage with the text and enter the storyworld more deeply by using language, commentary, and conversation to enhance meaning. Given the opportunity to stop reading and think aloud, Tony could use his prior knowledge and personal verbalizations to better comprehend and enjoy the story.

**Improved reading engagement.** Tony had difficulty sustaining focus and interest in the classroom environment. He wanted to do his own self-selected tasks, disagreed with lesson requirements, and often commented and complained to other students. When he started the dog-assisted reading program, he initially had similar attention issues in the office, but he quickly improved his behaviors and began to engage with reading for increased periods. Tony later transferred these improved behaviors into the classroom.
Tony’s mother reported that Tony often read for extended periods of time at home; as much as 45 minutes prior to the start of the dog-assisted reading study, and as much as 2 to 4 hours by the end of the study (Interviews, Maria, February 28, June 13, 2013). In contrast, Tony had difficulty staying engaged for more than a few minutes in the classroom. On November 19, 2012, Tony, assigned to work on computer-based literacy tasks, made comments to other students and complained about the assignment. On November 20, 2012, Tony again became irritated during morning work, criticizing the usefulness of the scheduled tasks, preferring to work on a personal cartooning project. In a February 11, 2013 observation, Tony began silently reading a self-selected book, read for 3 minutes, then stopped and called out to another student. His teacher instructed him to go back to his reading. Tony repeatedly started and stopped, looking around the room instead of focusing on reading. Miss Nadine commented that Tony often found it difficult to “settle down” in class (Interview, June 11, 2013).

During the first three sessions in the office, Tony eagerly read (Artifact, November 16); however, as in the classroom, he often became distracted, had trouble sitting still, and made many self-interruptions (Observations, September 25, October 2, 15, 2012; Interview, Miss Pat, November 28, 2012). By October 22, 2013, Tony began to be more relaxed, and had better overall focus and stamina for reading, staying on task for the entire 20 minutes. He continued to improve through the rest of the time reading in the office (Observations, November 6, 2012–January 8, 2013).

Tony also began to show specific engagement behaviors. On December 4, 2012, Tony entered the office talking loudly and very quickly. He sat in his usual chair and Zena immediately went to him, at which point Tony spontaneously moved to the rug; a new behavior for him. Tony stroked Zena nonstop for 10 minutes while he read his book without stopping; also
a new behavior. Usually Tony would read a few lines and then make comments and connections. On this day, his continuous stroking of Zena seemed to quiet him and help him stay inside the storyworld. He looked relaxed while he read, his voice calm and fluent. After a while, Tony began reading silently—yet another new behavior—indicating his absorption with the storyworld.

When the study moved into the classroom, Tony’s stamina for reading continued to grow, despite the busyness of the environment. On February 12, 2013, Tony came to the rug in an angry mood after an intense behavior incident. He and Miss Pat briefly talked about his feelings while Tony petted Zena. Then, without prompting, Tony began reading his *Goosebumps* book, *The Revenge of the Lawn Gnomes* by Stine. Tony’s facial expression softened and he continued stroking Zena as he read. Partway through, he took a quick break from reading to tell Zena a joke. At the end of the session, Tony said he did not want to stop reading but Anna awaited her turn. Tony decided to stay at the rug and listen to Anna as she read.

On February 27, 2013, after eagerly awaiting his turn, Tony sat down with Zena and immediately began reading silently. Miss Pat asked him to read aloud and Tony quickly complied. Miss Pat also asked Tony a comprehension question, which he answered before continuing to read. When Miss Pat invited Tony to make a prediction, he responded, “Let’s read and find out.” For the remainder of the session, Tony did not stop to talk, even though Miss Pat provided opportunities. Tony’s body posture relaxed, and he read at an appropriate volume and with expression. When the time ended, Tony asked for a few more minutes to read with Zena.

Tony continued to want longer periods of time for reading (Interviews, March 30, April 18, May 6, 2013). In a March 30, 2013 interview, he said, “Sometimes I don’t feel like I am getting enough time. The order [of the students] doesn’t matter, as long as I get to read with Zena—it’s cool. Fifteen minutes is short. A half hour would be perfect.”
Zena’s calm disposition helped Tony relax and focus on the process of reading. He read with increasing stamina and engagement, often asking for extra reading time and sometimes reading silently. The confluence of reading to a dog, having the opportunity to self-select texts, and being permitted to think out loud helped Tony engage in literacy-related tasks for increasingly longer periods, and to discover the pleasure of reading in the school setting.

**The Guides: Instructional Practices and Intentional Supports**

*Tony is just a case of focusing. I use the dog as a calm animal, and if he wants to spend time with her, he must not scare her.*

—Interview, Miss Pat, November 28, 2012

Tony’s classroom instructional team included his teacher, Miss Barnes, and his one-on-one teacher assistant, Miss Cindy. In the dog-assisted reading study, Tony’s guides included retired special-education teacher, Miss Pat, and her dog, Zena. Each team member worked with Tony in different ways.

**Observations Without the Therapy Dog**

In the classroom, where most books were computer-based, Tony focused on technical skills, such as spelling, punctuation, vocabulary, and comprehension. Exercises were almost always followed by tests. Miss Barnes and Miss Cindy worked to support these goals, helping Tony with a range of individualized programs and tasks including completing worksheets, performing comprehension exercises, and traversing the mechanics of writing. Tony preferred working on projects (Interview, Miss McMann, April 16, 2013) rather than unintegrated skill work, and often expressed this preference disruptively.

During a September 16, 2012 observation, Tony, required to work on phonics exercises, complained, “Do we have to do phonics?” He later stated a similar dislike for Main Idea worksheets, although he did his best to complete them anyway. On September 17, 2012, Tony
refused to work on one of his writing assignments and Miss Barnes provided an alternate academic option—working on the computer—which Tony preferred. On several occasions (Observations, September 17, December 4, 2012), computer assignments in vocabulary and reading held Tony’s attention, during which times Tony, with headphones, talked (loudly) to the program, and worked to complete the tasks. When his instructors asked him to speak more quietly, Tony tried to comply, but generally continued to be unintentionally disruptive to the rest of the class (Observations, November 19, 21, 2012).

**Observations With the Therapy Dog**

In contrast, when Tony read with a dog, he read for the pleasure of the story rather than focusing on completing worksheets and tests. Miss Pat provided Tony with an opportunity to enjoy Zena, relax into his reading, and joke or banter in a creative way. This was a welcome change for Tony: according to Miss Pat, it “took the pressure off” Tony’s struggles with his classroom program (Interview, Miss Pat, November 28, 2012). Miss Pat listened carefully, responded to Tony’s commentaries and creative speech, asked him leading questions, and engaged him in book-related talk. Miss Pat helped Tony become sensitive to how loud sounds affected Zena, which enabled Tony to begin to modulate his voice. Miss Pat also worked to keep Tony calm and on task. Tony had such an active imagination that he often went off on fantasy tangents that took him away from the actual text he was reading. Miss Pat wanted Tony to work to his potential:

Tony knows the difference between his fantasy world and the real world, but likes the fantasy world better. It is a real pulling match. He makes these connections and associations that high-school kids can’t make [Tony was in 8th grade]. Some of the things he says are like, ‘WOW! How did he do that?’ I think he is one of the real smart people that can’t focus, and if he could just channel that … he could be an author. (Interview, Miss Pat, November 28, 2012)
Although Tony’s classroom instructors provided support for computerized reading programs, Miss Pat helped Tony by offering an authentic reading experience and supporting his creativity. Specifically, Miss Pat helped maintain relaxation and focus, built relationship and raised awareness of audience, provided comprehension support, contributed text-related connections, and guided narrative development and coherence.

**Helped maintain relaxation and focus.** When Tony became overly excited, his reading quality suffered. He also had a tendency to go off task or lose his place while reading. Miss Pat observed that interacting with Zena helped Tony calm down and read with more ease and fluency. Therefore, whenever Tony began reading too quickly or too loudly, or if he jumped or moved excessively, Miss Pat would have him take a “relaxation break” to pet or brush Zena. In addition Miss Pat worked to bring Tony back to reading if he wandered too far from the text, and used cues to help him find his place when he got lost.

On October 2, 2012, Tony kept kicking his feet. Miss Pat observed, “You’re nervous and jumpy. Why don’t you take a minute and pet Zena? Take some breaths.” She had Tony move from his chair to the floor and then joined him there. Tony stroked Zena while Miss Pat engaged him in informal conversation about the book they were reading. When Miss Pat showed Tony where to scratch Zena, Tony said that his cat, Pumpernickel, had also liked to be scratched in that spot. Zena put her head on Tony’s lap and Tony, visibly calmer, smiled. Miss Pat asked, “Are you ready to read again?” Tony responded by immediately starting to read. He stayed on the floor with his hand on Zena, sounding much more relaxed and fluent.

When Tony began reading on October 15, 2012, his leg vibrated nervously, bouncing up and down. His reading sounded high pitched, choppy, and overly fast. Miss Pat interrupted him,
asking, “Want to try something? Want to try calming down a little by brushing Zena? She could use a good brush.” Tony agreed, and moved to the carpet next to Zena. Miss Pat instructed,

You need to slow down just a little. I’m going to let you brush Zena for a few minutes and then go back to reading. Give her long slow strokes. That’s how you should read: long strong breath and long strokes. Then you get more out of it.

When Tony went back to reading, he had a few more starts and stops, but the frantic quality of his voice gradually began to soften and his overall phrasing became smoother. Miss Pat commented on Tony’s increasing control: “I like the way he is starting to be more relaxed in the situation … he knows to calm down” (Interview, November 28, 2012).

When Tony lost his place or his focus, Miss Pat brought him back. On November 13, 2012, while reading A Night in Terror Tower by Stine, Tony read that the children in the story believed they were finally safe from a pursuer. At the word “safe,” Tony, who loved wordplay, yelled out, “Home run!” and then launched into a monologue about Babe Ruth. Miss Pat quickly intervened, saying, “One thing at a time,” and guided Tony to go back to his reading. When Tony read about the children again being chased, he stopped and said, “That would be scary. I would have found one of those axes and—swish, shoosh!” He then began to pantomime an elaborate sword fight. Miss Pat did not react, but instead kept her eyes on the book to show the expectation that Tony needed to return to the reading, which he did. A few minutes later, when Tony again strayed from the text, Miss Pat acknowledged his comments and then read the beginning of the next line. Tony picked up her cue and resumed reading.

Throughout these interactions, Zena lay close to Tony, remaining calm and unreactive to Tony’s expanded voice and gestures. In this way, Zena seemed to mirror Miss Pat reactions to Tony. During the early months of the study, Miss Pat worked to keep Tony focused on the task of reading so that he could build stamina, retain information, and better understand the story. She
used Zena as a calming influence, and modeled her own expectations for the reading session to help Tony relax into fluent reading.

**Built relationship and raised awareness of audience.** Miss Pat frequently engaged Tony in social interactions—often focused on Zena in some way—which helped build their relationship. In addition to being aware of how Zena affected Tony, Miss Pat also helped Tony become aware of how his actions affected Zena, and by extension, other listeners. This helped Tony improve the quality of his reading, as well as his self-confidence and control.

On October 2, 2012, Tony entered the office and sat down on a chair next to Miss Pat. He called Zena over informally and Miss Pat reminded him how to give commands for “come” and “sit.” She gave Tony time to pet Zena before he began reading. On February 12, 2013, Tony came to the rug in the classroom in a volatile state because he and a classmate had just had an altercation. As Tony rocked back and forth in his chair, Miss Pat asked him to talk about his feelings. Tony said “hard to describe” but a “living hell.” Miss Pat suggested that Tony pet Zena for a while, and Tony complied with several minutes of stroking. This action calmed him and he eventually started reading. Over time, Tony began to see Zena, in particular, as a friend. Early in the study, Tony’s mother, Maria, commented, “Tony’s self-esteem goes up [when he reads with Zena]. He makes connections with his time with Zena” (Interview, February 28, 2013). By the end of the school year, Maria observed that Tony’s increased motivation to read “had to do a lot with the dog … The dog listened to him ... He had this idea that the dog loved him. He felt something coming back from the dog” (Interview, June 13, 2013).

Miss Pat applied this sense of relationship to guide Tony in his reading. On October 2, 2012, Tony began reading in an excited state, jerking his feet back and forth very close to Zena, who lay on the floor in front of him. Miss Pat commented, “Watch the jerking around of your
feet: you don’t want to hurt Zena.” She also suggested, “Keep your voice nice for Zena but loud enough so she can hear you.” Tony read in a quieter voice, and Zena responded by rolling back into his lap. Miss Pat pointed out to Tony the effect of his softened voice and calmer energy. Miss Pat always let Tony know how changes in his actions and reading quality were helping Zena. This eventually helped Tony begin to self-monitor. On November 27, 2012, Tony caught himself shouting during a suspenseful part of the story, and he looked down at Zena and apologized for his outburst.

Tony also noticed the positive changes Miss Pat and Zena inspired, commenting in every one of his interviews on how much he enjoyed having Zena as a listener (Interviews, November 16, 2012; January 4, March 30, May 18, June 19, 2013). After finishing reading on February 12, 2013, Tony said, “Thank you, Zena.” On February 14, 2013, Tony commented, “Zena listens. She’s calm. It feels good when someone listens, someone who won’t be judgmental.” Later, Tony added, “Zena doesn’t tease—nothing like that. Zena always listens and is like a friend. That’s why they are called man’s best friend” (Interview, March 30, 2013).

Zena and Miss Pat developed a relationship with Tony that supported him in his reading and his emotional challenges. The addition of Miss Pat and Zena as audience members helped make reading more pleasurable and interactive for Tony, and provided the impetus for calmer, more fluent reading. This change later translated into Tony having less anxiety and more confidence when interacting with others in his classroom.

**Provided comprehension support.** In the beginning of the study, Tony tended to focus on reading dramatically and making side comments. Sometimes Tony’s talking distracted him from comprehending the actual plot. As the study progressed, Miss Pat offered a range of supports to help Tony stay with the story and better understand it: before reading, she would ask
for or provide summaries of previous chapters, and while Tony read, Miss Pat listened carefully, reacted to story events, made comments, and asked questions.

Before reading on November 13, 2012, Miss Pat asked Tony to remind her what had happened so far in the story of *A Night in Terror Tower* by Stine. Tony replied, “They are trapped by the man with the black hat; remember?” Miss Pat followed up with, “Where and how did they get there?” Tony answered with accurate detail and Miss Pat continued to question, “How come their parents are not there?” Tony could not answer that, and Miss Pat guided him to the first part of the story to find the answer. Once Tony began reading, Miss Pat drew his attention to italicized text, and asked him why he thought the author chose to use that font for particular words. Tony responded that the italics showed the characters’ thinking. He and Miss Pat discussed the difference between italics and quotations.

Similarly, at the beginning of the November 20, 2012 session, Tony petted Zena while Miss Pat reviewed a key event from the book saying, “Remember [Sue and Eddie] found themselves locked in a room? Let’s find out what that room is.” Later, Tony read, “The light revealed wide metal rungs hanging from the ceiling.” On the word “rungs,” Tony’s face became confused, and he reread the sentence twice. Miss Pat explained, “You know how a ladder has bars that go across? Those are ‘rungs’ and they repeat.” Tony wondered if this was similar to a cage, and Miss Pat explained the bars were horizontal instead of vertical.

In a February 27, 2013 session, Tony read from *The Revenge of the Lawn Gnomes* by Stine. When he read about the wide variety of lawn ornaments that were obstructing lawn mowing, Miss Pat clarified, “You know you have to move the ornaments to mow.” When Tony read about a four feet tall deer ornament, Miss Pat commented, “That’s twice the size of Zena.”
Tony replied, “Maybe even bigger than me?” Miss Pat estimated Tony at about 4’5”, and told him he would be bigger than the ornament.

Miss Pat responded to Tony’s reading needs, always working to help him better understand the story. She did this by integrating questions, reminders, cues, and comments designed to help him summarize, clarify, and relate. These methods helped Tony better enjoy and comprehend the text.

**Contributed text-related connections.** By the middle of the study, Miss Pat began to routinely make quick, targeted, and often humorous comments about the text Tony read. These mirrored Tony’s own humorous commentary without distracting from story flow. The text-to-world, text-to-self, and text-to-text connections reinforced the plot and engaged Miss Pat as a collaborative reading partner for performance-oriented Tony.

On February 12, 2012, Tony read from *The Revenge of the Lawn Gnomes* by Stine. Tony read about Mindy, the excessively organized older sister, teased by Joe, her 12-year-old younger brother. Tony interjected, “That’s real mature.” Miss Pat asked Tony if he was organized, and Tony responded, “Look at my hair; do I look organized?” Miss Pat joked that Zena would lend Tony her brush, but he would likely end up with a lot of dog hair mixed in with his own. Tony smiled and said he would think about it.

