

Peer assisted learning strategies and students with emotional/behavioral disorders: A case study

by

Nicole Wiseman

B.S., Kansas State University, 2010

M.S., Kansas State University, 2012

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Department of Special Education, Counseling, & Student Affairs
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

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Abstract

Students with emotional and behavioral disorders (EBD) have academic and behavioral deficits that impact their school success. For example, reading achievement of students with EBD is lower than typically developing peers and fails to improve over time without intervention. Despite this, the academic deficits of students with EBD often get overlooked and there are limited evidence-based practices for reading instruction to support them. This study sought to address this limitation by applying the Peer Assisted Learning Strategies (PALS), which has supportive evidence when applied to students with learning disabilities. The study involved eight 5th grade students, three were identified with EBD. The intervention, implemented by the classroom teacher, failed to result in gains in oral reading fluency, comprehension, and targeted social skills due to a variety of factors to be discussed. Limitations and future research are discussed, including considerations for future research.

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Approved by:

Major Professor
James Teagarden

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Students with emotional and behavioral disorders (EBD) have academic and behavioral deficits that impact their school success. For example, reading achievement of students with EBD is lower than typically developing peers and fails to improve over time without intervention. Despite this, the academic deficits of students with EBD often get overlooked and there are limited evidence-based practices for reading instruction to support them. This study sought to address this limitation by applying the Peer Assisted Learning Strategies (PALS), which has supportive evidence when applied to students with learning disabilities. The study involved eight 5th grade students, three were identified with EBD. The intervention, implemented by the classroom teacher, failed to result in gains in oral reading fluency, comprehension, and targeted social skills due to a variety of factors to be discussed. Limitations and future research are discussed, including considerations for future research.

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Dedication

This dissertation is dedicated to my incredibly supportive family. I would not be where I am today without their support, both morally and financially. Mom, Ricky, Grandper, and my late father, I am so thankful to have you in my court! This is dedicated to my boys, Charlie, and RJ. This is for you! I hope that Mommy can set a good example for you both. This is also for all of the students I have had the pleasure of teaching. It is my hope that educational research can provide a better future for both my own children and the students I have taught!

Chapter 1 - Introduction

Background

The purpose of this chapter is to first provide an overview of the challenges students with emotional/behavioral disorders face. Next, a brief look at some of the research based reading interventions that have had positive effects on students with challenging behaviors will be explored. Finally, the study's rationale, purpose, and research questions will be addressed.

Academic Challenges of Students with Emotional/Behavior Disorders

The most recent statistics from the National Center for Educational Statistics (NCES, 2017) report confirms that during the 2014-2015 school year 6.6 million students age three to twenty-one were receiving special education services in public schools. Among those students receiving services, 5% were served for having an emotional disturbance. In other words, nearly 330,000 children were being served in the United States for displaying one or more of the characteristics outlined in Individuals with Disabilities Act (IDEA; 1997) definition for an emotional disturbance. Of these 330,000 children, most are one to two grade levels behind in one or more academic subjects (Kauffman, Cullinan, & Epstein, 1987). The poor academic performance of students with EBD is not a surprise when one considers that the inability to learn or rather, academic underachievement is part of the identifying criteria set forth by the IDEA's definition of an emotional disturbance.

Underachievement of students with EBD lead to a variety of negative outcomes such as, lower grades, higher rates of school dropout, lower rates of post-school employment, and general adult adjustment problems that lead to an increase need for mental health supports (Wagner, 1995; Wagner & Cameto, 2004). Often times these negative outcomes are overshadowed by a focus on the elimination of problem behaviors (Wehby, Lane, & Falk, 2003) and a lack of

emphasis on academic interventions that address the deficits exhibited by students with EBD (Steinburg & Knitzer, 1992). Given the number of children in the United States currently being served for an emotional disturbance, this is an issue that should not be overlooked.

Reading proficiency of American children has been of concern since the publication of *A Nation at Risk* (National Commission of Excellence in Education, 1983). It has been reported that students with EBD receive lower academic marks and fail more academic courses when compared to students with other disabilities (U.S. Department of Education, 2004). Couple a student's deficits in reading with an inability to establish appropriate relationships and it becomes clear why students with EBD continue to lack progress into the upper grades.

Social Challenges of Students with Emotional/Behavioral Disorders

Students with EBD are often not equipped with the appropriate social skills needed to develop social competence (Gresham et al., 2001; Lane, Barton-Arwood, Nelson, Wehby, 2008). Gresham, Sugai, and Horner (2001) define social competence as the "ability of students to establish and maintain satisfactory interpersonal relationships, gain peer acceptance, establish and maintain friendships, and terminate negative or pernicious interpersonal relationships" (p. 331). Several obstacles lend to the inability of a student with EBD to develop social competence including, verbal and physical aggression, impulsive behaviors, and an inability to utilize communication skills to develop interpersonal relationships (Lane et al. 2008). Lack of social competence among students with EBD has been linked to deficits in academic subject areas (Lane et al., 2008, Reschly & Christenson, 2006). Students that have consistent difficulties in the area of academics develop a poor attitude for engagement and are more likely to drop out of school altogether. A study conducted by Reschly & Christenson (2006) found that grade retention, students being held back, was the highest predictor of school dropout among students

with EBD. Being held back may create a sense of failure and further magnify and student's distaste for academic engagement.

The link between social and academic deficits may also be due to the fact that when teachers implement academic interventions among students with EBD it can create hostile relationships which is in turn associated with lower rates of positive teacher attention (Hamre & Pianta, 2001). It is therefore important one take into account both the academic and social skill deficits experienced by this population when examining interventions to address the needs of the students.

Reading Strategies for Students with Emotional/Behavioral Disorders

Recent studies indicate that many interventions for students with disabilities are teacher mediated and implemented in a whole group setting, which is no longer sufficient to address the diverse needs of students (Pierce, Reid, & Epstein, 2004). A review conducted by Vaughn, Levy, Coleman, and Bos (2002) examined 16 studies that dealt with reading instruction implemented among students with LD and EBD. They found that an excessive amount of time, nearly half of the instructional period, was spent on seat work, waiting between instructions, and independent activities and that very little time was spent on actual reading of the text. Thus, lending to the idea that reading interventions for students with EBD need to move away from strictly whole group implementation and focus more on combining whole group and individualized interventions that can better meet the needs of a diverse population. One instructional method that is doing just that is decentering strategies. Decentering strategies involve interactive methods that require students to be more responsible in accessing and interacting with information (Mathes, Howard, Allen, & Fuchs, 1998). Students take on a more active role in the process of learning, while educators take on a more observant role. Decentering approaches encourage peers to assist one

another through a variety of learning activities and can include peer tutoring, reciprocal teaching, and cooperative learning. One method in particular that has received much attention is Peer Assisted Learning Strategies (PALS; Fuchs, Fuchs, Mathes, & Simmons, 1997).