During a February 27, 2012 observation, Miss Pat and Tony sat on bean bags on the reading rug. The classroom hummed with the chatter of other students doing independent assignments. Zena approached Tony and he gave her the “sit” command. Zena did not listen. Tony tried again, and this time Zena sat. Miss Pat joked that Zena listened slowly “like somebody else we know,” and Tony laughed heartily. During the reading, Zena interrupted Tony as he read about a garden product called “Bug Be Gone.” Miss Pat joked that they needed some
“Dog Be Gone.” As Tony read a long list of the types of lawn ornaments, Miss Pat sang, “And a partridge in a pear tree.” Tony laughed. Later, Tony read descriptions of several unattractive lawn ornaments and Miss Pat said, “The dad really doesn’t have very good taste does he?” Miss Pat’s brief comments linked to the story, helping Tony stay in the flow of his own reading. Additionally, the text-related connections that Miss Pat made enhanced comprehension and relationship, especially when tailored to Tony’s humorous ways.

Guided narrative development and coherence. Tony loved storytelling and opted in the last three sessions of the study to create his own “mind stories” to share with Miss Pat and Zena rather than reading other people’s texts. Although Miss Pat preferred that Tony stay with traditional reading, she followed his lead and used the time to help Tony develop organized narratives rich in character and plot development. She asked questions, made suggestions, and served as an active listener, enabling Tony to create coherent and generally logical fantasy expositions. In addition, Miss Pat, as she had done throughout the study, continued to make connections to Zena. This inspired Tony to insert Zena into his stories, which provided a real-world “hook” to keep his attention present in reality even as he constructed fantasy worlds.

On May 14, 2013, Tony said he had independently finished reading The Revenge of the Lawn Gnomes by Stine and wanted to transition to mind stories. Miss Pat said that Zena worked as a reading dog and therefore Tony should choose a book. Tony said that a mind story allowed him to “read in his head” and that Zena would be included in the action. Miss Pat hesitated, then said “okay.” Tony turned to the camera, spoke loudly and dramatically, and announced that this would be a story of “The Hunter.” Miss Pat prompted Tony to tell the story to Zena. As Tony described the hunter’s interest in “everything he could chase,” Miss Pat chimed in, “You know what Zena eats? Bunnies.” Tony said that the hunter also ate bunnies. Miss Pat asked Tony to
describe this hunter, and Tony provided details, stating he was “huge” and that “he would have to bend down just to get in a door.” This helped Tony add more detail to his character description. Miss Pat then reminded Tony to include Zena in the story: “Look at Zena. Take her leash.” Tony turned toward Zena and smiled, “Zena is my dog in the story: she’s a friend.” Miss Pat suggested Zena have a cape and killer breath. Tony laughed loudly, and with Miss Pat’s prompts and questions, added more details to Zena’s growing description, including “a super claw double whirling spin bite assault.” Tony created an exciting plot with many new characters, fleshed out by Miss Pat’s questions, cues, and references to Zena. Tony, animated and engaged throughout the storytelling process, wanted to continue even as the session ended.

For the remaining two sessions, Miss Pat continued to support Tony as he created detailed, intricate tales of Good versus Evil. In each one, Tony anthropomorphized Zena and spoke for her. Miss Pat reacted with laughter, brought Zena into the story if Tony forgot, and continually asked questions to help shape the narrative (Observations, May 28, June 11, 2013). Miss Barnes noted: “Tony’s mind stories were more than his own fantasy. He incorporated Zena into the story. Zena has become a friend” (Interview, May 22, 2013).

Although mind stories did not involve reading, Miss Pat’s careful scaffolding using questions, comments, and suggestions helped turn this favorite activity of Tony’s into an effective literacy tool. Through mind stories, Tony built on his strong imagination and language-based skills. In addition, incorporating Zena into the stories helped Tony stay focused and grounded in reality, even though he created fantasy narratives.

**The Community: Connecting with Others in Literacy Events**

*Tony is the actor of the group. The dogs help him to settle and tell stories. He is great with the characters. ... He likes to tell stories to Zena and will read to the class.
He loves to perform as he reads.*

—Interview, Miss Nadine, June 11, 2013
Tony’s community included the other students in the classroom, his teacher and teacher assistants, and the therapy dogs and their handlers. The latter included Miss Pat and her dog Zena, and (occasionally) retired science coordinator, Miss Sharon, and her dog Sasha.

**Observations Without the Therapy Dog**

Although Tony enjoyed performing and interacting with other people, he often created tension in his classroom community due to his behaviors. Other students tended to avoid him, making social or academic talk between Tony and his classmates a challenge. Tony did participate in whole-class literacy events such as read-alouds and group lessons, where he became engaged in the content—often the only student to make comments; however, Tony interacted only with staff during these sessions, not directly with other students.

On November 20, 2012, Tony became irritated during morning work because he wanted to do his own cartooning project rather than the assignment. He called the work “stupid.” Kenneth tried to intervene and help Tony with the tasks, but Tony told him to “please just be quiet,” and then kicked a bean bag chair. Similar incidents occurred throughout the fall and early spring. Tony often had to leave the room during group-reading events because of his disruptive behavior (Observations, February 11, 12, 27, April 19, 2013).

In contrast, during an April 18, 2013 read-aloud, Tony listened closely as Miss Barnes read from *Hatchet* by Paulsen. Tony made numerous observations that were relevant to the plot and interjected with jokes and humorous asides. He responded to Miss Barnes’ questions and his answers were elaborate. When Miss Barnes explained the importance of freeze-dried food, Tony gleefully cried, “You are making us hungry!” He also offered predictions about the story and voluntarily looked in the text to confirm whether they were correct. Tony clearly enjoyed the book reading, but he conversed only with Miss Barnes, not with his peers.
During a May 13, 2013 observation, yet another side of Tony surfaced. Students worked on a social studies lesson. Tony finished early and chose to make a birthday card for Anna. He worked diligently and quietly at the back table with three other students, although he did not talk with them. Tony put special effort into making the card. He had a package of 14 markers spread on the table and worked with focus and enthusiasm. He knew Anna liked Disney characters, and his card made reference to a variety of Disney books and movies, using each letter in “DISNEY” as an acrostic. The work, colorful and detailed, filled the paper with words and images. Tony happily engaged in a self-selected project, and although he did not interact much with other students, his project focused on another student.

**Observations With the Therapy Dog**

The therapy-dog program moved from the office to the classroom in late January, 2013 when group literacy events became more routine. All case-study students read regularly in the classroom with the dogs and their handlers, and other students sometimes joined them. During this time, several new behaviors emerged for Tony when the dogs were present. Specifically, he engaged in group readings and discussions, brought others into the storyworld and shared storytelling performances, and became a “more knowledgeable other” for his peers.

**Engaged in group readings and discussions.** When the study first moved to the classroom, Tony initially could not engage in group readings or discussions. He had difficulty working in peer groups due to his social-emotional challenges and would often have to work separately, go to another room, or walk in the corridor to calm down. Reading individually with Miss Pat and Zena in the classroom gave Tony an outlet for sharing with his peers. He eventually began to participate in group literacy events with the dogs, handlers, and other students.
For the first several months of the study in the classroom, Tony often needed to be separated from the group during reading time. On February 12, 2013, Tony had an explosive behavior incident with Jackson just before reading with Miss Pat and Zena. Immediately after reading, Tony quarreled with Jackson again and left the room with Miss Cindy for a walk in the hallway. On February 27, 2013, Tony needed to work separately in another room with Miss Cindy due to his disruptive behavior. Scheduled to read with Miss Pat and Zena, Tony made a point of asking me to come and let him know when he could read. On April 19, 2013, Tony had to be removed from the room due to an intense fight with Jackson. I walked Miss Pat and Zena out of class that day, and as we passed Tony in the hallway, he apologized to all of us and said he regretted missing his time with Zena.

The month of April became a turning point for Tony, despite occasional setbacks. On April 8, 2013, Miss Sharon and Sasha read *Dogfessions* by Moustaki with Kenneth and Michele at the reading rug. Tony sat at the back table building a Lego restaurant. He heard the laughter at the reading rug and walked over to the group. He began to pet Sasha and commented, “That book is funny.” He stayed to listen to Michele read, laughed at her story, and later read to the group himself. As Tony read that day, he leaned against Miss Sharon. Miss Sharon later commented that this relaxed physical contact might indicate that Tony felt pleasure at being able to be a part of the group, reading together (Conversation, Miss Sharon, April 8, 2013).

On April 30, 2013, the class celebrated Zena’s birthday. All the students gathered at the reading rug to honor Zena with cards and presents. After the ceremony, Tony, Anna, Michele, and Kenneth chose to stay at the rug together. Tony read first, reading from *The Revenge of the Lawn Gnomes* by Stine for 15 minutes while the others listened and laughed at his voices and gestures. Kenneth told Tony he sounded like one of the teacher assistants, a professional actor.
During Anna’s reading, Tony listened attentively, made related comments, laughed at humorous sections, and leaned over from his chair to look at Anna’s text while she read. Upbeat and talkative, Tony interjected commentary related to the text, such as saying that “Jack was a like a living encyclopedia.” Anna and Michele showed interest in Tony’s comments through their eye contact and laughter. Later, during Michele’s turn to read, Tony continued to listen, making eye contact often. At the end of the session, Tony commented on a new *Star Wars* movie and he and Kenneth began to talk about it, with Miss Barnes describing Tony as a *Star Wars* expert.

Tony read at the rug again on June 3, 2013, along with Anna, Kenneth, Miss Sharon, and Sasha. Tony self-selected a familiar picture book—*A Job for Wittilda* by Buehner and Buehner. The group listened and laughed as Tony read the story of a witch who must find a job to support her 47 cats. Sasha turned toward Tony and appeared to listen closely, enhancing the humor of the moment. When Tony finished, the group discussed what it would be like to have so many cats, and explored the benefits and drawbacks of such a scenario. Tony shared that he had once had a cat that, sadly, he had not been able to keep.

From April to June, 2013, Tony participated in and enjoyed literacy events with his peers. Working with the dogs helped Tony gain some control over his behaviors and built his confidence. Working with the dogs also gave Tony credibility with other students. As dog-assisted reading events in the classroom gradually became familiar and unthreatening, Tony learned to blend into the group and he began to read, listen, and interact in a more positive and enjoyable way with his classmates.

**Brought others into the storyworld and shared storytelling performances.** By the middle of the study, Tony began to participate with his peers in classroom literacy events. In the presence of the therapy dogs, Tony read dramatically to his fellow students, provided humorous
commentary on their readings, and eventually became an engaging storyteller of his original “mind stories,” all of which the other children seemed to enjoy immensely.

On April 9, 2013, Miss Pat and Zena entered the classroom and were greeted warmly by students and teachers. Tony, working at the back table, immediately stopped and joined in to pet Zena. He read first that day, choosing *Dogfessions* by Moustaki, while Michele and Kenneth listened. Tony read fluently and dramatically, enticing others to stay at the rug and laugh at the humorous anecdotes. When Tony read about a dog described as a “sockaholic,” the group conversed about the meaning of the word. When Miss Barnes overheard a vignette about a seeing-eye dog, she walked over to tell the group about seeing-eye ponies, which Tony found very interesting.

At Zena’s birthday party on April 30, 2013, Tony expressively read his book, *Goosebumps: The Revenge of the Lawn Gnomes* by Stine, to Anna, Michele, Miss Pat, and Zena. Kenneth and Peter, who had come to the rug to see Zena, stayed to listen to Tony read. Miss Nadine, who sat at a nearby desk, also paid attention to Tony’s performance. Tony’s speech pathologist, Miss Bess, complimented Tony on his colorful reading. As the audience grew, Tony added sound effects and more theatrics. Jackson came over to pet Zena and stayed to listen to some of the story. All the students listened or petted Zena. Tony, at the center, smiled as he performed for this large collection of peers and staff members. Miss Barnes had previously described the students as being “totally disinterested” in working together as a group (Interview, November 30, 2012), but in this particular social context, the class joined together and focused for a reading event.

On May 28, 2013, Tony came to the rug with Miss Pat and Zena after an intense behavior episode. When he read, Tony segued into a technofantasy narrative about Good versus Evil that
featured “Zena-tron,” a mechanical robot version of Zena. The story, adventure oriented, expressive, and highly animated, featured a dramatic fight scene between Shadow and Sonic, two videogame characters. Jackson, the student who had recently quarreled with Tony, voluntarily came to the rug twice during Tony’s story, laughing at Tony’s gestures, petting Zena, and showing continued interest in the plot through eye contact with Tony.

On June 11, 2013, Tony narrated his third mind story to Miss Pat, Zena, Anna, and Kenneth. The story began with fishbones “regenerated into fish.” Tony described the recipe that he and a human Zena concocted: “atomic fish oil with other fish parts, fresh and alive salmon brew of ocean, oyster blood and clam muscles.” Kenneth laughed uproariously while Miss Pat commented that the concoction must stink. Tony dramatically continued as the brew came to life: “Oh dear God, it’s a baby Gray-White shark.” Anna laughed hysterically at Tony’s theatrics. Miss Pat asked the shark’s size and Kenneth chimed in, holding his hands wide apart: “They’re normally that big.” Tony continued, “Wo-wo there, little tiger,” making animated motions to show the power of the shark. Anna and Kenneth laughed loudly at Tony’s sweeping gestures. Tony kept his classmates engaged by continuing to add new characters and details as the session drew to a close. Although Miss Pat wondered if Tony had “more pressure to perform downstairs” (Interview, June 14, 2013), Tony clearly enjoyed using his natural creative talents as a way to connect with and entertain others. As the study progressed, Tony changed his classroom identity and increased his status among his peers. The other students enjoyed listening to him read and reacted favorably to his humorous comments, dramatics, and original narratives.

**Became a “more knowledgeable other” for peers.** As Tony became more involved in dog-assisted group literacy events, he used his vast background knowledge and dramatic talents to support his fellow students. He listened closely when his peers read aloud, and helped them
with comprehension and engagement in a number of ways: he explained and elaborated difficult concepts for them, he sparked conversations with his insightful comments, and he reacted to story plots with entertaining actions and sound effects.

Tony came to the study with considerable language and information skills. Tony’s speech teacher, Miss Bess, described his vocabulary as “above 18 years” (Interview, June 11, 2013). Maria described her son as “kind-hearted: … [He] wants to help others … [and he] likes to know a lot about different things” (Interview, February 28, 2013). When Tony’s behavioral problems prevented group interaction, Tony could not make much use of these talents. As his continuing work with Zena and Miss Pat helped him to calm down and attain self-control, he began to relate more with his peers, gain acceptance, and use his abilities to help others.

After Zena’s birthday party on April 30, 2013, Tony sat next to Anna while she read from Magic Treehouse 2: The Knight at Dawn by Osborne. Tony listened closely and offered explanations that helped vocabulary words come to life. As Anna read about knights, Tony offered a “quick known fact: under the armor, knights wear a kind of coat called ‘gambeson’ that makes [the armor] heavier.” Later, when Miss Pat asked Anna, “What is a hawk?” Anna responded, “It’s a type of bird,” and Tony added, “a bird of prey.” When Miss Pat described how horns could be sounded for castle announcements such as dinner, Tony added, “Or to invite guests, like knights from other kingdoms.” Later, when Miss Pat let Anna know that peacocks are birds, Tony elaborated, “Peacocks have beautiful feathers.”

During a May 28, 2013 observation, Michele read from Follow My Leader by Garfield and Tony again listened closely. When the story’s main character returned home to start a new life with his seeing-eye dog, Tony wondered aloud if it was possible to feel fear even when there was nothing immediately frightening. Michele responded she believed it was, and elaborated on
how. Abstract text-based conversations between the students were unusual, yet Tony’s pondering helped set the stage for such deeper contemplation.

On June 3, 2013, Tony read with Anna, Kenneth, Miss Sharon, and Sasha. Tony suggested Anna read first in honor of her birthday. Anna read a favorite of hers, *Sleepy Nicholas* by Brande. Tony made jokes about the content and added humorous comments and sound effects, all of which Anna clearly enjoyed, laughing loudly. Tony’s animated interjections heightened Anna’s comprehension and pleasure as she read. Later in the session, during Tony’s turn to read, he chose *A Job for Wittilda* by Buehner and Buehner. At one point in the story, the book had a picture of a crowd rushing from a pizza parlor. Tony stopped reading, turned the book toward Anna and Kenneth, and challenged them to locate Wittilda in the picture. This invitation to participate creatively and actively engaged the others in the story. As the dog-assisted reading transitioned from the office to the classroom, Tony drew on his originality and extensive prior knowledge to support his peers, capturing their interest in ingenious ways, helping them better understand and enhancing their enjoyment of reading.

**Summary**

Tony loved creative language, performance, and the world of imagination. Classroom reading—a mix of isolated skill work and individualized computer reading-and-testing sessions—did not engage him. He preferred doing his own self-selected projects. This discrepancy often incited Tony to behavior incidents that separated him from his peers and reduced his opportunities for collaborative activities. Through reading with Miss Pat and Zena, Tony found a nonjudgmental outlet for his creativity and he learned to control his behavior. This helped him gain confidence and begin to enjoy reading with others, first in the privacy of the office and later in the classroom. Tony’s relationship with the dogs enhanced his status and
credibility with the other students and his work with Miss Pat and Zena helped him stay calm and focused, eventually helping him become an engaging performer and a “more knowledgeable other” for his peers.

Early in the study, Tony became motivated to read with Zena and Miss Pat because they provided an accepting and enthusiastic audience for his dramatic and inventive readings. Tony used accents and expressions to perform self-selected books for them in the privacy of the office. As the study progressed, Tony also engaged in book-related talk, eager to share his thoughts and make connections using his extensive background knowledge. Concurrently, Tony, learned how to relax, stay focused on the story, and read for longer and longer periods. Reading became a therapeutic activity for Tony, helping build his confidence and gain greater self-control. Tony’s mother, Maria, noted his enthusiasm for reading to a dog and observed that Tony read more at home on the days he read with Zena.

Throughout the study, Miss Pat helped Tony relax and maintain focus by suggesting relaxation exercises centered on Zena as a calming agent, and by modeling her own expectations for the reading sessions. She consistently provided comprehension support through questions, reminders, and cues. She also became a collaborative reading partner for Tony through her reactions, comments, and text-to-text, text-to-self, and text-to-world connections. Miss Pat encouraged Tony’s performance skills, often using humor to connect with him, and she routinely included Zena in the discussions and reactions, helping to build relationship. Miss Pat also provided careful scaffolding during Tony’s “mind stories,” which helped turn his favorite activity into an effective literacy tool, adding coherence and focus to his already strong imagination and language skills. This gave Tony confidence about performing for others.
In the classroom, Tony initially had difficulties interacting with peers in a group setting. Reading individually with Miss Pat and Zena in the classroom gave him an outlet to share his love of stories and storytelling with other students, and he eventually began participating in dog-assisted group literacy events. Tony enjoyed using his natural creative talents as a way to connect with and entertain others. The students enjoyed listening to him read and reacted favorably to his humorous comments and original narratives. By the end of the school year, Tony used his extensive background knowledge to help his peers with comprehension and engagement, enhancing their enjoyment of reading as well as his own.
Chapter 8: Cross-Case Analysis

Dog-assisted reading positively impacted all three students. In this cross-case analysis, I compare and contrast these experiences, finding the patterns and threads common to all the students, as well as those unique to each. I focus first on behaviors that emerged in the office, where students worked one on one with a therapy dog and handler. Then, I focus on how social context affected behavior by comparing results from the three observed contexts: in the classroom without the dog, in the office with the dog, and in the classroom with the dog.

**Literacy Learning through Dog-Assisted Reading**

Dog-assisted reading helped all three students improve their literacy in the areas of (a) motivation, (b) engagement, and (c) literacy processes/behaviors. These findings were consistent with prior research in the field (Hall et al., 2016). The positive effects first began in the office and then later continued in the classroom when the dog-assisted team moved there. I discuss additional effects that emerged only in the classroom with the dog present in the section entitled “Influence of Social Contexts.”

**Motivation**

The desire and eagerness (DEST, 2008) of Anna, Michele, and Tony to participate in dog-assisted reading played a major role in their literacy strides over the year. During the course of the study, motivation increased through reading with or to a dog, book and genre selection, and relationship-building with an expanding audience.

**Motivation through reading with or to a dog.** Dog-assisted reading motivated all three case study students for different reasons because they had differing goals and purposes. Each student fully participated, always showing enthusiasm for their time with Zena and Miss Pat (and with other dogs and handlers, as available). Their eagerness to read stimulated an increase in
actual reading—via time spent and amount of text read. For all three students, dog-assisted reading provided an opportunity they did not have during their regular classroom day. They gained the opportunity to read noncomputerized books in a calm and playful atmosphere with a touchable nonhuman companion, with the focused attention of a skilled guide, and without the persistent test-follows-reading format common in the classroom.

As an emergent reader, well behind her peers, Anna wanted to become more competent, a tenet of motivation (Pink, 2011). The dog-assisted reading program provided increased opportunities for Anna to practice. Assisted by a routine of support from Miss Pat as a more knowledgeable other (Vygotsky, 1978), and the calm, attentive presence of Zena as a reading “buddy,” Anna progressed from basic decoding of easy readers to enjoying and understanding stories in increasingly difficult texts. Showing only minimal interest in reading in class without a dog present, Anna eagerly completed many Failure Free Reading books in the office, and finished an entire instructional-level chapter book, something she had never done before. Anna even persisted for several sessions trying to read a frustration-level book to Zena. Through reading with the dog and handler, Anna gained self-confidence and self-efficacy, additional tenets of motivation (Schunk & Zimmerman, 1997). Anna’s parents commented that Anna had not been reading until recently and now routinely read at home to her little brother. Anna’s teacher observed that Anna wanted to read with every dog who visited the program.

Michele, a reluctant reader, became motivated to spend time with a dog. She initially read only the minimum amount of text before turning to pet and play with Zena. As she read, Michele simultaneously stroked and cuddled the dog, using its comfort, physical proximity, and emotional support to engage in reading (Vormbrock & Grossberg, 1988). Over time, the dog acted as a bridge, helping Michele become more interested in the reading itself. In one early
session, Michele first announced she would read only one easy book, then changed her mind and read a second. Another time, Michele read an additional book when Miss Pat suggested she choose it with Zena at her side. Michele eventually read with absorption, telling the dog “I’ll pet you when I’m finished,” asking for additional reading time, and occasionally reading ahead between sessions. In class, Michele sometimes asked to read first when the dog was present and spontaneously wrote letters to her favorite dog and handler, although she did not voluntarily write letters otherwise.

Tony, already a skilled reader, rarely read more than a few sentences at a time in class before losing focus and going off-task. In addition, although Tony enjoyed reading, he lacked opportunities for pleasure reading in the classroom due to his challenging behaviors. Working with Zena and Miss Pat empowered Tony with calming strategies that helped him relax and be in control of his learning, important principles of motivation (Csikszentmihalyi, 1990). Teachers and family noticed Tony’s increased self-control, self-confidence, and self-esteem after he began reading with a dog, adding to Tony’s motivation and self-efficacy (Schunk & Zimmerman, 1997). When Tony created his own narratives, he enjoyed having Zena in the social learning group (Vygotsky, 1978) as an audience member and as a “hook” for character creation. More than any other student, Tony verbalized how much Zena’s friendship and nonjudgmental attentiveness motivated him. Tony consistently asked for more time to read with Zena, did not want to stop when his sessions were over, and began to read ahead between sessions. Tony also learned to stay on task, reading for 10–20 minutes in school without becoming distracted, and as much as 2–4 hours at home, which he had not done before. His mother commented that Tony spent more time reading at home after he had read at school with the dog.
The uniqueness of the dog in the social group motivated all three students. Each derived support from petting and stroking Zena, using touch and physical proximity as agents of calmness, comfort, centering, or pleasure. Reading to the dog became more interactive, personalized, and meaningful for the children than the normal classroom routine of reading alone with a computer. All three students looked forward to their time with Zena and Miss Pat and expressed disappointment or regret when they could not participate (due to absence or needing to leave class). The dog became a vital member of the social group, and the students did not want to “let her down.”

The dog’s presence supported each student’s unique needs for attention, attachment, comfort, and calm, and enhanced their self-esteem, self-confidence, and self-efficacy. The handler’s conversational style and authentic interactions, plus her use of the dog as a group member, created a playful and creative atmosphere for learning. This interaction led to positive and relaxed reading experiences, increasing the students’ motivation and ensuring they read more in terms of both time and quantity. The enthusiasm to read with or to a dog continued when the program entered the classroom, motivating staff and students who were not even part of the study.

**Motivation through book and genre selection.** Book choice and access to a wide range of books are vital links to support reading motivation (Allington, 2009). Choice is especially central to increasing student interest and participation because it lets readers focus on what is relevant and meaningful to them, and offers them a sense of control over their learning (Allington & Gabriel, 2012). Anna, Michele, and Tony all expressed their desires for specific reading materials and genres. While the presence of the dog was not vital to this aspect of
motivation, the greater informality and spontaneity of dog-assisted reading sessions usually prompted more choice than the regular classroom environment.

Anna initially expressed a preference for Failure Free Reading books that she could read independently (Clay, 2002) because of their easy, repetitive, and syntactically controlled language. Anna’s teacher wanted her to read higher level books and Anna, who wanted to be at a competence level closer to her peers, tried to comply. However, Anna continued to articulate her desire for Failure Free books and finally convinced her teacher and Miss Pat that she needed to read easier text. In response, Miss Pat introduced the Magic Treehouse series, which was at a higher level than the Failure Free books and closer to Anna’s classmates’ reading materials (but in Anna’s ZPD). Through Magic Treehouse, Anna succeeded in completing her first chapter book, an important milestone for her. Anna also loved humor, and when she had the opportunity for self-selected reading, she repeatedly chose amusing titles that inspired laughter and imagination.

Michele’s clear preference for books about dogs highlighted her passion for animals. Michele believed the dog-assisted reading time should focus on books about dogs and she took a leadership role by coordinating the creation of a small library filled with books about dogs and other animals. Having access to books in her genre of interest (Gambrell, 2011), Michele began to read more consistently during sessions and to read ahead between sessions.

Tony, a skilled reader, preferred mysteries and thrillers that provided him with an outlet for his imagination and theatrical reading skills. Like Anna, Tony loved humor, and repeatedly asked to read a book of short, dog-related vignettes that featured funny observations about the relationship between dogs and their people. Near the end of the study, Tony lobbied to transition from reading books to telling his own stories, where he could use his vast talent for language and
imagination. Motivated by the attention and opportunity for self-selected work, Tony filled his narratives with creative language, fantastic ideas, and rich descriptions, usually including Zena as a character. Through storytelling, Tony changed his classroom identity, shifting from isolation to inclusion, while performing a literacy-related task he found personally meaningful.

All three students valued the opportunity to interact with books and genres of their choice. Each advocated for their preferences in content, form, and reading level. Through choice, all three students showed more motivation for literacy activities by reading more and eventually sharing their favorite choices with other students in the classroom.

**Motivation through relationship-building with an expanding audience.** The three students built strong relationships with the dogs and handlers during the dog-assisted reading experiences. In the early part of the study in the office, the students, dog, and handler learned how to connect to become a social learning team (Vygotsky, 1978). Later, the dog-assisted team learned how to interact in a larger social sphere with other students and adults in the classroom.

Initial team-building depended on several factors. First, students became comfortable with the dog so they could feel safe and enjoy the dog-assisted reading activity. The students also had to build a relationship with the handler so they could trust her guidance, engage in conversation, and relax into reading. Miss Pat assisted in this pursuit by being sensitive to the needs of each student, discerning which approaches elicited the highest response, and determining how to best talk for Zena to integrate that unique form of communication into the social encounter, since each child had varied interests and modes of interaction. This process took time and consistency to develop (Beck & Madresh, 2008; Vallerand, 2000).

In the office, students had access to my bookshelf plus books brought in by Miss Pat, the autonomy to choose self-select books for at least part of each session, and the uniqueness of the
dog as a reading partner. These aspects provided meaning, value, and significance to the experience (Allington & Gabriel, 2012; Guthrie & Humenick, 2004; Newmann et al., 1992), helping unite the team by making them all “insiders” in an ongoing special event (Rogoff, 2003). Miss Pat reinforced the team relationship with small but useful items such as pencils and bookmarks with Zena’s picture on them that the children used even when the dog-assisted reading sessions concluded. Using Zena to aid the process, Miss Pat worked differently with each student to build relationship and motivate reading.

Miss Pat actively supported Anna’s reading with cues and prompts, engaging Anna in conversation and talking for Zena during relevant plot moments. Anna seemed to crave this kind of attention from an adult and enjoyed reading to an active listener, readily responding to Miss Pat’s interjections and questions, and smiling whenever Miss Pat praised her reading quality. Miss Pat also raised Anna’s awareness of Zena as an audience member, pointing out the pleasurable and calming effects Anna’s voice had on the dog and routinely making references to Zena’s reactions. Anna checked often to see that Zena listened to her. Anna’s experiences with Zena and her feelings for the dog helped her better comprehend what she was reading by “pretending this story is about Zena” and by using Zena as a reference for comparison of plot points and ideas. Anna liked being a more knowledgeable other for the dog, routinely holding books up to show pictures to Zena and explain the story. This action later linked to Anna being a more knowledgeable other at home where she enthusiastically read to her younger brother—an activity that indicated her motivation was becoming intrinsic.

Anna spoke and wrote repeatedly about Zena’s calming effect, and how it motivated her to want to read with the dog. Anna trusted Miss Pat’s assistance in guiding her to read increasingly difficult texts. Miss Pat’s sensitivity to Anna’s needs helped select the *Magic*
Treehouse series that turned out to be exactly appropriate to increase Anna’s performance and self-image as a reader, further expanding motivation. Anna’s one-on-one work with Miss Pat and Zena influenced her to later become more interactive with fellow students in the classroom, where she most often expanded the relationship-building by sharing books that made her laugh. Anna became a better reader so she could become adept enough to “join the literacy club” and share in book-related talk with classmates and teachers, a desire she had accomplished by the end of the study.

Michele, initially much more distant with Miss Pat, focused exclusively on Zena during sessions and read mainly for the opportunity to spend time with the dog. Michele loved to touch, stroke, cuddle, and talk to Zena. As Michele’s mother observed, “The attention that the dog gives her is very important” and “with the dog, the connection is there for her.” Michele chose books she thought would interest Zena, noticed when the dog was attentive, and sometimes held books up so Zena could see the pictures. After a while, the regular reading sessions and time with Zena helped Michele grow more comfortable with Miss Pat, and Michele began to interact more with the handler and the texts. Miss Pat used their time to listen closely to Michele’s reading, respond to the plot, speak for Zena, ask questions, and share anecdotes about the dog. Miss Pat often used Michele’s relationship with Zena as a motivator for reading and book-related talk. Michele later transferred this relationship to reading at home to her own dog, especially when she was upset, demonstrating intrinsic motivation.

Miss Pat often made comments or observations that made Michele laugh. By the end of the study, Michele had attached not only to Zena but also to Miss Pat. Michele’s teacher commented that Michele craved emotional connection and one-on-one interactions and Miss Pat provided these for Michele while ensuring Zena had a prominent role during the visits. When the
dog-assisted reading sessions moved to the classroom, the presence of the dog and handler helped Michele build relationships with her peers and she eventually grew comfortable reading aloud to them, talking and interacting with them in book-related activities.

With Tony, Miss Pat initially used Zena as a different kind of bridge, helping him stay calm and regulate his loud voice. Tony cared about Zena and did not want to upset her; Miss Pat used this concern to help Tony control his disruptive behaviors and stay focused, improving his reading and socialization. Tony also cared that Zena was an attentive listener and was gratified to have an opportunity to read to someone who was so focused on his every word. Like the other students, Tony usually selected books he thought Zena would enjoy. Tony repeatedly spoke, wrote, and drew pictures emphasizing how much his relationship with Zena meant to him and how it motivated him to read. Miss Pat routinely spoke for Zena and reacted to the plot, helping solidify her own and Zena’s roles as audience members; something Tony, who loved performing, particularly craved.

Miss Pat recognized Tony’s creative and intellectual abilities, posing text-related questions at a higher level than with the other students and engaging in more collaborative banter. She also talked with Tony about his feelings when he was upset or when there had been classroom behavior incidents, and she frequently made Tony laugh with her comments and observations. These interactions helped Tony relax, engage, and take risks with his reading, eventually transitioning into creating his own narratives. Tony loved storytelling, and Miss Pat supported this by providing focused and positive attention, asking leading questions, and making comments that inspired Tony to richer and more coherent use of his already fertile imagination.

Tony included Zena in all his original “mind stories,” and responded to Miss Pat’s suggestions with enthusiasm. As with Anna and Michele, Tony’s relationship building in the
office later translated into his becoming more interactive with his peers in the classroom, doing so in ways that improved his relationship with them. His storytelling, in particular, roused the interest of the entire class, helping Tony feel valued and respected by others while doing something he found personally meaningful. Tony’s relationship with Zena and Miss Pat also led to intrinsic motivation as he began to read alone at home for hours at a time. Tony’s mother commented repeatedly how reading with Zena had raised Tony’s self-esteem and motivation to read.

All the children came to care about Zena and Miss Pat and behaved as if they believed Zena and Miss Pat cared about them. They enjoyed having Zena as a listener and believed that she, in turn, enjoyed their reading. They responded positively to Miss Pat’s interactions, which Miss Pat gauged and modified for each student. The calm, supportive, mentoring relationship of the dog-and-handler team created repeated positive reading experiences, increasing the students’ confidence and motivation for reading, as well as their opportunities for social learning (Gambrell, 2011; Vygotsky, 1978).