Rationale

Despite an increased focus on multi-tiered systems of supports, students with EBD continue to display significant reading difficulties. Reading is an essential component for success (National Institute for Literacy, 2008). Reading achievement is associated with career success, drop out status, and incarceration rates (Wood & Blanton, 2009). According to the National Center for Education Statistics (NCES; 2017), the percent of students who dropped out of high school in 2014 was highest among students with emotional disturbances (35%). Although national reading scores have improved, students with EBD made slight gains, thus it remains important to continue seeking highly effective reading strategies for this targeted population (NCES, 2017).

The separate importance of improving academic and social shortcomings of students with EBD has been well documented. The impact of reading interventions on both student achievement and social skills, however, is limited and vague. Therefore, more research needs to be conducted to examine the casual relationship between reading instruction and student's social behaviors. In addition to the abundance of research on the above areas, there is also a great deal of research that suggests PALS is effective for students with disabilities. What Works Clearinghouse examined a total of 45 studies involving PALS. Of the 45 studies, however, only three involved students with EBD, and none involved the examination of both academic achievement and social skills improvements (U.S. Department of Education, 2004).

Purpose

The purpose of this study was to systematically replicate the Peer Assisted Learning Strategies (PALS) reading program to examine the effects on the reading fluency, comprehension, and behaviors of 8 male students in the 5th grade, three of which are part of a self-contained/district level program for students with EBD. The following research questions were investigated using a case study approach:

1. Does the implementation of PALS increase a student with EBD's reading fluency and comprehension?
2. Does the implementation of PALS increase a student with EBD's ability to work effectively and appropriately with peers?

Chapter 2 - Literature Review

Reading Theories

There are several theories that inform reading instruction and in order to determine effective reading practices and interventions. It is first important to understand each of the theories and how they influence the way students learn to read and write (Tompkins, Campbell, Green, & Smith, 2014). Since the early works of John and Evelyn Dewey (1962) and their focus on natural learning, educators have expanded upon their foundation and recognized reading instruction as a complex process. Reading instruction is no longer regarded as just a simple cognitive process, but something much more complex that involves aspects of social, linguistic, and psychological features (Strickland, 1990). Since the 1960's, teacher-centered theories were the main focus of learning. Literacy instruction, however, has evolved into a more student-centered approach and even further into a balanced approach in which the two are combined (Tompkins, Campbell, Green, & Smith, 2014)

Teacher-Centered Approaches to Reading Instruction

In teacher-centered approaches to instruction the teacher is the sole leader and responsible for all organization. The discipline comes from the teacher and the teacher makes and posts all of the classroom rules for students to follow. Rewards are mostly extrinsic and students are allowed limited responsibilities within the classroom (Garrett, 2008). The main theory that informs the teacher-centered approach is behaviorism as coined by B.F. Skinner's (1976) work and his idea that environmental variables control behavior.

Behaviorism Theory. Characteristics of behaviorism include teacher lead direct instruction in which tests are used to measure student learning (Tompkins, Campbell, Green, & Smith, 2014). In this theory, learning is viewed as sequential and children learn language by

repeating words or sentences modeled by their teacher (Lilly & Green, 2004). In today's classrooms, students are participating in this theory through a variety of teacher driven engagement tactics such as sticker charts or marble jars that assist in encouraging high quality performance among students. One might also see this on technology devices in which applications use chimes or tunes to indicate correct answers that entice students to achieve better.

Student-Centered Approaches to Reading Instruction

In contrast to teacher-centered approaches, theories involving student-centered approaches have shared leadership and students are implementers of the organizational structures within the classroom. Rules in the classroom are developed with both teacher and student input and rewards are mainly intrinsic. Students share responsibilities throughout the classroom and all students have the opportunity to become an essential component of the classroom management system (Garrett, 2008).

Constructivist Theory. Several theories are encompassed within the student-centered approach. The first of these theories being the constructivist theory. This theory has been greatly influenced by Jean Piaget's (1969) views on the cognitive structures and schemata of a student's development. In this student-centered approach, children are active learners and acquire knowledge with the support of an adult or more experienced peer (Lilly & Green, 2004). Student's engage in constructivist learning when they use graphic organizers to consider what they already know, what they want to know, and what they learned or involve themselves in any learning activities that require them to make personal, world, and literary connections between and within books they are reading (Tompkins, Campbell, Green, & Smith, 2014). Within this theory, teachers are responsible for engaging students in experiences that build on students' schemas and allow them to construct new knowledge from those experiences (Strickland, 1990).

Interactive Theory. The interactive theory emphasizes the idea that readers make meaning as they read by making text-based connections and connections with their prior knowledge (Stanovich, 1980). This model is grounded in the idea of executive functioning in which fluent readers identify words automatically and use skills learned to process unfamiliar words they come across (Tompkins, Campbell, Green, & Smith, 2014). This theory is applied when teachers use guided reading practices to model strategies used throughout the reading process (i.e. Think-Alouds). Students partake in this method when they engage in the use of graphic organizers and other strategies to aid in their comprehension of text. This approach uses a combination of direct instruction and holistic approaches in which students are given written materials to decode using phonics skills they have learned through the direct instruction process (Davis, 2011).

Reader Response Theory. The theory of reader response was greatly influenced by the work of Louise Rosenblatt (1978). Her theory states that students either read, for enjoyment or for information. Reader response theory suggests that students learn to read better and become lifelong readers when they are exposed to reading for aesthetic purposes rather than efferent purposes (Tompkins, Campbell, Green, & Smith, 2014). Responses come when readers engage, conceive meaning, connect, explain, interpret, and judge written material (Beach, 1993). Students engage in reader-response theories when they are asked to write in response journals or writing workshops. This theory extends the thoughts of the constructivists theory and suggests that students do not try to determine the authors purpose as they read, but instead create meaning as they read based on background knowledge (Tompkins, Campbell, Green, & Smith, 2014).

Critical Theory. The critical theory of learning is backed by Pablo Freire's theory of critical pedagogy (1996) that suggests students come to school with a variety of social and

cultural backgrounds which creates an inequality in literacy development. This theory suggests that teachers do more than just teach students how to read and write, but rather involve some level of social justice education (Tompkins, Campbell, Green, & Smith, 2014). This theory suggests that students learn social justice concepts, read diverse literature, notice inequalities as they read, and use writing to take action for change in society (Bomer & Bomer, 2001, Lilly & Green, 2004). Students partake in this theory when they read multicultural literature, write letters to editors, and consider social issues as they read (Tompkins, Campbell, Green, & Smith, 2014).

Sociolinguistic Theory. This theory is centered on the work of Lev Vygotsky (1978) and his idea that students use language to not only organize thought, but also communicate and share experiences with other. Understanding these ideas help teachers to create and implement activities that incorporate social components and in turn create instruction that can be scaffold (Tompkins, Campbell, Green, & Smith, 2014). In scaffolding, as students are learning, assistance can be gradually pulled back until the student is able to perform certain tasks independently (Samuels & Farstrup, 2011). The zone of proximal development (Vygotsky, 1978) is also utilized in the sociolinguistic theory in that students come to school with a certain level of development and experiences of which educators must take into account when measuring a student's actual developmental level. For instance, students that come to school from homes that are rich with adults that model good reading habits and discussions are far more likely to develop good reading habits and abilities in school compared to students that come from homes with limited text rich environments (Lilly & Green, 2004). Teachers expose students to sociolinguistic practices when they read aloud to students and when they require students to work collaboratively through the reading process (Tompkins, Campbell, Green, & Smith, 2014).

Reading Interventions and Students with Emotional/behavioral disorders (EBD)

Elementary age students identified with emotional/behavioral disorders (EBD), have significantly lower reading achievement than their regular education peers (Barton-Arwood, Wehby, & Falk, 2005; Reid, Gonzalez, Nordness, Trout, & Epstein, 2004). Typically, behaviors are the focus of intervention rather than academics (Wehby, Lane, & Falk, 2003). With a limited focus on academics, educators have restricted knowledge in the area of academics and EBD. This is also due to the earlier educational philosophy and research centered on behavior change as a priority rather than educating youth with EBD (Wangsgard, 2008).

Students identified with EBD have been noted to perform up to two grade levels below their peers in elementary school, and this deficit grows as the student progresses through their educational career (Kauffman, 2005). Students with EBD experience a great deal of literacy deficits and because of the numerous negative outcomes associated with deficits in literacy abilities, it is particularly important that we find effective literacy interventions and practices to support these students (Griffith, Trout, Hagaman, and Harper, 2008).

A meta-analysis conducted by Benner, Nelson, Rolston, and Mooney (2010) identified effective literacy instruction programs that have had a positive effect on the reading outcomes for students with EBD. The study identified six group studies and 18 single-case studies that met inclusion criteria for high-quality interventions. Findings from these 24 studies identified three components that should be addressed when conducting interventions with students with EBD; (a) reading interventions should use an intervention model grounded in theory (b) research should be conducted at both the secondary and tertiary levels within a multi-tiered delivery system and (c) research should follow secondary and tertiary level requirements for direct, explicit instruction,

scaffolding instruction, and behavior management procedures already in place within the school (Benner, et al., 2010).

Similarly, a national report conducted by the National Reading Panel (2000) identified over 100,000 articles since 1966 that were relevant to reading research. Subgroups were formed and the panel addressed the following topics throughout their report (a) alphabets (b) fluency (c) comprehension (d) teacher education and reading instruction (e) and computer technology and reading instruction. Though this study did not focus directly on students with EBD, it has essential findings that can be related to the effective instruction of students identified with such disorders. The development of fluency, the ability to read text with accuracy and proper expression, as well as comprehension, the ability to determine meaning in text, were identified as two of the most important components to student's instruction in intermediate grades (National Institute of Child Health and Human Development, 2000). Studies that addressed fluency provided significant evidence that repeated readings and paired reading procedures, in which students received guidance and feedback after reading text orally multiple times, were effective in improving a variety of essential reading skills. Furthermore, comprehension, coined by Durkin (1993) as "the essence of reading", is effectively taught using cooperative learning in which readers work together to develop strategies for making meaning of text read orally. Each of these components; repeated readings, paired readings, and comprehension practices, are components of cooperative learning and more specifically, those involved peer assisted elements.

A reported ten studies from the National Reading Panel examined the effects of cooperative learning on student's comprehension throughout grades three through six. All ten studies showed a positive impact on student's comprehension when they were required to instruct or interact with reading strategies and also showed that it lead to the development of

more affluent social skills with peers (National Institute of Child Health and Human Development, 2000). The National Reading Panel (2000) also suggests that oral reading fluency is one of the best predictors of students' fluency and comprehension achievement at certain grades.

In addition to cooperative learning interventions, a study conducted by Nelson, Lane, Benner, and Kim (2011) found that cooperative reading interventions that also involved some degree of direct instruction, produced strong academic and social outcomes for students exhibiting challenging behaviors. Direct instruction methods have shown to produce effective results through the use of scripted instruction, allowing for frequent response and highly engaged instruction (Becker & Carnine, 1980). There are, however, a limited number of studies that have investigated the use of reading programs that involve both peer tutoring and direct instruction to improve the reading deficits and targeted behaviors of students with challenging behaviors. One such program, however, that combines the use of peer tutoring and direct instruction is the Peer Assisted Learning Strategies program developed by Fuchs & Fuchs (2006).

Peer Assisted Learning Strategies (PALS)

Brief overview. PALS is a form of peer tutoring that can be used class wide or in small groups. Students participating in this intervention are paired with another student and are asked to work productively with their peers to take on the role of both “coach” and “player/reader” over a period of lessons that focus on a variety of reading skills (Fuchs & Fuchs, 2006). This multi-faceted intervention was developed in 1997 by Lynn and Doug Fuchs and is distributed by Vanderbilt Kennedy Center for Research on Human Development (2015). The program offers interventions in both reading and math, but for the purpose of this overview, the researcher will focus on the reading components. The PALS reading program has 4 versions; (a) Kindergarten

PALS that targets the practice of letter-sound correspondence, decoding, phonological awareness, and sight words (b) First Grade PALS which emphasizes decoding and reading fluency (c) Grade 2-6 PALS which encompasses four activities to promote reading fluency and comprehension (d) and High School PALS which is similar to Grade 2-6 PALS but with more age-appropriate strategies and motivations (Vanderbilt Kennedy Center, 2015).

Typically, PALS activities last 35-40 minutes per session and are intended to be implemented three to four times per week. The Grades 2-6 PALS program includes the following activities (a) partner reading, in which the reader receives corrective feedback from the coach as he/she reads for 5 minutes (b) paragraph shrinking in which the reader determines the main idea in a 10 word summary and a sequential retell of the important events (c) and prediction relay in which the reader predicts what is likely to happen next, while the coach determines whether predictions are accurate before switching roles (U.S. Department of Education, 2012).

Theoretical Framework Alignment

After assessing the various components and previous research involving PALS, one can conclude that the sociolinguistic theory is embedded in almost all components of the intervention program. This theory, as previously discussed, involves students working together through the reading process. PALS calls on students who have deficits in reading to work together to improve their literacy abilities. Similar to the views of sociolinguistics, PALS views reading as a social activity in which language helps one organize thought, communicate with each other, and share experiences (Tompkins, Campbell, Green, & Smith, 2014). Students that partake in the PALS program are given the opportunity to not only improve their own reading skills, but also coach their peers to help improve their reading shortfalls. This collaborative process allows students to see the various backgrounds students come from and learn to appreciate differences

among their peers. Sociolinguists believe that every student comes to school with a different set of experiences and perceptions of the world. When they are required to work together, they get to experience the perceptions and beliefs of others involved in the reading process. These perspectives are then shared and interpreted by their peers (Resnick & Weaver, 1979).

In conclusion, there are many positive implications that suggest the use of PALS leads to reading improvements of both typically developing students and those with EBD. With the sociolinguistic theory at its core, educators can appreciate the social components of the programs implementation and can be assured that the program has shown to be effective for a diverse population of children.

Systematic Review of the Literature Involving PALS and Students with EBD

The intent of this review was to extend the existing review conducted by the What Works Clearinghouse (U.S. Department of Education, 2012) and further explore the effects of PALS on the reading development of students with or at risk for EBD. Furthermore, the intent was to examine the following questions:

1. What are the characteristics of participants involved in studies examining reading achievement and students with emotional/behavior disorders?
2. What design features were employed in the included studies?
3. What were the effects of using PALS on students with EBD?