The relaxed atmosphere, the dog’s friendly and nonjudgmental attentiveness, and the handler’s playful yet instructive interventions also enhanced motivation, creating a more authentic reading experience with a focus on the pleasure of reading rather than the verification of specific reading skills (Allington, 2002; Allington & Gabriel, 2012; Moll, 1990). Opportunities to act as more knowledgeable others for the dog and to help calm the dog with their reading helped raise the children’s self-esteem, self-confidence, and self-efficacy, further increasing motivation for reading (Guthrie, 2001; Hymel et al., 2006; Ryan & Deci, 2000; Schunk & Zimmerman, 1997). When the dog-assisted reading team moved to the classroom, all three students successfully transferred their gains into more positive interactions with their peers.
around reading, which further enhanced motivation as each student gained evidence of being valued and respected by others in the class for their reading and talking skills (Newmann et al., 1992; F. Smith, 1988; Vygotsky, 1978). Overall, the various sources of increased motivation for reading segued into all three students reading more at school and at home.

**Engagement**

Whereas motivation speaks to the drive and energy to act, engagement is the action itself: the connection between the student and the task (DEST, 2008). Some behaviors associated with engaged learning include displaying effort (perseverance and stamina), staying on task (focus), enjoying learning, being an active listener, participating verbally, being mastery-oriented, and having self-efficacy (Guthrie, 2001, 2004b; C. E. Smith, 2009). In addition, engaged reading is associated with “entering the storyworld”—losing track of time, reading silently, and moving beyond the mechanics of reading to internalize the content of a book in the moment. All three students demonstrated several of these engagement behaviors over the course of the study, including entering the storyworld. As previously discussed, motivation and engagement have considerable overlap. For example, wanting to read more and spending more time reading were signs of increased motivation, but are also indicators of engagement. Similarly, enjoying reading and wanting to get better at it overlap both motivation and engagement.

Anna wanted to become a better reader (as described by Pink, 2011), and dog-assisted reading provided more opportunities for her to practice. With Miss Pat’s assistance, Anna moved from primarily focusing on decoding to comprehending text and stories at higher levels of difficulty. She persevered for five sessions with a challenge-level book, and when she became frustrated, Miss Pat offered a book in Anna’s ZPD (Vygotsky, 1978). This preparation ensured that Anna could continue her efforts to improve her proficiency. When given the choice to pet
and brush Zena at the end of a session, Anna preferred instead to read another easy book to Zena. Staying focused on her reading even when it was difficult, Anna eventually finished an entire chapter book, something she had not done before.

Anna came to enjoy learning: smiling, laughing and often saying “I love reading” during the sessions. Anna also came to prefer the more challenging books at her instructional level, saying she liked them better than the “little” books. Anna gained self-confidence and an improved self-image as a reader through reading higher-level texts. During classroom dog-assisted reading sessions, Anna learned to listen attentively to others read and participated verbally by reading with others and sharing favorite books with laughter and enthusiasm. Anna learned to enter the storyworld with the book *Sleepy Nicholas* by Brande: she laughed heartily at the silly things Nicholas did, became completely engaged with the plot, and delightedly and spontaneously ran to others in the room to share the story and pictures with them.

Michele began the year as a reluctant reader who did not want to read for long periods. She needed a dog-related plot to become engaged in reading; other subjects were not sufficiently meaningful for her (Newmann et al., 1992; Pink, 2011). Miss Pat predicted that if Michele could keep reading long enough with a book that had a dog as a main character, the plot would eventually pull Michele into the storyworld. This happened with *Follow My Leader* by Garfield, a book about a blind boy and his seeing-eye dog. Michele became more engaged in the book’s storyline and less focused on Zena, sometimes telling Zena “I’ll play with you later,” that is, when she was finished reading. Sometimes Michele read silently, indicating deep absorption in the storyworld. Miss Pat supported Michele by frequently providing sustained time for reading, not interrupting except to provide quick and targeted support for a new word or concept.
Michele increasingly demonstrated focus and stamina in her reading and began to participate verbally by voluntarily asking questions and making comments and connections. Her increasing self-confidence emerged through increased vocal volume and more physical composure, less touching of the dog, and more concentration on the work. When dog-assisted reading moved to the classroom, Michele continued to remain focused on her reading in spite of room noise and other distractions. During classroom read-alouds without a dog present, Michele usually worked on jigsaw puzzles and did not talk. With a dog and handler present, Michele began to listen attentively to others read, and to offer comments and questions.

Tony often got sidetracked from reading by his own frequent comments and interjections and was easily distracted by talk or activity in the room. As Tony relaxed into the routine of reading with Zena and choosing his reading material, his focus and stamina increased (Gambrell, 2007). Miss Pat provided support and strategies to cultivate Tony’s engagement, such as keeping her eyes on the book when Tony began to stray, using Zena to help Tony stay calm, and supplying questions and conversation to keep Tony focused on the text and storyline. Using books from his beloved Goosebumps series by Stine, Tony began reading for pleasure in the school milieu, sometimes showing deep engagement by reading silently. Tony also started asking for more reading time, and began to read for long periods without becoming diverted, even when the dog was no longer present, such as when he read for hours at home.

When dog-assisted reading entered the classroom, Tony’s increased focus and self-control helped him participate in more peer-based social learning, changing his classroom identity and raising his status with the other students. Tony also listened attentively when his peers read, making comments, asking insightful questions, and adding entertaining sound effects. Tony gained even more self-confidence, self-esteem, and self-efficacy by telling his “mind-
stories” to classmates, becoming engaged in his own original storyworlds and pulling others into them as well.

For all three students, engagement increased gradually through a combination of the pleasure and support of reading to a dog (Hall et al., 2016), book selection (Allington, 2012), Miss Pat’s guidance (Vygotsky, 1978), and the students’ steadily increasing sense of self-efficacy (Guthrie, 2001). The dog and handler became a powerful team in helping create calm and concentration. All three students relaxed and read for longer periods. By the end of the school year, each student had experienced entering the storyworld: losing track of time and becoming completely engaged in the book at hand.

**Literacy Processes/Behaviors**

Literacy processes such as comprehension are internal, and must be inferred by observation of behaviors. Fluency-related behaviors are straightforward: the child reads at speed with accuracy and prosody (expressiveness). Comprehension-related behaviors are more complex, involving multiple and often intertwined levels of interaction. At the most basic level are behaviors associated with the mechanics of reading, or what Fountas and Pinnell (2006) call “within the text.” These behaviors include: decoding, self-monitoring, self-correcting, searching for information, remembering information, and fluency-related behaviors such as maintaining and adjusting rate and phrasing (Block & Pressley, 2002; Clay, 1993; Fountas & Pinnell, 2006). At a higher level are behaviors associated with talking and thinking “beyond the text” including: predicting, using prior and content knowledge, making text-to-text, text-to-self, and text-to-world connections, generating questions, inferring, and synthesizing (Blachowicz & Ogle, 2001; Fountas & Pinnell, 2006; Keene & Zimmerman, 1997). At the most complex level are behaviors associated with talking and thinking “about the text”: noticing and evaluating the writer’s craft,
language usage, literary devices, and characteristics of genre (Fountas & Pinnell, 2006; Pearson, 2011).

All three case-study students demonstrated a combination of these literacy behaviors during the dog-assisted reading study. Behaviors changed over time, increasing with students’ enjoyment, confidence, and proficiency. Students became more self-directed and drew on Zena and Miss Pat for inspiration.

**Fluency and other foundational literacy behaviors “within the text.”** All three students improved their “within the text” behaviors over the course of the study. Anna developed fluency, decoding, and concrete question-answering. Michele improved in fluency through increased confidence, volume, and expressiveness. Tony refined his already-high fluency by better modulating his volume and tone. All three students improved in self-monitoring and self-correcting.

Anna initially displayed the behaviors of early readers (Clay, 2002). She tracked words with her finger, read slowly, and used a choppy word-by-word approach. She demonstrated little expression and ignored punctuation. When she came to an unknown word, she looked at picture cues for support or asked a more knowledgeable other for help. She rarely self-monitored or self-corrected. Although eager to tackle new books, Anna had difficulty decoding, and when asked basic comprehension questions that involved direct searching of the text, she often could not do so without assistance.

When Anna started reading with the dog-assisted team, Miss Pat began by supporting Anna with cues, prompts, and strategies for decoding, sometimes providing an unknown word directly so Anna could continue reading. Whenever Miss Pat supplied a word, Anna immediately repeated it. When Anna lost her place, Miss Pat read some of the sentence to get her started again.
Anna gained confidence with Failure Free Reading books, whose repetitive structure and simple story lines were easy for her to process. As Anna’s decoding improved, she began to read in short phrases rather than word by word. Concurrently, Miss Pat explained and modeled prosody and Anna began to read with expression, showing improved intonation with specific words and phrases. Miss Pat also encouraged Anna to use her voice in ways that “soothed” Zena or “calmed her down.”

As Anna progressed to higher-level texts, she could no longer rely on picture cues to read unknown words, so she learned, with Miss Pat’s assistance, to sound out multisyllabic words by partitioning them. Anna began to read at a faster pace while continuing to improve her word recognition and expressiveness. Miss Pat consistently explained the meanings of unknown words so Anna would not only be able to pronounce them correctly, but would also know what they meant and therefore say them with proper prosody. Sometimes instead of explaining a new word, Miss Pat would prompt Anna with helpful cues and questions to figure out the meaning herself, and Anna became more fluent as she gained confidence through this process.

Eventually, Anna transitioned from waiting for Miss Pat to supply hard words to independently working through the words on her own. She also began to catch herself in errors and to self-correct. Miss Pat helped by stopping Anna when she misspoke. Miss Pat often asked Anna questions about what she was reading that dealt directly with what was in the text, and Anna answered, sometimes rereading the text for confirmation, sometimes needing a cue from Miss Pat to do this. By the end of the study, Anna read text at her instructional level with confidence and expression, and brought these improved abilities into the classroom to read aloud to her peers.
Michele began the study with strong decoding skills and mostly automatic word recognition, but with limited regard for meaning. She read quickly, ignoring punctuation and proceeding as if the text were one long run-on sentence. She used minimal expression, and a soft voice. Sometimes she used her fingers to keep her place. When she came to an unknown word, she usually skipped over it or mumbled a guess and did not notice when she read words inaccurately, accepting her miscues even if they changed the meaning.

Over time, with the support of Zena and Miss Pat, Michele’s reading rate slowed, her volume increased, and she began to self-correct and sometimes to self-monitor. Her body posture relaxed and she became less focused on petting Zena. Her expressiveness improved, and she began to pause or ask for help with difficult words. Michele began to read for meaning. Miss Pat often started sessions asking questions that summarized the previous session’s coverage, which Michele usually answered correctly, remembering information or referring to the text to get an answer. By the end of the study, Michele had progressed to reading fluently and confidently, and being able to consistently answer “within the text” questions.

From the beginning, Tony read with energy and expression, adding sound effects and character-based accents, thrilled at the opportunity to perform for an audience. Still, Tony often read at too loud a volume and with a fast, frantic pace. Miss Pat guided Tony to lower his voice and read more slowly by using Zena as a “hook,” encouraging Tony to help Zena “stay in a calm state” by speaking more gently. Miss Pat also had Tony take “relaxation breaks” to pet or brush Zena, comparing the long slow brush strokes to the way Tony should read: long slow breaths and smooth phrasing. Tony began to self-monitor and self-correct his volume and speed. Miss Pat often asked Tony “within the text” questions, which Tony usually answered from memory, occasionally referring to the text for confirmation. On the rare occasion when Tony encountered
an unknown word, Miss Pat provided vocabulary assistance. Near the end of the study, a fellow
student compared Tony’s delivery to that of a professional actor.

All three students improved their “within the text” behaviors over the course of the study.
Miss Pat provided targeted assistance to each student to support these changes. Zena, audience
member and listener, provided an additional purpose for fluent reading.

**Higher level comprehension behaviors “beyond the text” and “about the text.”**
Comprehension is the goal of reading: a “process of simultaneously extracting and constructing
meaning through the interaction and involvement with written language” (Snow, 2002, p. xiii).
Although “within the text” reasoning is fundamental to comprehension (because if a child cannot
decode a word, they cannot move on to understanding it), the literacy behaviors associated with
“beyond the text” and “about the text” more commonly link to comprehension: that is, being able
to talk about stories and characters, answer questions, and draw expanded inferences and
conclusions are typical ways of gauging comprehension.

Throughout this study, the students worked to extract and construct meaning using such
aids as authentic dialogue, talking about books, and talking about thinking. All three students
talked with Miss Pat about storylines and characters. Miss Pat guided the students to work in
their ZPD, offering skilled scaffolding, and employing Zena in a variety of ways to help elicit
higher level comprehension behaviors. Miss Pat reacted to story events and asked questions that
helped the students construct meaning. She also routinely used humor to aid comprehension and
made text-to-text, text-to-self, and text-to-world connections, modeling the process for the
students so they began to make text-related connections themselves. Miss Pat’s interactions and
use of Zena helped the students extend their thinking about the details of what they were reading.
As an emergent reader with difficulty decoding, Anna initially focused on the pictures in the low-level books she read, using the visuals to bridge her textual understanding. She would make comments about the pictures and engage in related conversations. Over time, as the texts Anna read became more sophisticated with fewer illustrations, Anna still engaged in the comprehension process by asking questions about confusing vocabulary or plot actions, and by making text-related comments. Miss Pat repeatedly explained words and concepts, supplying Anna with needed background knowledge. Miss Pat often made connections to Zena, building on Anna’s growing knowledge of dogs, and Anna independently used Zena as a “hook” to better understand and relate to story scenarios (e.g., “I’m pretending this book is about Zena”).

Miss Pat asked questions requiring that Anna make simple inferences (e.g., “Where do you think the baby sister goes?”/”Day care.”). Anna became strong enough to defend her inferences, as when she thought the boy in My Life in Dog Years by Paulsen might be dead. Miss Pat also asked Anna to make predictions and reminded Anna when these turned out to be correct. Anna often made connections to her own life and personally responded to story events, eager to share her opinions and reactions. All these interactions were “beyond the text.” Anna’s emergent reading level did not lend itself to “about the text” conversations, although Miss Pat did teach Anna to understand how books in a series “worked” (common characters, predictable structure), and raised Anna’s awareness about the author of a book. These gains in the office later transferred to the classroom where Anna began to engage in lively book-related conversations and interactions with her peers.

Michele began the study as a reluctant learner, accurately answering basic comprehension questions but not demonstrating any investment in the stories or dialogue. Knowing Michele’s love of animals, Miss Pat made use of dog-related books and topics to engage Michele’s interest.
and create “beyond the text” interactions. Miss Pat regularly related story details to events in her own, Zena’s, or Michele’s life. This helped personalize the storyworld for Michele, who began to spontaneously make text-to-self and text-to-world connections herself by making comments, asking questions, and sometimes offering humorous or ironic observations, often dog-related. Miss Pat helped Michele think more deeply about what she was reading by asking questions and prompting Michele to make inferences and predictions.

Recognizing Michele as the most tactile of the three students, Miss Pat sometimes used touch-based interactions to extend Michele’s comprehension, as when she brought in a Braille book to help Michele understand a blind person’s world, and when she suggested Michele read a book about dog yoga and put Zena into the postures. Michele’s improved verbal interactions and increased interest in stories later transferred to the classroom, where she began to engage in book-related talk and other activities with her classmates. Michele’s behaviors all stayed “beyond the text” and did not venture into the realm of “about the text.”

Tony came to the study already demonstrating high-level comprehension behaviors “beyond the text” and “about the text.” Working with Miss Pat and Zena helped him build on these strengths. Tony routinely made text-based connections, inferences, and predictions. He loved wordplay and puns, which informed his unexpected text-to-text associations; his text-to-self and text-to-world observations were so rich and original that Miss Pat commented that he made “connections and associations that high-school kids can’t make.” Tony frequently spoke to or for characters in a book, often with great emotion and engagement as if personally involved. Like Anna, he sometimes used Zena as a focus to personalize story events.

Tony spontaneously made evidence-based predictions and often confirmed them by checking ahead in the text. Tony also often synthesized—which none of the other case-study
students did—combining information in the text with his own imagination and prior knowledge, such as when he created accents and backstories for book characters. These activities enriched characterization and expanded meaning making. More than any other student, Tony enhanced his understanding by talking aloud about what he was thinking, and by using body movements and gestures to bring stories to life. When Tony’s comments and actions disrupted the story’s flow, Miss Pat would gently lead him back to reading.

Tony and Miss Pat engaged in lively discussions about books, and on the few occasion when Tony lacked background knowledge, Miss Pat supplied it, using Zena as a reference. Tony engaged in “about the text” behaviors, questioning the author and making judgments regarding plot construction. Miss Pat supported Tony by asking him “about the text” questions such as why an author used italicized font for certain text, and inviting Tony to add a confession for Zena to the humorous Dogfessions book by Moustaki. Tony correctly answered such questions, and his funny “dogfession” reflected the same style as the book while incorporating clever and original wordplay.