Method

A systematic search of the literature was conducted in order to identify previous research involving the use of PALS to improve the reading achievement of students with EBD. In order to determine an inclusive search of the literature, searches were conducted of the following electronic databases; ERIC, Education Full Text, and PsycINFO. Search procedures outlined by

Benner et al. (2010) were utilized to search the online databases. The following Boolean phrases were applied for each of the three databases; “Peer Assisted Learning Strategies” OR “PALS” AND “Emotional Behavior Disorders” OR “EBD”. The initial search produced a total of 37 peer reviewed articles or dissertations.

Following the databases searches, hand searches of the following journals were conducted from years 2013-2017; *Journal of Special Education*, *Exceptional Children*, and *Behavior Disorders*. This search produced an additional 5 peer reviewed articles. After removing duplicates, a total of 42 articles were compiled for further screening.

Due to the low number of identified articles the initial screening involved scanning each article in their entirety to determine if they met the following inclusion criteria:

1. Research had to be publically available.
2. Participants had to include students with or at risk for behavior disorders.
3. The independent variable had to involve primarily the PALS curriculum.
4. The dependent variable had to involve the improvement of reading achievement.
5. The study had to be conducted in an elementary school setting.
6. The article had to be available in English.

Studies that met all six criteria were included in the literature review. A total of 5 studies met the criteria and were therefore included in the review.

Participants. Information was collected in regards to the number of participants included in the studies, as well as, selection criteria (i.e. disability status, reading ability, placement), grade level, mean age, gender, and disability category.

Design Features. All studies involved in this review were found to be single case design studies, therefore, information was gathered on the type of single-case design used by the

researchers. The design being used had to allow for at least three demonstrations of effect on the reading achievement of participants included. Additionally, information was collected on the type of dependent variable (i.e., curriculum based measures, oral reading fluency).

Characteristics of Participants

A total of 32 participants were included in the five studies analyzed. Descriptions of participants age, gender, grade level, and disability status can be found in Table 1. Participants ranged from 5 years (Falk, 2001) to 11 years (Losinski et. al., 2017). Studies included predominantly included male participants (n=30) over female participants (n=2). The only study that included female participants was Barton-Arwood et. al. (2005). Participants ranged from grade levels kindergarten to sixth grade. One study (Barton-Arwood, Wehby, Falk, 2005) did not specify the grade level of participants.

Table 1*Included Study Characteristics*

Study	N/Gender/Disability Category	Age/Grade
Barton-Arwood, Wehby, & Falk (2005)	Treatment = 6 Gender = 4 Males & 2 Females Disability = ED, LD, OHI, SL Treatment = 6	Age = 8.25 Grade = Not specified
Boulos (2015)	Gender = 6 Males Disability = ED, LD, OHI Treatment = 6	Age = 9.2 Grade = 1-3
Falk & Wehby (2001)	Gender = 6 Males Disability = ED, OHI, SL Treatment = 6	Age = 5.5 Grade = K
Losinski, Ennis, Wiseman, & Sanders (2017)	Gender = 6 Males Disability = ED, OHI, SL	Age = 10.9 Grade = 5
Wehby, Falk, Barton-Arwood, Lane, & Cooley (2003)	Treatment = 8 Gender = 8 Males Disability = ED, LD, MR, OHI, SL	Age = 7.75 Grade = 2-4

Note. ED = Emotional Disturbed; LD = Learning Disabled; OHI = Other Health Impairment; SL = Speech Language; MR = Mental Retardation

Design Features

All five of the studies utilized a multiple baseline across participants/dyads design. Additionally, each of the five studies allowed for at least three demonstrations of effect for reading achievement in both the baseline and intervention phases.

Independent Variable

Each of the five included studies utilized a pre-existing reading curriculum coupled with the PALS program. These reading programs included Horizon's Fast Track Reading (Englemann, Engelmann, & Davis, 1997), Reading Mastery (Schieffer et al., 2002), Teacher Directed Sound Play, StoryTown Reading Curriculum (Beck & McKeown, 2008), and Open Court Reading (Adams, et al., 2000), each of which are outline in table 2.

Dependent Variable

The five single case design studies employed either the independent variable of oral reading fluency (n=3) or a combination of early literacy skills (n=2) which included non-sense word fluency, blending, segmenting, letter sound correspondence, and sight word recognition. Each of these dependent variables are outlined by the study in table 2.

Table 2

Independent & Dependent Measures of Studies

Study	Dependent Measure	Independent Variable
Barton-Arwood, Wehby, & Falk (2005)	Oral Reading Fluency	Horizon's Fast Track Reading & PALS
Boulos (2015)	Oral Reading Fluency	Reading Mastery & PALS
Falk & Wehby (2001)	Letter Sounds, Blends, & Segmenting	Teacher Directed Sound Play & PALS
Losinski, Ennis, Wiseman, & Sanders (2017)	Oral Reading Fluency	StoryTown Reading & PALS
Wehby, Falk, Barton-Arwood, Lane, & Cooley (2003)	Non-sense word fluency, blending, letter sound correspondence, & sight word recognition	Open Court Reading & PALS

Results

To determine the effectiveness of the 5 included single subject studies, the researcher calculated the percentage of non-overlapping data (PND; Scruggs, Mastropieri, & Casto, 1987). PND requires the reviewer to interpret the data based on the percentage above that of the highest baseline data point. In the case of multiple baseline design, the PND for individual dyads was calculated and then averaged to obtain an overall treatment PND. According to the PND standards for data interpretation set forth by Scruggs, Mastropieri, & Castro (1987), three of the included studies were considered not effective (PND < 50%; Boulus, 2015; Losinski et al., 2017;

& Wehby et al., 2003) and two of the studies were considered to be minimally effective (PND = 50-70%; Barton-Arwood, Wehby, & Falk, 2005; Falk & Wehby, 2001). The PND data is further detailed in table 3.

Table 3

PND Scores by Study

Study	Scores Above Baseline	Total Assessed	PND
Barton-Arwood, Wehby, & Falk (2005)	48	82	0.58
Boulos (2015)	22	50	0.44
Falk & Wehby (2001)	68	111	0.61
Losinski, Ennis, Wiseman, & Sanders (2017)	7	39	0.18
Wehby, Falk, Barton-Arwood, Lane, & Cooley (2003)	104	227	0.46

Discussion

This systematic review identified a total of five studies that utilized the PALS curriculum with students with EBD within the last ten years. Based on the researcher's calculation of PND, none of the five studies were determined to be effective for the intended population. Several of the studies noted limited increases in a few areas of reading achievement, but when the PND was averaged, these areas were considered ineffective. For instance, Falk & Wehby (2001) found limited increases in participants letter sound correspondence and blending. Losinski et al. (2017) found limited fluency gains in one of the participants, but not the other four. Wehby et al. (2003) found moderate gains in participants non-sense word fluency, sound naming, blending, and segmenting. In addition, none of the studies that sought to measure behaviors found improvements among students when PALS was utilized.

Limitations

Perhaps the biggest limitation to this review was the surprisingly small number of studies that were considered eligible for inclusion. Considering the number of databases and hand searched journals, there were a minimal amount of studies that qualified for further exploration. When one considers the documented reading problems of students with EBD, it is surprising that so few studies exist. One explanation for the limited number of studies may be the search phrases utilized or the inclusion criteria set forth. Both of these factors may have narrowed the pool of literature and disqualified certain studies that may have produced insight on reading performance and students with EBD. With a small number of studies, also comes a small level of generalizability, therefore making it apparent that more single case studies are needed in order to determine the effectiveness of PALS on students with EBD.

Summary

This systematic review of the literature implies that there are very few studies that have identified the PALS curriculum effective for students with EBD. Though it was noted that a few areas of reading achievement were improved, the overall effectiveness was limited. Even more limited were studies that examined both the reading achievement and social skill improvements of students with EBD. This review serves as strong evidence that further studies are necessary to determine whether the PALS curriculum, when coupled with positive behavioral supports, can improve the reading achievement and social skills of students identified with EBD.

Chapter 3 - Methodology

Setting and Participants

The following study was conducted in a district wide self-contained classroom for 5th and 6th grade students identified with EBD in a Midwest elementary school for grades K-6. The self-contained classroom had partitioned walls that separated the classroom space into three different learning areas. Each learning area had a table and supplies for student use (i.e. pencils, small white boards, erasers). In the middle of the classroom was a central work table where students would meet prior to the start of the intervention lesson to obtain instructions. The classroom also contained two teacher desks in the back corner of the room.

Prior to the implementation of this study, the researcher distributed informed consent forms to the entire 5th grade consisting of approximately 60 students. The three fifth grade classroom teachers dispersed these documents during parent teacher conferences. A brief letter describing the researcher and the study were given in addition to the permission form. To address the issue of selection bias, every parent that attended the 5th grade conferences were given the informed consent and introduction letter. Parents were given approximately two weeks to return the consent forms. After two weeks, the researcher collected ten forms and was then able to develop the list of study participants. Students that participated in the study were given a child/minor agreement to participate in the research study. Each participant was aware that they would be participating in the research study and signed off that they were willing to take part in the intervention.

A set of four students were selected for participation in this study based on (a) input from classroom teachers on the Student Risk Screening Scale (SRSS; Drummond, 1994, see Appendix A for an example of the SRSS), (b) placement in the school's self-contained setting or other

special education support program, (c) reading achievement scores on the district's reading Measures of Academic Progress (MAP; Northwest Evaluation Association, 2015) test below the 20th percentile, (d) Student DIBELS composite score below benchmark, and (e) documented behavioral incidents through the school's disciplinary forms/procedures. An additional four students were selected to serve as peer models based on (a) reading achievement scores on the district's reading Measures of Academic Progress (MAP; Northwest Evaluation Association, 2015) test below the 20th percentile and (b) Student DIBELS composite score below benchmark.

The fifth-grade classroom teachers (n=3) were given the SRSS. The SRSS is a universal screening tool in which teachers rate students on a 0-3 scale for various risk factors. The scale measured both internalizing and externalizing behaviors (Ennis, Lane, & Oakes, 2011). According to Drummond (1994), teachers should be familiar with students for at least 6 weeks before analyzing risk factors of student's behavior and each student should only have one rating. Therefore, the three teachers conducted the scales for their own classroom during the third month of school, having had the students for more than eight weeks.

Based on these SRSS results, the researcher was able to determine which students fell within the high and moderate risk categories. The researcher utilized a combination of the SRSS scores and data from the schools DIBELS and MAP assessment scores to choose four students that were at high risk on the SRSS report and low achieving in reading (below benchmark and below the 20th percentile) and four students that were at low to moderate risk on the SRSS report and low achieving in reading (below benchmark and below the 20th percentile). The low to moderate students served as peer models for those that scored in the high-risk category. All eight participants that were selected were male and in the 5th grade. Two students were African American and six were Caucasian. Three had been previously placed in the school's self-

contained program and had been identified as having a behavior disorder. Two students were receiving services through the resource setting and had been identified as having a behavior disorder and LD. Finally, three students were not receiving any special education services and therefore had no special education identifications. These three students, however, were considered “at risk” in reading based on their DIBELS and MAP scores.

The four students that scored at high risk on the SRSS had a Functional Behavior Assessment (FBA) and Behavior Intervention Plan (BIP) as part of their IEP. Specific positive behavior interventions were outlined and implemented in the self-contained classroom, resource classroom, or general education classroom as outlined in the students’ IEP. Functions of student behaviors included attention and escape.

For the purpose of this study, the results were only reported and analyzed for those students being served in the self-contained setting. Students in the self-contained setting, in addition to their academic deficits, struggled with behaviors. As previously stated, these students were placed in the district level program for students with behavior disorders. As part of their individualized education plans, formal FBA and behavior intervention plans (BIP) were in place to determine the function of their behaviors, as well as document the intensive positive behavioral supports that were in place for students in the self-contained program. Further descriptions and functions of these behaviors are discussed below. In order to remain anonymous, each of the four participants discussed below were given a pseudonym.

Mark. “Mark” was an 11-year-old white male in the fifth grade who was receiving supports in the self-contained classroom for 120 minutes, which included his language arts and math instruction. He was also receiving para support in the general education classroom for 60 minutes daily, which included his science, social studies, and spelling instruction. To measure

Mark's intelligence quotient (IQ), he was administered the Differential Ability Scales, Second Edition (DAS-II; Elliot, 2007) on September 3rd, 2015. Based on this IQ assessment, Mark's general conceptual ability standard score was 79. Mark was also administered the Measures of Academic Progress (MAP; Thum & Hauser, 2015) reading test in October 2016. Mark scored a 170, which placed him in the 1st percentile amongst his same age peers. Mark's composite score on the DIBLES assessment was a 68, placing him well below benchmark for 5th grade.

Mark was identified with a behavior disorder in the second year of his elementary career. Prior to identification and placement in the self-contained setting, Mark presented delusions and hallucinations that caused his behaviors to appear socially unacceptable. Often times, during class he would make comments about hearing or seeing things that were not really there. Post diagnosis, Mark began medication to regulate these behaviors and in turn he was better able to function in a general education setting. Mark, however, continued to require a great deal of supports from the self-contained program in order to maintain appropriate classroom behaviors.

As a 5th grader, Mark continued to display a need for intense behavior supports. The function of Mark's behavior presented itself as avoidance and escape from academic tasks. In order to complete class assignments Mark required constant redirection from adults and would often shut down if asked to do something that he perceived as being too difficult. Without consistent adult proximity, Mark would become oblivious to his surroundings and lose out on valuable work time. On many occasions, when more daunting tasks were assigned, Mark would present elusive behaviors to suggest he was out of touch with reality. When aware of his surroundings, Mark was a hard worker, and aimed to please staff. His behaviors, however, set him apart from his peers and caused him to be isolated from age appropriate social interactions.