Tony enjoyed biographical information on authors of his favorite books, wanting to share the information with others. Tony’s responses to Miss Pat’s questions and comments demonstrated rich understanding of language and of the storylines. In his “mind stories,” Tony synthesized personalized events with thriller/adventure storylines from books and video games he loved, usually adding Zena as a character, and sometimes smoothly changing her into other forms such as a robot (Zena-tron) or a human (blond-haired girl). During these narratives, Tony applied various elements of “about the text” reasoning, often guided by Miss Pat, who prompted him to build coherency and consistency in his plots and characters. This support enhanced
Tony’s appreciation for the writer’s craft, and he demonstrated his understanding of language usage, foreshadowing, setting, and characteristics in the thriller/horror genre.

When dog-assisted reading moved to the classroom, Tony used his broad “beyond the text” understandings to act as a more knowledgeable other for his classmates. Tony supplied classmates with background and content information, adding humorous sound effects and observations about stories to make meaning more accessible to his peers, and engaging in book-related talk with fellow students. Tony also showed higher level comprehension behaviors in some of his artifacts by creating acrostics and other written games with words.

Using Zena as a reference, Miss Pat guided all three students to improve their higher level comprehension behaviors. Anna, Michele, and Tony all extended their use of text-based connections, inferences, and predictions, as well as prior and content knowledge. With humor, authentic dialogue, and Zena to personalize the storyworld, Miss Pat individualized her approach to each student to help them build on their strengths, inspiring an abundance of self-directed and other-directed book-related talk.

**STAR test results.** I also considered students’ standardized test scores and discuss the results here because test data is often interpreted as a way to measure literacy processes/behaviors. The STAR program is an approved third-party comprehension test that Upton district teachers must use three times per year for their Annual Performance and Progress Reports. STAR is a computerized cloze test in which students are asked to supply words that have been removed from a passage to demonstrate their ability to comprehend text. The students are tested in September, January, and May. The results appear in Appendix H.

All three case study students improved their STAR scores from September through January, with Michele and Tony gaining over 1.5 years in the 4 months of working with Miss Pat.
and Zena. Then, all three students dropped slightly from January to May, although they still showed overall growth from their September scores. Several possible reasons exist for this pattern. Upton frequently notices a drop-off in May scores. Griess (2010) reported that erratic test scores are not uncommon in students with learning disabilities. Additionally, in the office, where the social group was small and the environment free of distractions, the students focused more on their reading and spent more actual time reading—cornerstones of building better readers—demonstrated by their January test scores. When dog-assisted reading moved from the office into the classroom, although the dog and handler were still present, the focus shifted to the excitement of reading with others, and the loss of uninterrupted reading time and targeted attention could contribute to decreased scores. Through the classroom dog-assisted reading sessions, the students continued to cultivate better attitudes about reading, had repeated positive experiences around the social aspects of reading, and learned for the first time how to read, talk, and think in a social group. This laid the foundation for substantial gains not easily quantifiable.

**Influence of Social Context**

In this study I observed dog-assisted reading in different contexts. Throughout the study, I obtained ongoing data of the students in the classroom without any therapy dog. In the office, I observed individual students interacting with one dog and handler team. Later, I observed these same students interacting in the classroom with two dog-and-handler teams. The motivation, engagement, and literacy processes/behaviors that emerged first in the office later transferred into the classroom when the dog-assisted reading study moved there. Additional behaviors developed in the classroom that I did not observe in the office or in the classroom without the dog. The presence of the dog-assisted reading team had a far-reaching influence that impacted all the classroom students and staff.
The Three Contexts

Classroom without a therapy dog. Individualized instruction without the support of a therapy dog and handler involved working alone on computer-based literacy assignments, rarely interacting with other students. A test usually followed the computer-skill work, providing the students with few authentic reading experiences. A teacher or teacher assistant supported each of the three case-study students, as needed, during this work, but the students showed little enthusiasm for reading, often losing focus, straying off task, or becoming disruptive.

Anna complied with her individualized classroom program, needing much teacher support to complete assignments. When she had the option for non-dog-assisted self-selected activity, Anna did not use the time to read, although she sometimes skimmed books, looking at the pictures. Without a therapy dog, Michele did not read for more than a few minutes in the classroom and became easily distracted, often losing interest and staring into space. In the classroom during individualized instruction, Tony frequently refused to do assignments, questioned their utility, and lost focus, talking, laughing, or complaining to other students, wanting to work on his own creative projects. Some of these behaviors diminished after the three students began working with the dogs on a regular basis but did not disappear altogether, and I still observed several near the end of the study whenever no dogs were in the classroom.

Classroom group literacy events without dog and handler yielded mixed behaviors. During read-alouds, the teacher read while the students listened. Sometimes the teacher asked questions about the story, with a generally limited response. In group content-area lessons, the students gathered at the back table for presentations by the teacher or visiting “experts” on specific topics. The three case-study students showed varying degrees of engagement with these non-dog-assisted group literacy activities.
During these sessions, Anna rarely asked or answered questions, although she usually paid attention and showed engagement through eye contact. Michele did not participate in read-alouds: instead, she quietly worked on jigsaw puzzles, did not contribute comments, and did not answer comprehension questions about what had been read. During group content-area lessons, Michele was similarly disengaged. Tony, in contrast, engaged during read-alouds and presentations and asked questions or answered the teacher’s questions. However, Tony interacted only with the teacher, not with his peers. Additionally, Tony often could not participate in group literacy lessons because of his disruptive behaviors; teachers routinely asked him to leave the room. Even after the dog-assisted reading study began and progressed, these non-dog-assisted classroom interactions did not change much: even though students responded during dog-assisted sessions in the classroom, they frequently did not engage without the dog.

Office with a therapy dog. In the office context, students worked one on one with Zena and Miss Pat without the noise, activity, and interactions of other students. This gave each of the case-study children a chance to read in a sustained fashion and receive targeted personalized support, while minimizing anxiety about performing in front of others. In this environment, each student showed significant gains in literacy learning, including increased fluency and comprehension, as well as more participation in text-related conversations and connections. The students showed greater motivation and engagement, staying focused and on task, sometimes reading silently, reading more in school and at home, and expressing their enthusiasm for reading and for Zena and Miss Pat through cards, letters, and drawings. The students built relationships with Zena and Miss Pat, and Miss Pat learned how to best support each of the student’s specific literacy-learning needs. The students found favorite books and genres and learned how it felt to share them while interacting in the small social group of dog/handler/student.
Classroom with a therapy dog. When dog-assisted reading entered the classroom, the three case-study students continued to read individually with Zena and Miss Pat, but now in the classroom environment, initially staying with the books they had started in the office. At first, Anna and Michele were hesitant to read in front of other students, but within a few sessions became more engaged with their classmates. At this time, the literacy-learning strides made in the office transferred to the classroom, with all three students continuing to show motivation for reading, especially with their favorite texts and genres. They retained their improved fluency and comprehension behaviors in the reading sessions, increasing their text-related discussions and connections now that they had a larger audience with whom to share. The relationship-building experienced in the office with Zena and Miss Pat expanded into the classroom to encompass staff and peers. The students now engaged in new reading events with their classmates, as well as with a second dog and handler, Sasha and Miss Sharon. In addition, several new behaviors emerged in the classroom that impacted not only the case-study students, but the entire class.

Effect of Context on Motivation

Without the dog, none of the three students wanted to read. During the morning work block, Anna and Michele complied with the minimum requirements and did not choose to read during free time, whereas Tony often argued about assignments and refused to do them. During group literacy events without the dog, neither Anna nor Michele interacted much, whereas Tony talked a lot, but only with the teacher, not with his peers. Tony’s behaviors led some of his peers to avoid him. The students usually did not help each other or work together on projects related to reading.

In the office with the dog and handler, all three students developed motivation to read; even Michele who at first only wanted to be with Zena. As dog-assisted reading in the office
continued, all the students read more extensively with increasing enthusiasm, did not want sessions to end, asked about and looked forward to the next session, and shared how much they loved reading with Zena. In the non-dog classroom environment, this motivation often evaporated.

When the students began reading in the classroom with dog and handler, students read and laughed together about books, paid more attention to each other while reading, shared favorite stories, acted as more knowledgeable others for their peers, and engaged in book-related talk and new cooperative behaviors. Students not part of the study often came to the reading rug to join the team. Staff members also joined the circle, sharing information, laughter, and favorite stories.

**Effect of Context on Engagement**

Without the dog, all three students had difficulty engaging and rarely entered the storyworld. During independent reading time, Michele often became distracted, showed no interest in stories and stopped work to stare into space. When Tony worked on assigned literacy tasks, he could not read for more than 1 or 2 minutes before going off task and making comments and jokes that distracted himself and others. Although Anna usually stayed on task with her computerized reading when an adult worked with her one-on-one, she read below her instructional level and showed little perseverance with harder texts. During group literacy events without the dog, Michele worked on jigsaw puzzles, rarely talked, and never volunteered to answer questions or seemed interested in the stories. In larger groups, Anna also rarely spoke, although she indicated interest through eye contact and sometimes asked questions. Tony, highly engaged during group events, loudly made comments for the teachers and shared observations during read-alouds that showed he had entered the storyworld, but did not interact with peers.
In the office with the dog and handler, all three students shifted their reading engagement, becoming more focused and perseverant, and ultimately succeeding in entering the storyworld. This did not happen instantaneously. Michele, especially, started out far more interested in playing with Zena than reading. Miss Pat’s gentle yet persistent support and the use of dog-related books eventually pulled Michele into the storyworld, and she began to stay focused on reading rather than on Zena. Tony needed Miss Pat’s calming strategies and Zena as a focus to rein in his self-disrupting behaviors. As he gained self-control, he stayed on task and became more engaged with the stories. Anna wanted to become a better reader even though she found decoding difficult, and Miss Pat helped Anna persevere with increasingly difficult texts. Each student found at least one book whose subject matter totally engrossed them, and teachers and family members noted the students’ improved engagement behaviors. In the classroom without the dog, however, the students often reverted to their more disengaged stance.

All three students transferred their office-based engagement gains to the classroom when the dog and handler joined the classroom. For Tony, this was immediate; for Anna and Michele it took a little time. At first Michele did not want to read in front of others even though she read aloud in the office for months. Anna initially disengaged when other students read with the dog, preferring to read one of her own books silently at the same time, sometimes becoming disruptive by playing and laughing with the dog. Eventually, all three students became engaged in reading with their peers. All three learned to stay focused on reading in spite of classroom noise and distractions. They learned to listen more attentively when other students read, and they all began to participate verbally with other students, talking about ideas, and asking questions and making comments when other people read.
Michele, the quietest of the three students, sometimes volunteered to read first, whereas Anna and Tony energized the entire room with their delighted sharing of favorite stories. This created a new behavior: shared storyworld engagement, discussed in a later section. Thanks to Miss Pat’s calming strategies, Tony developed sufficient self-control, self-confidence, and self-efficacy to interact with his peers in a way that retained his high energy without becoming disruptive. These engagement behaviors occurred with a dog-assisted reading team in the classroom, but became inconsistent without the dog and handler.

**Effect of Context on Literacy Processes/Behaviors**

In the classroom without dog or handler, students worked independently on computers, sometimes with one-on-one assistance from their teacher or teacher assistants, but without peer interaction. The computer work lacked spontaneity, and the students’ limited motivation and engagement made improvements in specific literacy-related processes/behaviors difficult to gauge through observation.

When the students began regular reading with a dog and handler in the office, their increased motivation and engagement led to gains in comprehension-and fluency-related behaviors readily observed during the office visits. With Miss Pat’s guidance and support strategies, all three students showed improved “within the text” behaviors. They increased in fluency, self-monitoring, and self-correcting. Anna, an emergent reader, gained confidence and skill in decoding as well as searching for and remembering textual information. All students showed “beyond the text” gains by making predictions, inferences, and text-based connections with the help of Miss Pat’s cues, prompts, questions, and comments. Tony also engaged in “about the text” behaviors with books and with his own original mind stories. Miss Pat supported
his engagement by asking Tony “about the text” questions related to structural and craft elements in books, and by challenging Tony to make his narrations rich and coherent.

In the classroom with the dog and handler, the students at first showed mixed results. Tony dove right in and loved performing in front of a larger audience, retaining the fluency gains he made in the office and applying the self-control strategies he had learned with Miss Pat and Zena. This enabled Tony to share his comprehension gifts with his peers without becoming disruptive. The other students quickly grew to appreciate Tony’s dramatic readings, humorous interjections, and assistance as a more knowledgeable other with his extensive background knowledge. In contrast, Anna and Michele needed some time to adjust to the expanded social environment of the classroom with the dog and handler. After gaining a sense of self-efficacy in the office, Anna still remained self-conscious reading in front of her peers. With practice, her confidence grew, and by the end of the year, Anna read to others with pacing, focus, and expression. Staff commented that Anna read in front of others because of the dogs. Michele, the most reluctant to read in front of others in the classroom, at first reverted to focusing entirely on the dog, refusing to read at all. The teacher intervened and insisted that Michele participate and Michele complied, keeping her attention on the dog and ignoring the other students while she read. Over time, Michele relaxed and overcame her anxiety. By the end of the year, she, too, read aloud to her peers with fluency and confidence, and engaged in book-related talk.

Over the study, all three students improved their literacy-related behaviors with the help of Zena and Miss Pat. Miss Barnes believed the dog-assisted reading was the most consistent and authentic reading that the students engaged in that year. If learning is social, then the lack of social interaction and authentic sharing of stories in the classroom would limit the progress of the three learners.
Effects That Emerged only in Classroom With Dog and Handler

Without the dogs, students did not cooperate during classroom literacy events. Instead, they worked alone or listened passively as the teacher read. Students rarely talked about books together or helped each other read. Miss Barnes observed that the students seemed to prefer to work alone at their computers rather than engage in social interactions around literacy. Students viewed reading as a chore to be completed instead of an enjoyable activity to share. The dog-assisted reading program dramatically shifted this culture by creating excitement around reading events and inspiring several new cooperative interactions between students. These new interactions represented a confluence of motivation, engagement, and literacy processes/behaviors. They appeared in the classroom only when the dog was present, and during that time, the students clearly preferred these activities, generated spontaneously through the students’ own efforts. The cooperative behaviors included (a) shared storyworld engagement, (b) reading partnerships, and (c) group readings and discussions, including the emergence of a “literacy club.”

Shared storyworld engagement. When Anna and Tony started reading with a dog in the classroom, they began pulling others into the storyworld with their exuberance about favorite stories, often bringing all classmates into the dog-assisted reading circle (Cazden, 1988). They also experimented more with new stories (new books for Anna, storytelling for Tony), perhaps motivated by the opportunity to share with a larger group.

Anna became particularly excited about reading and sharing stories when she read with Miss Sharon and Sasha in the classroom. With many classmates gathered near the dog, and the opportunity to self-select books she had not read before, Anna took risks with reading and discovered several new books that became favorites because they made her laugh so much.
When Anna later reread these books in what was supposed to be one-on-one classroom sessions with Zena and Miss Pat, her joyous laughter captured the interest of other students who joined her on the rug and in the storyworld. Anna’s excitement became contagious as she talked about plots and shared pictures, sometimes even leaving the rug to show favorite parts to staff and peers. Anna’s joyful mood from reading lifted the overall energy in the room.

Tony’s animated performances attracted others when he began to read with Zena and Miss Pat in the classroom. Students and staff gravitated to the rug to enjoy Tony’s funny accents, theatrical voicings, and expressive body movements. When Tony later began to tell his original “mind stories,” his impact became even greater. The combination of Zena’s dog appeal and Tony’s dramatic talents led students and staff to stop by the rug to pet Zena, laugh, and listen as Tony drew them into worlds of fantasy and adventure. Even students and staff who stayed at their desks to work could not help but look up and listen, often smiling and laughing, as Tony’s presentations turned the whole room into a storyworld.

Michele, the most reserved of the three students, became more engaged with the books she read to herself, and frequently acted as an audience member for other students. She did not make much effort to pull others into the storyworld.

When dog-assisted reading moved into the classroom, sharing storyworlds became a source of enjoyment, stimulation, and laughter with peers. The children grew as readers and developed more autonomy, competence, and willingness to share thoughts and ideas. The classroom environment simultaneously became more interactive and connected as literature and storytelling became avenues for joint pleasure and engagement.

**Reading partnerships.** When dog-assisted reading moved into the classroom, the students who had read with Zena and Miss Pat in the office continued to read individually with
Zena and Miss Pat in the classroom. Students now began to spontaneously come together in self-selected groupings that supported their thinking and learning (Lee & Smagorinsky, 2000). When the students worked in the classroom with Sasha and Miss Sharon, the informal format brought the students together at the reading rug, developing further interactions.