Nathan. “Nathan” was an 11-year-old African American male in the fifth grade who was receiving supports in the self-contained classroom for 120 minutes, which included his language arts and math instruction. He was also receiving para support in the general education classroom for 60 minutes daily, which included his science, social studies, and spelling instruction. To measure Nathan’s IQ, he was administered the Differential Ability Scales, Second Edition (DAS-II; Elliot, 2007). Based on this IQ assessment, Nathan’s general conceptual ability standard score was 84. Nathan was also administered the Measures of Academic Progress (MAP; Thum & Hauser, 2015) reading test in October 2016. Nathan scored a 174, which placed him in the 1st percentile amongst his same age peers. Nathan’s composite score on the DIBLES assessment was a 128, placing him well below benchmark for 5th grade.

Similar to Mark, Nathan was identified as having a behavioral disorder early in his elementary career. Nathan began Kindergarten with very little school experience. Many of his behaviors stemmed from not being used to having structure and consistency. Often times, Nathan would present aggressive and elopement behaviors in response to adult requests. Early interventions were put in to place to assist Nathan in adjusting to the school setting. Nathan, however, continued to display escalating behaviors until it was determined that he would benefit from a more restrictive placement as offered in the self-contained setting.

As a 5th grader Nathan continued to struggle with many of the same behaviors that were depicted early on. The main function of Nathan’s behavior was attention, as determined by a FBA. Often times, Nathan would present elopement behaviors in order to obtain attention from others. When tasks were presented to Nathan that he either did not want to do or he felt were too difficult he would shut down and refuse to respond to adults. Once adults began to ignore the behavior, he would attempt to leave the classroom and/or move into closer proximity to staff.

These behaviors presented themselves in both the general education and the self-contained setting. If Nathan left the general education classroom without permission, he was not permitted to return until the next content area began. These elopement behaviors caused Nathan to miss out on a great deal of instruction and time away from his peers, again, isolating him from age appropriate social interactions.

James. “James” was an 11-year-old Hispanic male in the fifth grade who was receiving supports in the self-contained classroom for 180 minutes daily, which included his language arts, math, science, social studies, and spelling instruction. James was administered the Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV; Weschler, 2003) in 2016. James’ full-scale score was a 112, placing him at the 79th percentile. James was also administered the Measures of Academic Progress (MAP; Thum & Hauser, 2015) reading test in October 2016. James scored a 181, which placed him in the 4th percentile amongst his same age peers. James’ composite score on the DIBLES assessment was a 302, placing him below grade level for 5th grade benchmark.

Unlike Mark and Nathan, James was not identified with a behavior disorder until later in his elementary career. Though behavioral interventions were in place to assist James throughout his early years, behaviors did not escalate to the point of requiring more intensive supports until grade four. Many of James’ behavior resided in what one might consider the “gray area”. Those behaviors that walk a fine line between needing administrative assistance and those that can be handled within the classroom. James typically presented avoidance behaviors when academic work was presented. He would sit for hours on end refusing to work and making inappropriate comments to both peers and adults. An evaluation was suggested for a more restrictive placement when James’ behaviors began to become more aggressive in nature. When conflicts

would arise with peers or teachers, James would resort to physical or verbal aggression rather than his usual work refusal.

As a 5th grader, James was placed in the self-contained program where he began to receive more intensive and consistent behavioral supports. Despite these supports, James continued to display aggressive behaviors that required him to receive much of his academics in the self-contained setting. At times, the function of James’ behaviors presented themselves as avoidance. There were incidents when James would simply shut down and refuse to work due to an antecedent event or because the task was perceived as too difficult. At other times, the function of his behavior was perceived as being attention seeking. One could argue, however, that this attention seeking behavior was also presented to avoid work. When seeking attention, James would present prejudicial statements that include racial slurs to obtain a rise out of others. James would also make inappropriate sexual statements that were considered harassment in order to gain attention from those around him. Unfortunately, attention was more often not the result of these behaviors, but rather further isolation from peers resulted.

Table 4
Participant Descriptions

Student	Race	Gender	Grade	Sped	Disability	Function of Behavior	DIBELS Score	DIBELS Level	SRSS Score
Mark	W	M	5	SC	LD, SL	E	68	WB	9
Nathan	B	M	5	SC	ED, SL	A	128	WB	9
James	W	M	5	SC	ED	E & A	302	BL	13
Chip	W	M	5	R	OHI	E	405	AA	17
Dale	W	M	5	R	ED	A	281	BL	6
Pete	B	M	5	None	N/A	N/A	422	AA	2
Paul	W	M	5	None	N/A	N/A	338	BL	0
Walt	W	M	5	None	N/A	N/A	264	BL	2

Note. W = white; B = black; SC = Self-Contained Class; LD = learning disabled; SL = speech/language; ED = Emotional Disorder; OHI = Other Health Impairment; E = Escape; A = Attention; WB = well-below; BL = Below; AA = At or Above

Research Design

This study used a holistic multiple case study design (Yin, 2003) in which baseline and intervention data on students reading fluency, comprehension, and daily behavior rating was assessed and coded. This is similar to the single case multiple base line across participants design (Gast & Ledford, 2014). Single case design methods typically rely on the analyzing of graphed data, whereas case study design lends well to a more holistic approach in which the researcher is able to analyze various data sources including anecdotal observations. Intervention implementation was staggered to account for any academic or behavior improvements that could be attributed to time, testing, or contact with the intervention (Kazdin, 1992). Students all began participating in the baseline phase at the same time, but then each dyad moved into the intervention phase at varying intervals; after three weeks, six weeks, nine weeks in the baseline phase. According to Yin (2003), case studies can be “based on any mix of quantitative and qualitative evidence” (p. 86) This PALS study set forth to combine both a quantitative and qualitative approach to determining the effectiveness of PALS on students with EBD.

Students participated in this study during their 40-minute tier two reading time over a period of eight weeks. Progress monitoring occurred weekly and daily behavior rating scales were taken on each day that a PALS session occurred. In addition to the students’ tier two PALS sessions, students continued to receive instruction from the districts adopted StoryTown Language Arts Curriculum (Houghton Mifflin Harcourt, 2008).

Dependent Variable

Student’s oral reading fluency and comprehension was progress monitored using passage reading fluency probes and retell from Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2017). According to the Dynamic Measurement Group, DIBELS

is a “set of measures developed to assess the attainment of early literacy skills from kindergarten to sixth grade” (2017). Benchmark norm-referenced data were utilized to determine students’ current passage reading fluency and retell abilities. Each student was administered the beginning of the year grade level benchmark reading probe. If students were unable to meet benchmark on their grade level probe, then the probe for the previous grade level (4th) was administered. This continued until the students were able to meet benchmark. The 5th grade beginning of the year benchmark score was 111 words per minute and a score of 33 on retell measures.

After a benchmark score was established, DIBELS weekly progress monitoring probes were administered to all eight participants. Once a stable baseline among trend, level, and variability was established, the researcher introduced the intervention to the first dyad. Though passage reading fluency and retell continued to be administered to all four dyads throughout the study, only one dyad began the PALS intervention. The remaining three groups continued to participate in skill based reading activities focused on fluency and comprehension through the use of a novel study.

The researcher served as the primary DIBELS administrator. Students were assessed individually and standard directions were given. The passage reading probes required students to read aloud for one minute while the adult marked words read incorrectly (i.e. substitutions, omissions, insertions, and hesitations for longer than four seconds; Deno, Deno, Marston, & Marston, 1987). Student’s performance was then recorded for the number of words read correctly in one minute. A para educator observed 30% of each student’s progress monitoring session to ensure standard procedures for DIBELS implementation was adhered to. DIBELS Retell requires the students to retell as much as they can remember about what they read during the one-minute time period. This portion is untimed, and students are awarded a point for each

word they elicit that is related to the passage. They are then allotted a quality response rating or subjective evaluation that serves as qualitative information for developing instruction.

During the baseline phase and intervention phase, student's behavior was progress monitored using Chafouleas, Tillman, and Christ's (2010) Direct Behavior Rating Single Item Scales (DBR-SIS). The DBR-SIS form included operational definitions for the following three behaviors; disruptive, academically engaged, and respectful. Disruptive behavior was defined as an action that interrupts regular school or classroom activity. This included being out of one's seat, fidgeting, playing with objects, acting aggressively, or talking or yelling about things that were unrelated to classroom instruction.

Academically engaged behavior was defined as actively or passively participating in the classroom activity. This included writing, hand raising, answering a question, talking about the lesson, listening to the teacher, reading silently, or looking at instructional materials.

Respectful behavior was defined as compliant and polite behavior in response to adult directions as well as interactions with peers and adults. This included following teacher directions, prosocial interaction with peers, positive response to adult requests, or verbal/physical disruptions without negative tone or connotation (Chafouleas et al., 2013).

In order for students to form positive relationships with others they need to display non-disruptive and respectful behaviors and exhibit non-disruptive and academically engaged behaviors to successfully benefit from instruction (Chafouleas, Kilgus et al., 2013). Ratings were made on a line divided by 10 equally spaced vertical lines, each of which included a numerical anchor at the beginning (i.e., 0%, Never), middle (i.e., 50%), and end (i.e., 100%, Always).

Baseline

During the baseline phase, students participated in twelve introductory PALS sessions over the course of 12 school days for 20-40 minutes depending on the length of the training lesson. Several of these sessions were interrupted or halted due to student absences, behavioral incidents that interrupted the instruction, and in school suspensions that kept students from being able to participate. For these reasons, the trainings sessions were not presented consecutively, but rather over the course of approximately three weeks, 12 days in total. These sessions allowed students to practice and familiarize themselves with the process and procedures involved in the PALS curriculum. Students were given the opportunity to practice partner reading, identifying mistakes, correcting mistakes, retelling what they read through partner prompting, and shrinking paragraphs. During this baseline phase, practice lessons involved modeling from the implementer in which students were able to utilize a script and follow exactly how each lesson should look. The teacher and para educators helped facilitate the reading lessons and monitored student engagement.

During the baseline phase and training sessions, the researcher paired students with various partners in order to determine which partnerships might be the best fit for the intervention phase. Students were paired with two to three different peers throughout the course of the 12 training sessions. Due to the short lessons and the fact that the majority of the lessons involved the researcher modeling the PALS process for the students, the researcher does not feel that the training sessions had an effect on student's baseline oral reading scores.

Intervention

The intervention phase also occurred in the self-contained setting during the student's 40-minute tier-two intervention time. In order to effectively implement the PALS curriculum,

students were paired into dyads based on their reading ability, scoring on the SRSS, and input from the trial partnerships conducted during the training lessons. PALS suggests that students be paired so that one of the partners is a stronger reader, therefore the researcher utilized fall benchmark DIBELS scores in order to pair students based on reading abilities. Once reading abilities were addressed, the researcher then took into account student behaviors. The four students who exhibited high risk scaled scores on the SRSS were paired with students in the low to moderate risk range and served as peer models for those with challenging behaviors.

Student dyads had relatively similar reading abilities, so a series of text was selected for the students to choose from that was within their independent reading level. Each of the eight participants were interested in sports, so the Jake Maddox (Maddox, 2018) series was selected for students to pick a common interest book from. Partners had to agree on the book. None of the dyads had an issue selecting a common interest book and appeared to enjoy having the freedom to choose the text they would utilize with the PALS lessons.

Materials

PALS Curriculum. PALS is a research-based reading program developed in 1996 by educators at Vanderbilt University. The curriculum utilized for this study was geared towards students in grades two through six to assist in improving the reading skills of below grade level readers (McMaster, Fuchs, & Fuchs, 2006). The program utilizes teacher-selected text in which students interact with the literature using one of the three reading strategies set forth by PALS; partner reading, paragraph shrinking, and prediction relay. Each of the training sessions has scripted lessons for the instructor to follow, as well as, lists of teacher materials, student materials, objects and things to do before the lesson begins.

PALS Student Folders. Each participant had a folder that held their PALS materials. These materials included scripted reminders of the coaching and reading procedures, book marks outlining each of the PALS activities, and training packets. Each session students obtained these folders from an organized station in the room.

Daily Behavior Rating Scales. As previously discussed the DBRS assesses participant behaviors during the PALS intervention. Students are given a rating from 0% to 100% (0 being none of the time and 100 being all of the time) in one of the following three categories; academic engagement, respectful, and disruptive. For example, if a student was respectful the majority of the lesson, one might subjectively determine that they were respectful for 80% of the lesson, for which they would receive a score of eight on the DBRS. See Appendix B for an example of the DBRS form.

Daily Behavior Sheets. Each of the students that were enrolled in the district wide program for students with EBD had daily behavior sheets that tracked behavior in two categories, on task/off task and responding appropriately/inappropriately, every fifteen minutes. Throughout the school day, staff monitor student behavior by assigning them either a one or a zero in each of the behavior categories. There is also a section to note anecdotal records. Staff were trained to identify and document the antecedent, behavior, and consequences of student's behavior. They were also encouraged to document positive comments as these documents were then sent home to parents for them to see how their school day was. See Appendix C for an example of students' daily behavior sheets.

DIBELS Progress Monitoring Booklets. The DIBELS program has progress monitoring booklets that have 20 probes at the level being assessed. These booklets are kept in a secure location and are used each week for progress monitoring. The front of the booklet has a

graph to track progress towards an aim line. Each reading probe has scripted teacher instructions for both the timed reading and the retell following the one minute read. The fluency probe allows educators to mark directly on the booklet any errors, while the student has their own copy of the probe. There is also a section for recording the student's total words read, errors, and correct words per minute. The retell section has a continuum of sequential numbers that teachers are able to run their pencil over as students elicit the retell of the passage. Following the retell, there is a final section in which the implementer gives the student a subjective quality response rating in one of the following four categories; rating 1 – provides 2 or fewer details, rating 2 – provides 3 or more details, rating 3 – provides 3 or more details in a meaningful sequence, and rating 4 – provides 3 more details in a meaningful sequence that captures a main idea. See appendix D for example of DIBELS progress monitoring booklet.