When Anna transitioned to reading with a dog in the classroom, she immediately gravitated to her good friend Kenneth, who had recently returned to the classroom after 4 months in another alternative school. Kenneth, a dog lover, consistently came to the rug during Anna’s individual reading sessions with Zena and Miss Pat as well as the group sessions with Sasha and Miss Sharon. Kenneth and Anna had an easy chemistry and Kenneth enjoyed being a more knowledgeable other for Anna, helping her with difficult vocabulary words. At the same time, Anna seemed to help Kenneth enjoy stories more by modeling emotional responses with her frequent laughter and comments. The two often read books together by trading lines, with much laughter. This partnership decreased Anna’s dependence on adults, continued to increase her motivation to read, and raised her overall confidence as an independent reader.

Tony acted as a reading partner and a more knowledgeable other. With the dog’s help to control his classroom behaviors, Tony began to assist his peers with their reading. As an attentive audience member for Anna, Tony offered vocabulary information as needed so Anna could better understand the text. Tony often joked with Anna about specific language, helping her gain an appreciation for wordplay. He also made humorous sound effects and text-based connections that expanded other readers’ thinking and enjoyment of stories. Tony also worked with Michele to soften her discomfort and reserve. He listened attentively as she read, posed interesting text-based questions, and occasionally engaged in choral reading with her, trading lines playfully. These activities helped Tony feel more connected and provided a continuing
outlet for his desire to perform. Overall, Tony captured Anna’s, Michele’s, and other students’ interests in creative ways, helping them better engage with and enjoy their reading.

As the study progressed, Michele received support and engaged in paired and choral reading with her peers. She did this with both Tony and Kenneth. Other students tended to initiate Michele’s reading partnerships.

The presence of dog and handler, coupled with the students’ new eagerness to share favorite texts, shifted the classroom dynamic from isolation to mutual support, cooperation, and collaboration during the dog-assisted reading-time block. This made the reading sessions more lively and enjoyable and widened the aggregate social impact of dog-assisted reading to include the whole class. When students chose their own reading partners they became empowered. The playful interactions of paired and choral reading that organically emerged added to the positive reading experience. When the dogs left the classroom, these partnerships dissolved, and students returned to isolated work.

**Group readings and discussions.** When dog-assisted reading moved into the classroom, the students had a much larger scope for literacy interactions than just Zena and Miss Pat. Other students and staff members regularly and spontaneously joined in, leading to mutual reading, listening, and discussing. These interactions helped all students grow as readers. Anna, in particular, wanted to feel equal with her peers in reading and enthusiastically joined “the literacy club,” changing her self-image as a reader.

When Anna began reading aloud with the dog in the classroom, for the first time she also began engaging in social conversation and book-related talk. She rarely engaged in social conversation without the dog in class. Zena served as a connector, and other students also wanted to engage with Anna and the dog in class. As Anna became a more interactive member of the
social group, other students reacted positively to her. When Miss Pat introduced Anna to the *Magic Treehouse* series of books, Anna read at a level more consistent with her peers, creating an opportunity for Anna to connect with her classmates through enjoyable conversations about the series.

During group readings and discussions, the students mirrored Anna’s enthusiasm for these books. Several students, including Tony and Kenneth, shared their reading of the *Magic Treehouse* books, further validating Anna’s reading choice. The teacher spontaneously entered *Magic Treehouse* discussions, providing even more support for the choice. These interactions helped Anna change her self-image and feel like a reader, a transition that raised her self-confidence and sense of status in the classroom. Through the reading, discussion, and realization of *Magic Treehouse* as a favorite series of others, Anna evolved into a contributing member of a group of readers, effectively joining “the literacy club.” The club stirred students’ critical-thinking skills and widened their own reading landscapes as new conversations and connections transformed reading into a shared group experience. The dog-assisted reading structure provided the impetus for the creation of this literacy club because, prior to the study, the students spent very little time discussing books together.

Once Michele became confident about reading in the classroom with the dog, she became invested in it, sometimes wanting to go first. She responded to texts and talked more with other students and adults, asking questions and making text connections. She also began to laugh more. The other students responded positively to Michele and became resources for learning. With Tony’s prompting, Michele even made some deep inferences and connections to self. By the end of the study, Michele actively wanted to read to fellow students with the dog in the room.
Reading with Zena helped Tony stay calm and focused, which greatly reduced his disruptive behaviors. Zena helped Tony attract others to the reading area, giving him the opportunity to blend in with the group and become a more integrated part of the growing literacy community, even taking a leadership role. Tony enjoyed all the literature other students brought to the rug, often adding comments and explanations derived from his background knowledge and vocabulary. Tony liked making people laugh. He enjoyed the new social interactions and the opportunity to read, listen, and talk with others about books. Tony’s classmates mirrored this transformation, beginning to enjoy and appreciate Tony’s contributions now that he could make them in his new, more controlled fashion. Tony’s creativity became more socially oriented, such as when he challenged others to find a specific character in a complex picture in one book, and when he asked questions about personal motivation and emotion in another. The students in Miss Barnes’ class rarely engaged in such activities, and Tony helped set the stage for these deeper connections.

In the classroom students needed to share their time with Zena, stay focused within a more busy space, and read and discuss their books with a widening audience. As the study evolved, all three students came to enjoy the expanded setting, interacting with others in a larger group. This helped students who had previously experienced isolation in the classroom. The dog conferred a certain status and acted as a “hook” for others to become interested and engaged. Learning became a shared endeavor as students gained confidence and developed enhanced thinking and communication skills through shared reading, listening, and text-based discussions. Classroom reading became more authentic as it had been in the office, and the students gained the sense of reading for pleasure as well as the pleasure of connecting with others. With the dog
as connector and motivator, new cooperative behaviors emerged in the classroom that did not usually continue in the classroom without the dog.

**Summary**

Therapy dogs impacted all three students’ literacy learning by fostering motivation and engagement, as well as supporting literacy processes and behaviors. In the office and in the classroom, dog-assisted reading spurred improvements in literacy achievement and in the social aspects of learning well beyond that observed in the classroom without the dog.

The relationship and bonding that formed in the privacy of the office between the students, dog, and handler created an important bridge that ignited reading motivation in all the students. Anna, Michele, and Tony enjoyed spending time with Zena and Miss Pat. Importantly, book choice and sustained independent reading time at an appropriate text level, all guided by the support of Miss Pat as a more knowledgeable other, helped the students engage with the text and enter the storyworlds, increasing their fluency and comprehension behaviors. All students read more texts and for longer periods. Differentiated support to each student provided opportunities for authentic and scaffolded talk, enhanced through the handler’s use of the dog to solicit interaction. This helped each student respond to text events. Increased conversations gave the students opportunities to engage in understandings and discussions in the text, beyond the text, and sometimes even about the text.

Later, in the classroom context, new behaviors emerged with the dog in the classroom. The therapy dog became a catalyst for students to connect socially and intellectually in a shared experience. Anna, Michele, and Tony began reading aloud in the regular classroom setting, which they had not done before. They became enthusiastic about reading and discussing books with their peers. Tony emerged as an entertaining storyteller and helped engage class members
with his imaginative “mind stories.” Students and staff not part of the investigation joined the study group to listen and comment, attracted by the dogs, by the noncomputerized texts, and by Tony’s original presentations. This transformed Tony’s identity in the class and lifted the classroom atmosphere. Anna also transformed her identity as she became a member of the reading community, joined “the literacy club,” and began to see herself as a reader. She discovered favorite books, rereading and sharing with others, widening the scope of the reading community. Partnerships formed with students supporting each other’s readings, engaging in text-based discussions, and decreasing their dependence on adults. The social interactions raised the status of reading for the entire class and redefined reading as a source of pleasure. The pleasure extended into the home environment where all three students read more.

Dog-assisted reading helped students increase their motivation, engagement, literacy learning, and literacy behaviors. Reading moved from a mandatory, isolated activity to a source of pleasure and social engagement through the intervention of a nontraditional social member—a therapy dog—and the guidance of the dog’s handler. Through the stimulating and supportive new social community that developed, the students began to engage in authentic and meaningful literacy activities and became excited about reading, listening, and talking about books.
Chapter 9: Discussion

In this multiple case study, I explored how three middle-school special education students engaged with dog-assisted reading teams in different contexts. Given dog-assisted reading’s consistent positive effects on younger readers (Bassette & Taber-Doughty, 2013; Beetz, 2014; Black, 2009; Lloyd & Sorin, 2014; Paradise, 2007; Siegel, 2004; Snider, 2007; Truett & Becnel, 2011), I extended the research to dog-assisted reading with older students. I also observed dog-assisted reading in different environments with the same students. Beyond these two purposes, I explored why dog-assisted reading “works” to better address the complexities involved with dog-assisted reading (Friesen, 2012; Hall et al., 2016; LeRoux et al., 2014; Smith, 2009; Treat, 2013; Walsh, 2014).

Investigating dog-assisted reading has been a seven-year process for me. During this time, I reviewed a variety of studies of animal-assisted therapy and its specific subset, dog-assisted reading. Dog-assisted reading represents a recent development in animal-assisted therapy, and the process of studying dog-assisted reading is equally new. The research field has been shifting from expert opinion papers (Dunlap, 2010; Inklebarger, 2014; Jalongo, 2004, 2005; Siegel, 2004; Snider, 2007), to descriptive reviews (Friesen, 2012; Garnto, 2014; Lane & Zavada, 2013; Pillow-Price, 2014; Shaw, 2013), and to formal research utilizing qualitative, quantitative and mixed studies (Booten, 2011; Fisher & Cozens, 2014; Griess, 2010; LeRoux et al., 2014; Paradise, 2007; Smith, 2009; Smith & Mehan, 2010; Treat, 2013; Walsh, 2014). Formal research still has an unevenness in terms of focus, content and methods. The studies are complicated by the mix of behaviors examined, with both psychological factors such as motivation and engagement often being examined simultaneously with reading behaviors related to fluency and comprehension (as in this study). Beyond the challenges of purpose and content, studies must
acknowledge influential considerations such as the role of the handler, the personality and purpose of the dog, the age/grade of the students, the student population demographics, book choices, the reading program (if any), the length of the study, and the social context. All of these issues have made the formal study of dog-assisted reading complex and challenging in terms of both study design and understanding of the findings.

**Complexities Within Dog-Assisted Reading**

I always believed dogs mattered for students. My belief was wrapped up in my own personal love of dogs, a bias I carried into this study. In the past, I had witnessed the positive way dogs interacted with both children and adults. I saw how the presence of a dog could change the atmosphere and energy in a room yet I was not certain how dogs would impact literacy learning.

Since the introduction of dogs to the school in 2010, administrators assigned therapy dogs to particular students and/or classrooms, and set a schedule for visits. Several dog assisted teams visited twice a month or weekly and listened to the students read in a variety of Randall School locations. Across the school, students prepared for the visits by gathering stacks of books from classroom libraries or the media center. Before and after reading, the students walked the dogs, brushed them, and practiced commands such as sit, shake, stay, and come.

In the study, I expected a positive impact when dogs supported middle-school special education students. As I engaged in this study, however, I learned that integrating dogs into a literacy program was far more complicated and nuanced than I originally imagined. As it turned out, the dogs alone were not responsible for the students’ changes as literacy learners. I discovered that the students’ engagement with the dog, the role of the dog handler, and the role of the context all impacted students in different and multiple ways.
Student Engagement With Dogs

Throughout the study, I came to recognize the range of ways Anna, Michele, and Tony engaged with the dogs. All three students built close relationships with Zena, each in a unique manner, fueled by the regular routine of weekly visits with the clear purpose of reading together.

The dog handler invited the students to talk to the dogs and greet them as they began their time together. One student repeatedly inspected the dog’s fur before reading, commenting on the dog’s physical appearance and their collars, tags, and scarves. All of the students noticed the dog’s moods and regularly commented on whether the dog was peppy or tired. The students looked to the dogs for focus and calm, discussion, and as a valued audience member.

As the students engaged with the dogs, the dogs focused and calmed them. Before reading, the students walked, petted, stroked, and brushed the dogs. While reading, the students used the dog to relax into reading. Two of the students regularly continued petting the dog as they read, with one student encouraging the dog to lay on top of her. During a behavior incident, one student pet and talked to the dog to regain control and focus and then could transition to reading. After reading, all of the students pet and said goodbye to the dog and sometimes even thanked her. When engaging with the dogs, the students had fewer distracting and disruptive behaviors and read for longer periods of time.

The students engaged with the dogs to support both social and reading conversations. While reading, the students involved the dogs as part of discussions. Students made connections to the dogs in the stories and asked questions about the therapy dogs that related to the plot, wanting to know more about dogs or discuss dog-related information. One student continually compared the dog in her story to her favorite therapy dogs, noticing similarities and differences.
in their actions. The students used the dogs as bridges for connections and discussions, with the dogs helping students make connections and enhance understandings during conversations.

All of the students engaged with the dogs as audience members for oral reading, commenting that they enjoyed having the dogs listen to them read aloud. One student regularly shared illustrations with the dogs, and turned to the dog to make sure the dog could follow along. Another student read louder so the dog could hear and positioned her body so that the dog could visually see her. The third student read more softly, and toned down his overly loud voice, so as to not scare the dog. On occasions when he would get loud, the student would look at the dog, apologize, and read more softly. Overall, the dogs provided an additional purpose for fluent and well-controlled reading. Over time, the students gained more self-confidence as readers through engaging with the dogs. Having a dog as listener gave purpose to reading and importantly, inspired the students to spend more time reading.

The students eagerly engaged with the dogs and were motivated to read to them. They liked spending time with the dogs—this calmed and interested each of them and created a fun purpose for reading. Over time, the students’ increased motivation moved from extrinsic (wanting to read more to the dogs) to intrinsic (wanting to read more, period), spilling over into increased reading at home as well as at school. Ultimately, the students interactions with the dogs served to make the reading experience more pleasurable, successful, purposeful and socially rich.

The Role of the Handler

Over time, I also began to notice and unpack the role of the handler and the handler’s interactions with each learner. Initially the handler took time and built a supportive social relationship with the students, using the dog to stimulate social conversations. Simultaneously,
the handler drew on her teaching experiences to approach each of the three students differently, using the dog in multiple and flexible ways to support each student as a reader. She supported each of the students with vocabulary, questioning, text response, and discussion, as well as book and genre choice, appropriate text level, and sustained independent reading time.

The handler helped each of the students with difficult vocabulary, providing or chunking words, giving clues, and explaining new terminology. When appropriate she would include prompts that integrated the dog and made references to the dog’s size, shape, and actions. The handler built on all of the students background knowledge to access new vocabulary, a practice which supported the students to participate and discuss unknown words. Providing vocabulary support helped students better understand the books they read.

During reading, the handler and the dog listened to the students reading. The handler responded as an audience member and asked scaffolded questions to help students better understand the plot and stimulate discussion. She often spoke and reacted for the dog, a practice that extended conversation and enjoyment. Sometimes the handler posed questions of a more literal nature, geared to ensure the student understood the texts read. Other times, the handler asked open-ended questions to help students go beyond the text to deepen their understandings. The handler’s responses, paired with her questions, supported the students to engage with the text and enter the storyworlds, while simultaneously improving their reading prosody, accuracy and volume.

With her educational background, the handler worked to match students with books/genres at their reading and interest levels, something new for the students who previously only read isolated passages on the computer in their classroom. When one of the students struggled with a hard book, the handler brought in a chapter book at a more accessible level. This
book allowed the student to continue reading a longer book that better suited her interests and reading level. The handler also helped to access additional reading material that could be used randomly when a short, humorous book pick was needed. Another time, the handler allowed one of the students to perform his own original narratives. She encouraged the student to use the dog as a character and construct a coherent story through scaffolded questions and prompts. As the handler matched books and genres to particular students, the students became more motivated and engaged. Finally, the handler often stayed quiet while students read aloud, providing them with the much needed time they needed to read. During these moments, the handler would sit and pet the dog, laughing or making a quick comment. In this way, the students knew they had an attentive listener, a practice which further supported their motivation and engagement for reading.

Ultimately, through the handler’s vocabulary support, questions, comments, and book choices, the students also became more attentive to their own performance, and began to self-monitor, self-correct, and discuss stories. The handler’s contributions led to improvements in literacy learning. The handler in partnership with the dog supported the students, acting as a responsive, attentive, non-judgmental listener.

The Role of Context

The contexts of the interactions with the dogs and dog handlers added another layer of complexity to the study. During the first half of the study the students met with the dogs and dog handlers in the privacy of an office. The students read books to the dog and handler, chose the books they wanted to read, and engaged in discussions within a weekly, predictable format. Through the weekly visits, students developed a comfortable routine, learned how to enter the storyworld, and improved a variety of literacy behaviors. The relationships that emerged within
the office between the students and the dog/handler team created a vital link that served to fuel reading motivation for the students. The students’ reading engagement in the office with the dogs was quite a contrast to the students’ engagement in the classroom context without the dogs. Without the presence of the dogs, none of the three students appeared motivated to read, listen to, or discuss books in the classroom.

With the entrance of the dog and handler in the classroom, the social context of the entire classroom began to change. Over time, all three students became comfortable reading aloud to their peers, and began to spontaneously read, listen to, and discuss texts with each other. Reading partnerships and collaborations grew and conversations, both informal and book-related, began to evolve. The students helped each other read and engaged in paired and choral reading. Students discovered favorite books. They discussed these books with an expanding audience, generated new perspectives in the widening reading community, and helped to create a shared storyworld experience among peers. The pleasure of performing for others blossomed, with one student who had previously been isolated in class gaining acceptance and status for his humorous sound effects and commentaries. All three case study students built closer relationships with each other, powered by the routine of weekly classroom visits with the dogs and the dog handlers.

Staff and students who were not part of the study began to gravitate to the dog-assisted reading area, attracted by the dog, by the authentic reading of non-computerized texts, and by the sheer enthusiasm of the dog-assisted readers. When the dogs were in the classroom, the room changed from one of isolated learning to an environment where students and teachers smiled, laughed, and engaged in learning as a community. However, the positive changes in social learning observed with dog-assisted reading did not generally transfer to the non-dog assisted
reading times. The literacy block, without therapy dogs, remained a time with individualized computer reading characterized by isolated work routines and behavior challenges.

**Broader Perspectives—Behavioral Mandates and Instructional Philosophies**

Dog assisted reading in the study revealed a clash of underlying behavioral issues and instructional philosophies within the classroom and larger school. At Randall, an alternative school within a special education division, behavioral issues were the clear priority. School administrators, working with mental health professionals, prioritized behavioral issues in a systematized way, with formalized behavior plans and regular trainings, whereas instructional philosophies and literacy practices remained eclectic and elective. In my study, two of the three students in the study regularly exhibited severe behavior concerns. Therefore, the classroom teacher tended to favor structured activities, such as individualized work on computer programs. While the teacher believed her programming was not ideal, she chose to focus on student safety. Instructionally, students could move forward with their individualized goals through computer-based instruction.

Professional development at Randall also emphasized behavior rather than instruction, with mandated trainings during professional development days to learn how to de-escalate explosive behaviors, and restrain students if there was the threat of physical harm. Instructional training, when offered, was minimal, elective, and offered mostly during after-school workshops. This lack of emphasis on instruction led to differing understandings of the content of literacy instruction—a focus on sub skills versus real literature, and isolated activities versus collaborative learning.

Unlike the behavioral mandates, literacy instruction at Randall changed each and every year. At the time of the study, teachers did not have a systematized literacy philosophy, instead
choosing from an assortment of past and present instructional approaches, focusing on available resources necessary to support a wide range of instructional levels represented in their classrooms. Although there were past attempts to systematize book clubs, guided reading, and reading and writing workshops, state accountability initiatives and administration changes at Randall had sidetracked the building from a unified literacy approach. Resources were dated and skill-oriented. Teachers worried about resources and often photocopied workbooks to insure future materials. The computerized literacy programs were a welcome addition and especially appealing since a wide range of authentic literature and readability levels were unavailable.

Randall classrooms followed a behavior plan with point systems and rewards, and instruction based on each students’ Individual Education Plan (IEP). Dog-assisted reading offered a balance of potential behavior and literacy benefits that appealed to several of the teachers at Randall, as well as administrators, staff, and students. Miss Barnes viewed dog-assisted reading as an opportunity to support students therapeutically while incorporating the pleasure reading that was missing from her curriculum. She credited the success of the program to the dog and handler team, grateful for the emotional support it offered her students in terms of improved comfort and confidence with reading. However, the morning literacy block remained isolated, even after dog-assisted reading had been successfully integrated into the classroom.

Skill-based approaches, like the one in Miss Barnes classroom, historically have been used for students who struggle with reading (Adams, 1990). Yet, the approach lacks the authentic reading materials, and discussion-based protocols that form the underpinnings of social learning (Vygotsky, 1978). Student-centered and collaborative literature-based approaches can improve motivation, engagement, and literacy learning—an approach especially useful for students with reading difficulties (Allington, 2011, 2012, 2013; Allington & Gabriel, 2012; Clay,
1993; Fountas & Pinnell 2006; Scanlon et al. 2010). A literature-based approach might have enhanced the classroom’s literacy learning without the dog, or better still, worked congruently with dog-assisted reading. Nonetheless, Miss Barnes did not build on the positive climate for social learning created by the dog-assisted learning. Instead, she stayed with computerized programs and worksheets. Frustrated with her own literacy program, she struggled with an explosive and volatile atmosphere. A disconnect remained between literacy with and without the dogs, with a missed opportunity to grow a literature-based curriculum that was collaborative and discussion based.

Undoubtedly, dog-assisted reading supported the classroom with authentic literature and collaborative learning approaches that were not options in the classroom setting without the dogs. Through dog-assisted reading, students had greater access to a wider range of texts and genres. In the office, students accessed short, high-interest dog-themed texts, as well as a Failure Free Reading collection (Lockavitch, 2008). In addition, the handler brought personal copies of Magic Treehouse (Osborne, 1992) to supply Anna with instructional level reading materials, integrated a Braille book to motivate Michele while she read Follow My Leader (Garfield, 1994), and allowed Tony to compose and perform original narratives. This kind of personalized matching of books to readers along with space for storytelling was lacking in the classroom. Once the study moved to the classroom with the dogs, students built on their book and genre choices and engaged in the growing collaborative discussions that had been established in the office as part of dog-assisted reading. Each of the students became hooked on favorite books and genres, with two of the three students particularly interested in the dog themes which centered around Zena. Concurrently, the students had greater access to reading and talking—which supported not only literacy learning, but the students’ behavior. For all three students, the dog provided a non-
threatening focus with her friendly attentiveness and enjoyment of the child’s stroking, speaking, and reading. The dog paved the path for positive social interactions and literacy learning and helped to first build extrinsic, and then intrinsic motivation for reading. For the students in this study, the dog provided extended time to focus on the reading with their anxiety minimized. Access to books did not continue once the study concluded. Rather, without dog-assisted reading, the morning literacy block remained a time of isolated, skill-related tasks. Although students continually requested more time for dog-assisted reading, access to a wide range of books and genres, integrated into a collaborative reading time, was absent for these students.

**Implications for School District Personnel**

In this next section, I share four recommendations for school district personnel based on the findings from this study. First, carefully integrating dog-assisted reading teams can support the literacy development of learners. Second, providing a clear structure and space for dog-assisted team can increase the amount of time students spend reading. Third, encouraging professional development for literacy learning experiences can help staff build on their knowledge of reading instruction. And fourth, including a wide range of reading materials during dog-assisted time can support students to engage as readers in multiple ways.

**Integrating Dog-Assisted Reading Teams**

Spending time integrating dog-assisted reading teams can support literacy learning, with an additional benefit of providing calming and comforting support. When bringing in volunteers and their dogs for dog-assisted reading, entrance interviews with each dog-assisted team will help administrators and teachers better understand the unique strengths the teams bring to the program, including knowledge of literacy materials and instruction. Then, school personnel/staff
can adjust and build the program accordingly so as to best integrate the teams into the classroom culture.

In this study, students worked with dogs initially in a quiet office. While it is not necessary to conduct dog-assisted reading sessions in an office, I recommend initially creating a quiet space within the classroom to insure comfort and safety of all participants, including the dogs. The dog’s personality makes a difference and specific dogs can serve as better matches for particular students. During the initial meetings, I suggest setting student expectations on how to and how not to touch the dog. It can also help to review seating options during reading. For instance, some therapy dogs prefer to lay down beside the child, while other dogs (like Zena) are happy to lay on top of the students while reading. Concurrently, some students prefer to sit on a chair and read to the dog, while others prefer closer proximity through a beanbag or lying on the rug next to the dog. Also, providing initial time for petting, brushing, or a quick walk can set a great tone before reading. Be specific in terms of how long students will read. While students in the study read for 15 minutes, many times students complained the time was too short. Longer periods of time could build stamina, perseverance, and reading skills, although the dog’s stamina will also be an important consideration.

Handlers can serve as mentors and integrate increased support and dialogue into the activity. Miss Pat, a retired special education teacher, and Miss Sharon, a retired science coordinator, had extensive educational backgrounds and experiences—which is not unusual; many volunteers in dog-assisted reading have similar skills. Also, many therapy dog organizations (e.g., READ), provide training to handlers so they can learn the skills needed to support students in their reading (Gambrell, 2007). In any case, a literacy specialist can initially work with the team to discuss specific literacy guidelines, differentiated instruction for each of
the students, with an emphasis on using the time for increased reading and enjoyment. During
dog-assisted reading, handlers can be advised to use the dog in a supportive and individualized
manner that minimizes anxiety, keeping the time gentle and non-threatening. Handlers might talk
for the dog, commenting on the plot or making connections to the dogs, encouraging more book-
related conversations.

The relationship and bonding that emerges between the students and the dog/handler
team can create a vital link that serves to fuel reading motivation for students. As they become
integrated into the classroom schedule, dogs and handlers together can provide mentoring,
informal support, and encouragement for relationship building.

**Structure and Space for Dog-Assisted Teams**

Dog-assisted reading provided the three case study students with a consistent time and
structure for reading aloud, thereby building opportunity, habit, and purpose. The predictable and
designated dog-assisted reading routine increased the students’ reading motivation, engagement,
and literacy processes/behaviors. I recommend developing regular times, locations, and routines
during dog-assisted visits. Schedules and structures provide the essential time needed for dog-
assisted reading so the majority of time can be spent reading (Friesen, 2012; Garnto, 2014).
Without a clear structure, essential reading time may be reduced. Schedules and structures can
expand as dog-assisted reading evolves within the classroom (Lane & Zavada, 2013).
Additionally, teachers, reading specialists, and handlers can develop a schedule for readers.

For dog handlers without teaching backgrounds, school district personnel are encouraged
to develop routines and specific guidelines for book selection. School librarians and/or reading
specialists can offer handlers training on how to engage with books and work directly with the
students. Supports such as book lists, with descriptions and reading levels, as well as organized
classroom libraries or book rooms, can help begin this process. But more importantly, sessions need to be planned where handlers learn how to engage with the books, listen carefully to readers, and notice when students need additional support. If personnel are not readily available, videos or DVDs can show handlers how dog-assisted reading, at its best, can look. Handlers with teaching experience could model the process and also add their tips for reading success. Also, a handout with what to do and not do for dog-assisted reading, could provide a welcome support.

Overall, I recommend developing specific plans to insure that the dog-assisted reading time is well utilized for literacy. Structures and spaces intentionally planned for dog-assisted reading can go a long way in increasing sustained and focused reading times. This in turn can foster intrinsic motivation, engagement, and literacy learning.

**Professional Development to Support Literacy Learning Experiences**

My study revealed a conflict in the special education classroom between behavioral mandates and instructional philosophies. Teachers and staff received little professional development to learn how to implement authentic reading experiences. To support struggling readers, it is essential to balance behavior-management and sound literacy instruction, not an easy task. Professional learning communities and study circles can explore the best ways to unite behavior and literacy, grappling with the difficult questions related to behavior, motivation, engagement, and literacy learning. By committing professional development time to examine the elements of dog-assisted reading (relationship building, authentic literature, discussion), a school can help staff think about how to combine social skills with literacy learning. Furthermore, a coherent philosophy that addresses both literature-based instruction and behavior management can avoid putting all one’s eggs into the behavior management or authentic literacy baskets.
In this study, the dog-assisted reading teams supported literacy learning experiences with increased time for reading, listening, and talking about books. Collaborative talking, thinking and sharing increased student’s literacy learning, and dog-assisted reading, brought students and staff together, with the dog and handler serving as social catalysts. Professional development that provides time for all staff members to learn how to create a collaborative, literature focused environment, can not only support students during dog-assisted reading, but can educate staff on the instructional philosophies that provide the underpinnings for motivation, engagement, and literacy learning. Ultimately, literacy learning with dog-assisted reading can help to develop a “literacy club,” elevating reading as a source of pleasure rather than a chore (Smith, 1988).

Reading Materials

A wide range of literature during dog-assisted reading proved appealing to the students and opened the door for text based connections and discussion. Throughout the study, the reading levels, text choices, and overall genres made a difference to the students (Allington, 2011, 2012; Clay, 2002). The inclusion of instructional level text and humorous stories supported Anna, while dog-related books inspired Michele. Tony enjoyed a range of materials, and then showed a major preference and talent for story creation and performance. A wide and voluminous library, with a range of readability levels, where students have a chance to interact and choose their own reading materials during dog-assisted reading can support student engagement (Allington, 2013; Gambrell, 2011). Taking the time to organize a classroom or school library by levels, themes, and interests, can provide better access to motivating titles matched to readers. Bins and baskets clearly labelled can help make the selection process easier for students during dog-assisted reading.
If dog-assisted reading sessions are short—comic books, magazines, poetry, speeches, newspapers, joke books, and graphic novels can provide students with the satisfaction of reading a complete text to the dog. I also recommend a generous offering of dog-related themes—an appealing choice for dog-lovers. The continual updating of classroom libraries with new titles, can add to the excitement of dog-assisted reading, especially if the teacher or handler provides short “book talks” to preview the new picks.

Implications for Future Research

While the study provides a foundation for the examination of student engagement with dog assisted reading, further qualitative studies can unpack and address the complexities of dog-assisted reading. Qualitative studies can capture this intricacy and examine how schools use dog-assisted reading to support literacy learning. Quantitative studies controlling for the effects of the dog and handler are also beginning to emerge (LeRoux et al., 2014; Smith, 2009; Smith & Mehan, 2010; Treat, 2013), and continued quantitative studies would be helpful in terms of showing the impact of dog-assisted reading. As researchers examine these complexities, they can better understand the instructional details of dog-assisted reading, and school personnel can build more effective dog-assisted reading programs to increase motivation, engagement, and literacy learning.

The role of the handler, in regards to literacy learning, showed itself to be important in my study. Research that explores the multiple ways handlers partner with their dogs for the purposes of motivation, engagement, and literacy processes/behaviors, could prove useful. There are currently no studies on this topic. Qualitative studies, in particular, could capture the details of the handlers’ instructional techniques, helping both educational and dog-assisted reading organizations better prepare their handlers for the important work of literacy mentorship.
Additionally, future research can focus on exploring dog-assisted reading for older students considered at-risk. The dog-assisted reading studies for younger children continue to grow, yet there is a paucity of research for adolescents. Older readers remain a particularly important population to investigate due to the difficulty of achieving gains if they have not yet become proficient readers. Finally, although most of the dog-assisted educational studies focus on the value of enhancing reading, the less-studied but still-vital literacy practices of writing and speaking (oral presentation) also warrant further investigation.

**Limitations**

While this case study of three special education middle-school students contributes to and extends current professional research and literature on dog-assisted reading, this research has limitations. The three middle school children I studied, all with different literacy profiles, provided insights into the motivation, engagement and literacy learning that occurred during dog-assisted reading. Yet, three students, school personnel, dog handlers, and family members represent only a small sample of special education students. Although it is highly possible that the dog-assisted reading results from my study will generalize into other settings, additional research is needed to continue to explore students’ experiences with dog-assisted reading.

Second, while I have rich data showing Anna, Michele and Tony engaged in conversations about their books with Miss Pat, Zena, and the other students in the class, I did not include additional measures of comprehension, with the exception of STAR reading data (STAR is a quick testing computerized tool that is not based on reading and discussing literature—students choose words that have been removed from short passages). Since Upton teachers used and reported testing results in September, December and May, I included the STAR data. Additional evidence such as written or graphic responses to the readings could have provided
additional ways to understand the students’ thinking. Although the study never set out to show how dogs alone raise reading scores, measures for motivation, engagement, and literacy processes could have strengthened data collection and been more aligned with the literature-based emphasis of the study. I recommend including a wide range of evidence in future dog-assisted qualitative studies, including written and graphic responses to texts, along with other measures such as motivation/engagement inventories and questionnaires, and fluency/prosody scales.

Concluding Thoughts

I undertook this study with the belief that for students to embrace reading in meaningful ways they need to have positive reading experiences as well as opportunities to read more and to read for pleasure in school. I believed that working with a therapy dog and handler would help children move forward as literacy learners. Rogoff (2003) said, “Mutual understanding occurs between people in interaction; it cannot be attributed to one person or another” (p. 285). Each participant and process had a role to play, and each mattered—the therapy dogs, the handlers, the students, the literacy practices, and the range of contexts. Overall, the case study methodology used in this research helped to peel back the layers of each crucial reading-related component, showing how each mattered to the individual students and to the classroom as a whole. A case study approach provided a close-up look at the complexities of therapy dogs in action, hopefully helping other teachers to build more effective dog-assisted reading programs, and perhaps contributing information on how or why the dog’s presence is effective. As it turned out, the dogs alone were not responsible for the students’ improvements as literacy learners. I discovered that the students’ engagement with the dog, the role of the dog handler, and the role of the context all impacted students in different and multiple ways.
Behavior mandates and limited access to literature revealed a clash of underlying behavioral issues and instructional philosophies within the classroom and larger school. Students worked alone and rarely talked about books together or helped each other read. Reading was viewed as a job to be completed instead of an enjoyable activity to share. The dog-assisted reading program dramatically shifted this culture by creating excitement around reading events and inspiring several new cooperative interactions between students. These new interactions represented a confluence of motivation, engagement, and literacy processes.behaviors. They appeared in the classroom only when the dog was present, and during that time, the students clearly preferred these activities, generated spontaneously through students’ own efforts. Reading moved from a mandatory, compliant, and isolated act to a source of pleasure, accomplishment, and social engagement through the intervention of a nontraditional social member—a therapy dog—and the guidance of the dog’s handler. The dogs initially provided extrinsic motivation to read, leading to more reading as well as more pleasurable experiences reading, which eventually developed into intrinsic motivation. Coupled with the dogs as attentive listeners and “hooks” for personally relating to story details, the students’ desire to read expanded further, and they read more—more text and for longer periods. The increased discussions and interactions around reading helped improve the students’ self-confidence, self-esteem and self-efficacy, and expanded their connections to other people. The students grew as literate learners by participating in literacy activities within a unique and meaningful new social community. It is my hope that these experiences will inspire special educators to integrate motivating social learning practices into many aspects of their literacy programming, with and without dog-assisted reading, working to cultivate a lifelong love of reading for students such as the three in this study.
Children’s Literature Cited


REFERENCES


221


Palmer, B. M., Codling, R. M., & Gambrell, L. B. (1994). In their own words: What elementary students have to say about motivation to read. *Reading Teacher, 48*, 176–178.


Treat, W. A. (2013). Animal-assisted literacy instruction for students with identified learning disabilities: Examining the effects of incorporating a therapy dog into guided oral reading sessions (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3599249)


241
APPENDICES
Appendix A: Sample Consent Forms

Informed Consent Scripts For Dog Handlers:

1. Title of the research project
   Fostering Motivation, Engagement and Literacy Learning Using Therapy Dogs as Reading Partners.

2. Names of the researchers
   Donna Lamkin, BA English Education, Siena College; MS Reading, University at Albany; CAS Literacy, University at Albany; PhD Literacy candidate, University at Albany.

3. Description of the research
   Research has shown that therapy dogs have a calming effect on individuals and can often be a source of great enjoyment and comfort. Additionally, reading fluency scores for students who participate in dog reading programs have risen. More research on dog-assisted reading is needed to confirm anecdotal reports and describe the unique ways that therapy dogs can assist students who struggle with literacy. My study will help to fill this gap and is designed to understand the ways dog-assisted reading can impact motivation, engagement, and literacy learning.

4. Description of human subject involvement
   My research begins in September of 2012 and ends in June 2013, at the end of the school year. During this time, I would focus on videotape one or two students who regularly read to your therapy dog, as well as observing/videotaping these students reading without your therapy dog (1x a month for up to 60 minutes). Additionally, I would interview you, the handler, (2 times for approximately 45 minutes interviews) at the mid-point of the study and at the end of the study to better understand your perspective. Results will be confirmed and shared with you at each step of the research.

5. Risks & discomforts of participation
   I do not anticipate any risk in your participation other than you may become uncomfortable answering some of the questions.

6. Measures to be taken to minimize risks and discomforts:
   You may choose not to answer any questions that make you uncomfortable.

7. Expected benefits to subjects or to others:
   Although you may not receive direct benefit from your participation, others may ultimately benefit from the knowledge obtained from this research.

8. Confidentiality of records/data
   All information obtained in this study is strictly confidential unless disclosure is required by law. In addition, the Institutional Review Board, the sponsor of the study (e.g., NIH, FDA, etc.) and University or government officials responsible for monitoring this study may inspect these records.

9. Audio/Video Recording of subjects:
Video-recording devices will be used during the observations and audio recordings will be used for the interviews. All data will be stored in a locked cabinet in my home and shredded or disposed of upon the completion of the study. Please sign below if you are willing to have observations videotaped and the interview recorded (audio).

10. Contact Information

Required text:

Contact Information:

If you have any questions about this study, please contact the Principal Investigator: Donna Lamkin, PhD candidate, University at Albany, 518-427-1903, dlamkin@albany.edu.

You also may contact my Faculty Advisor, Dr. Cheryl Dozier, Associate Professor, University at Albany, 518-442-5101, cdozier@albany.edu.

You will be provided a copy of this form to keep.

11. Your Rights as a Research Participant

Required text:

Your Rights as a Research Participant:

If you have questions concerning your rights as a research participant, you may contact the University at Albany, Office of Regulatory Research Compliance at 518.442-9050 (if outside the 518 area code – 800-365-9139) or via email at orrc@albany.edu.

12. Voluntary nature of participation

Participation is voluntary and if you wish to withdraw or not participate, just let me know through a phone call, e-mail, or letter. You also have the right to not answer any questions or have audio or videotapes turned off.

13. Withdrawal of subjects and data retention

Your participation in this project is voluntary. Even after you agree to participate in the research or sign the informed consent document, you may decide to leave the study at any time without penalty or loss of benefits to which you may otherwise have been entitled. I will retain and analyze the information you have provided up until the point you have left the study unless you request that your data be excluded from any analysis and/or destroyed.

14. Consent of the subject
"I have read, or been informed of, the information about this study. I hereby consent to participate in the study."

Date:

Please sign below if you are willing to have your reading session with the therapy dog videotaped and the interview recorded through audiotape.

Date: 12-2-06

Valid Through

AUG 19 2013

The University at Albany
Hello,

I am learning about how dogs are used in classrooms to help students' practice reading. This is called research. I will write a special research report about this. I would like to include information about your time reading with your dog reading buddy. In September I will begin to come into your classroom one time a month, until the end of the school year. I will observe you reading with your dog buddy and also observe you reading during your class reading time. I will take notes and have a videotape recorder to help remember details. Your classroom teacher will find a comfortable place for us to talk in the classroom or media center. I will show you the video of you and your dog reading buddy reading together and ask you some questions about your time with your reading buddy. I will have crayons/markers/pens/pencils and ask you to either draw a picture related to your time reading to the dog, and/or write a letter to the dog or the dog's handler. If you prefer not to write, you can tell me what you want in the letter, and I will write it for you.

During our conversation, you never have to answer a question you don't want to answer. If you sometimes prefer not to draw or write, you also don't have to do this.

Even though your parents gave you permission to participate in this study, you can say no. You can change your mind about working with me at any time. You would just let your teacher or mom and dad know that you prefer not to be in the research report.

Do you understand what I have said? Do you have any questions? Would you like to participate?

Thank you for your time. Please sign your name below if you have an interest in working on this study.
Appendix B: Description of the Standardized Test for Assessment of Reading (STAR)

The Standardized Test for Assessment of Reading (STAR) is a computerized cloze test in which students are asked to supply words that have been removed from a passage in order to demonstrate their ability to comprehend text. Although some fluency is intrinsically involved in this process, STAR does not test fluency directly nor generate fluency scores. All case study students took the STAR Reading exam, including Anna even though she was an emergent reader (a different STAR test is available for that level).

Scaled Scores range from 0-1400 and are based on the number of correct answers and the difficulty of the questions. Scaled scores are not normed, so a 12th-grade student who is (e.g.) reading at a 2nd-grade level would show up with 2nd-grade numbers (in the 200-300 range), while a 2nd-grade student reading at a 12th-grade level would show scores of 1300-1400. To a certain extent, scaled scores show the students “competing against themselves.”

Grade Equivalents are normed in the sense that they show the equivalent grade level of the student’s reading abilities based on the average scores of all other students taking STAR. An average 3rd-grader would read at grade-equivalent level of 3.0 at the beginning of the school year, at 3.5 by the middle of the school year, etc. For more information on STAR numbers, see https://resources.renlearnrp.com/us/manuals/sr/srrptechnicalmanual.pdf.
Appendix C: Student Interview Questions

*Initial Questions:*

1. What words come into your mind when you think of reading a book?
2. Talk about reading with (dog’s name).
3. What is special for you about reading with (dog’s name)? Talk about how you feel when reading with (dog’s name).
4. What is your favorite part of reading with (dog’s name)?
5. Are there parts of reading with (dog’s name) that you don’t enjoy?
6. Talk about the kinds of books you read when you read with (dog’s name)?
7. Who chooses the books when you read with (dog’s name)?
8. Do you recommend other children read with (dog’s name)? Why or why not?
9. Do you think (dog’s name) enjoys reading with you? Why do you think this?

*Follow Up Questions (asked repeatedly over time):*

1. Talk about your continued reading with (dog’s name).
2. What do you like best about reading with (dog’s name)?
3. What do you like least about reading with (dog’s name)?
Appendix D: Adult Participant Interview Questions

Teacher Questions (first five questions were only asked at the initial interview):

1. Talk about your classroom and your literacy program.

2. Discuss why you decided to bring a therapy dog into your classroom to read with children.

3. Talk about how you go about structuring dog-assisted reading.

4. Talk about how you select the children to read with the dog.

5. Talk about how you go about selecting the literature—what criteria do you use?

6. What is special for you about dog-assisted reading in your classroom?

7. Talk about the benefits you have seen from dog-assisted reading.

8. Talk about the challenges you have seen with dog-assisted reading.

9. Will you continue to use this program? Why or why not?

Handler Questions:

1. Talk about your role during the student/dog reading interaction.

2. What is special for you about dog-assisted reading?

3. Talk about the benefits you have seen from dog-assisted reading.

4. Talk about the challenges you have seen with dog-assisted reading.

Parent Questions:

1. Talk about your child and the dog-assisted reading program at his/her school.

2. What is special for your child about dog-assisted reading?

3. In what ways does dog-assisted reading support or hinder your child’s reading?
4. Does the dog-assisted reading program at school affect your child’s reading habits in the home? Please explain.

5. Do you recommend other children take part in dog-assisted reading programs? Why or why not?

Teacher Assistant, Social Worker, and Speech Teacher Questions:

1. Talk about the students and your role in supporting them.

2. Talk about the students’ classroom.

3. Talk about each student’s literacy learning.

4. Talk about each student’s motivation and engagement level for school-related activities.

5. Talk about the student and the dog-reading program at their school.

6. Talk about the benefits you have seen from dog-assisted reading for the students.

7. Talk about the challenges you have seen with dog-assisted reading for the students.
You are the calmest dog ever!
You are the best dog ever!

Ze

the magic treecous

4/30/13
Anna
Dear Z. and P.,

I enjoy reading to you both every Tuesday. The one thing I like about Z. when I read is that she will listen. I just like reading with you both because you both are very nice.

Love,
M.
<table>
<thead>
<tr>
<th>Observations</th>
<th>Interview Notes</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tony—Desires Audience</td>
<td>Miss Barnes</td>
<td>Miss Nadine</td>
</tr>
<tr>
<td>Obs, 10/15/12, 10/22/12: Miss P uses Z as audience—makes T feel like he is reading to partner.</td>
<td>Interview, 11/30/11</td>
<td>Interview, 6/11/12: “Tony is the actor of the group. The dogs help him to settle and tell stories. He is great with the characters ... He likes to tell stories to Zena and will read to the class. He loves to perform as he reads.”</td>
</tr>
<tr>
<td>Interview T, 11/16/12: “Actually helps me adapt because I know I am reading Tony’s mind stories, and you know it’s fun when you have someone who listens every time through each and every part.”</td>
<td>Interview, 5/22/13: Enjoyed</td>
<td></td>
</tr>
<tr>
<td>Obs, 10/15/12: “I don’t think Zena will take off unless something really scary happens”—connection to text. “Stolen glances; I’m going to give Zena some stolen glances”—helps T with an abstract phrase (by demonstrating usage). “What do you think Zena would do if she was scared? What does a dog do when it is scared?” –putting Z into story.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs, 10/20/12: “Is she sleeping?” (T appears insulted—wants listening.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs, 11/27/12: T makes predictions as he reads. Apologies to Zena for screaming as he reads dramatically.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs, 1/8/13: T wants to tell a mind story (in office), includes Zena.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview, 1/4/13: “I don’t get a chance to talk a lot during the day.” Craves more mind story time.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs, 2/12/13: Says “thank you” to Z at end of session.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview T, 2/14/13: “Zena listens. She’s calm. It feels good when someone listens, someone who won’t be judgmental.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs, 5/14/13: As Tony gets invested in mind stories (he</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tony—Desires Audience</td>
<td>Miss Barnes</td>
<td>Miss Nadine</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>requests them, other students come to listen</td>
<td>audience for Tony.</td>
<td></td>
</tr>
<tr>
<td>Obs, 5/21/13: T very motivated by mind stories, very animated. Jackson &amp; Arthur sit in and listen.</td>
<td>Interview MP, 6/14/13: Knows T felt pressure to perform, but was initially worried the pressure would be too much. Has changed mind.</td>
<td></td>
</tr>
<tr>
<td>Obs, 5/28/13: Mind story gets loud, Zena used to help T keep his voice at acceptable volume.</td>
<td>Interview MP, 6/14/13: Tried to keep T on a logical path, had him bring in Zena, and asked lots of questions to keep T sequenced. Wished she’d had him write the stories down.</td>
<td></td>
</tr>
<tr>
<td>6/11/13: Mind story, T very comfortable, more control of the story, engaged and does not want to stop. Arthur comes over to put away book and stays to listen for awhile. T responds favorably to the audience and performs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anna in the classroom without dog</td>
<td>Anna in the office with dog</td>
<td>Anna in the classroom with dog</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>“Anna doesn’t like the work—everything is hard for her ... she is motivated by the one-on-one help.” (Miss Nadine)</td>
<td>“There’s nothing I don’t like about it. At first I was afraid to read but now I like to read and would like to read every day with Zena.” (Anna)</td>
<td>“Anna has really come out of herself. Kenneth would really help her ... Anna started out shy with Sasha and then warmed up ... now she’s the first one to go and get a book. She searches that book rack. She loves reading and her self-confidence has increased” (Miss Sharon)</td>
</tr>
<tr>
<td>(Anna)</td>
<td>(Anna)</td>
<td>(Anna)</td>
</tr>
<tr>
<td>Individualized work: needs support. (Learned helplessness?). Computerized skill work worksheets, computerized reading programs: attention varies.</td>
<td>Comprehension/Vocabulary: Miss P uses dog to give comprehension and vocabulary support (“I have a companion and her name is Zena”), Zena enters story, Miss P speaks for Zena. (Handler’s role very integral.)</td>
<td>Reading aloud: starts by reading silently and then gradually wants to read aloud in front of others. (Risk-taking, academic resilience.)</td>
</tr>
<tr>
<td>(with Miss Pat)</td>
<td>(with Miss Pat, Miss Sharon, class members)</td>
<td>(with Miss Pat)</td>
</tr>
<tr>
<td>Read alouds: often inattentive, unfocused, passive, comprehension challenges in terms of answering questions. (Are there opportunities for dialogue?)</td>
<td>Book choice: frustration voiced with hard materials, but persists (academic resilience); motivation and engagement increase with independent-level text.</td>
<td>Reading and talking about the books: accepting help from peers and listening as others read. (Community of readers, dogs/handlers as community members.)</td>
</tr>
<tr>
<td>(with Miss Barnes)</td>
<td>(with Miss Pat)</td>
<td>(with Miss Pat)</td>
</tr>
<tr>
<td>Home-to-School connection: self-initiated desire to take books home to read with siblings.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Anna in the classroom without dog | Anna in the office with dog | Anna in the classroom with dog | Anna in the classroom without dog | Anna in the office with dog | Anna in the classroom with dog
---|---|---|---|---|---
(with Miss Barnes, Miss Bess) Group work: attentive but very quiet/passive. *(Is Anna self-conscious in front of other students?)* & (with Miss Pat) Oral reading fluency: structured time for practice, Anna starts out word by word and choppy, then begins to read in short phrases; Miss P provides a model of how to read with fluency and gives explicit instruction. *(Handler’s role again integral.)* & (with Miss Pat, Miss Sharon, class members, Miss Barnes, Miss Nadine) Conversations about dogs and books: handlers make connections, and help Anna to make connections. *(Note differences in Anna’s oral language here versus in classroom without dogs.)*

*Note.* This was an early context matrix for Anna. Later versions added more detail, including dates, which clarified the timelines associated with each student’s process.
## Appendix H: STAR Test Data for Case Study Students

The following table shows the STAR reading assessment test scores for Anna, Michele, and Tony over the 2012–2013 school year:

<table>
<thead>
<tr>
<th>Tested in 2012–2013 school year</th>
<th>Anna</th>
<th>Michele</th>
<th>Tony</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scaled score</td>
<td>Grade equiv</td>
<td>Scaled score</td>
</tr>
<tr>
<td>September</td>
<td>282</td>
<td>2.5</td>
<td>403</td>
</tr>
<tr>
<td>January</td>
<td>364</td>
<td>3.1</td>
<td>578</td>
</tr>
<tr>
<td>May</td>
<td>327</td>
<td>2.7</td>
<td>542</td>
</tr>
</tbody>
</table>