Incentive Charts. Each of the dyads had an incentive chart that was housed in their PALS folders. Partnerships earned “points” for various things throughout each of the PALS components. For example, during the partner reading component, they were awarded points for making corrections in an appropriate way and following their scripted correction procedures. For every 50 points that the pair earned, they were rewarded with tangible incentives that were discussed and decided on prior to the start of the PALS lessons. Student chose snack items as their reward and were able to eat the items during the last 5 minutes of each session. The partners were able to earn a maximum of 100 points per session. Points added up quickly, as students were rewarded several points for each present component within the PALS lessons. Students appeared to like the competitive aspect of the incentive charts and were motivated to try and get more points than the other pairs.

Procedures

Throughout the PALS sessions students took on the role of both reader and coach. They learned to identify and correct word recognition errors as their partner read aloud. These errors were outlined on prompt cards to remind students of the appropriate ways to assist their partner when reading. Errors were defined as saying the wrong word, leaving out a word, or hesitating longer than four seconds to say a word. When these errors occurred, coaches were taught to correct the missed word by saying, “You missed this word. Can you figure it out?” Then they would wait four seconds and if the reader could not come up with the correct word the coach would tell them the word. The coach would then prompt the reader to re-read the entire sentence. If the word was then read correct in the sentence, the coach encouraged the reader by making a positive statement such as “Great job!” This procedure continued for five minutes while the first reader read. Then the retelling phase began.

During the retelling phase, each reader was given two minutes to recall what he or she had read. The coach was trained to prompt his or her partner by asking “What did you learn first?” “What did you learn next?” and so forth. These prompts were also given to the students in their PALS folder. During the retelling portion, the coach also encouraged the reader to go back through the text to skim for keywords. The reader was not given time to re-read the entire selection. After two minutes, it was then the second readers turn to read for five minutes and retell for two minutes. Roles switched and the first reader became the coach. Students were encouraged to utilize their scripted prompts from the PALS folders so that they were able to be a thorough coach and assistant to the reader.

Intervention Fidelity

The PALS Implementation Checklist (Fuchs & Fuchs, 2006) was utilized by the researcher and para educators present during the tier-two reading time. Para educators were trained in the checklist procedures during a short fifteen-minute session in which they were asked to read over the checklist components and were given operational definitions of each checklist item. If the component was present during the session, they were asked to check it off to ensure each procedure was documented as occurring. This additionally ensured that procedures and materials were followed for set-up/arrangement, partner reading, paragraph shrinking, and predication relay components of the PALS curriculum. The implementation checklists were used throughout the study in both the baseline and intervention phases. See Appendix E for an example of the fidelity checklist utilized.

Inter-observer Agreement

In order to assess reliability of observer agreements, the researcher utilized inter-observer agreement (IOA) measures. Two para educators from the self-contained classroom who were briefly trained on the PALS curriculum and DIBELS progress monitoring, reviewed 30% of the DIBELS progress monitoring probes conducted for each of the students. IOA was calculated by dividing the smaller number of occurrences by the larger number of occurrences and multiplying by 100 (Ayres & Ledford, 2014). The higher the percentage of agreement, the more reliable the measure. This measurement determines the percentage of agreement between two viewers when they are observing the same behaviors (Gast & Ledford, 2014). The two observers, as well as the intervention agent were able to exhibit 99% inter-observer agreement.

Social Validity

Para educators present during the PALS study were given the Intervention Rating Scale (IRP-15; Marten, Witt, Elliot, & Darveaux, 1985) following the culmination of the study. The fifteen-item questionnaire included a five-point scale, from one (strongly disagree) to five (strongly agree), in which questions are asked regarding the appropriateness of the study as it pertains to the improvement of student's growth in oral reading fluency, comprehension, and targeted social behaviors. Students were also given a social validity questionnaire in which they were asked seven questions about the PALS curriculum by answering strongly disagree, disagree agree, or strongly agree. The seven scaled questions were followed by two open ended questions that asked students what they found most and least helpful about PALS. See Appendix F and G for an example of the social validity forms utilized.

Data Collection

In order to evaluate the effectiveness of PALS on student reading achievement in the areas of fluency and comprehension recall, the researcher utilized weekly reading probes from the Dynamic Indicator of Basic Early Literacy Skills (DIBELS). Originally developed at the University of Minnesota to mimic the measurement procedures of Curriculum Based Measures (CBM), the DIBELS assessment is a quick and inexpensive assessment that measures students' progress in a variety of early learning general outcome measures (University of Oregon, Center on Teaching and Learning, 2010).

Daily Behavior Rating Scales (DBRS) and students' Daily Behavior Sheets were analyzed to determine effectiveness of PALS on students' ability to work effectively and cooperatively with peers. The researcher applied the case study inquiry techniques discussed by

Yin (2003), in which multiple data sources were examined to determine effectiveness of the intervention in the realm of behavior.

Data Analysis

Daily Behavior Rating Scales. Data from students Daily Behavior Rating Scales was initially put into a table and graphed to determine on which dates students had poor performance during the PALS lessons. In order to address what caused the students poor performance the researcher examined the student's daily behavior sheets to determine antecedents and/or prior events that caused the PALS session to be unsuccessful.

Daily Behavior Sheets. Qualitative data for the study was analyzed using the student's daily behavior sheets. The researcher was primarily tracking incidents that occurred before the PALS lessons and during the PALS lessons to determine if prior incidents caused students to have poor performance during the PALS session or if there were events between peers and/or teachers that occurred throughout the actual PALS lessons. In order to determine categories of events, the data from student's daily behavior sheets was organized, coded, and categorized according to a theme (Yin, 2009; Shank, 2006).

Student's behaviors were tracked every 15 minutes. Two behaviors were addressed; on task or off task and responding appropriately or inappropriately. Students were either given a one, meaning they were on task and/or responding appropriately, or a zero, meaning they were off task and/or not responding appropriately. Next to the ones and zeros behavior columns were a space to leave comments. Staff in the self-contained classroom were encouraged to make comments on the antecedents, behaviors, and consequences that lead to a student receiving a zero on either of the tracked behaviors.

DIBELS Progress Monitoring. Students' weekly progress monitoring data was input into the DIBELS Next online data system. The researcher was then able to analyze students' progress towards benchmarking goals and aim lines. The DIBELS data was used to assess whether or not the PALS curriculum, in combination with the student's regular ninety-minute reading block, lead to an increase in student's overall oral reading fluency and comprehension recall ability.

Summary

This multiple baseline across dyads study was conducted over the course of 21 school days. Both student's daily behavior data and DIBELS progress monitoring data was collected and analyzed to determine the effectiveness of the PALS program on the oral reading fluency and effective cooperation of students in the self-contained program for students with EBD. Both the baseline and intervention phases took place in the self-contained setting. Analysis of the collected data is discussed throughout the next chapter.

Chapter 4 - Results

A total of eight participants took part in this holistic multiple case study. Out of those eight participants, none of them were able to successfully complete the PALS curriculum due to a variety of incidents that will be discussed in detail throughout this section. Overall, attrition was not an issue in this study since all eight participants that began the study were present when it ended. The PALS sessions took place a total of 21 school days. Of those 21 days, 22 incidents occurred that lead to an interruption in instruction and/or an inability to complete the PALS reading session. Themes were identified both between and across the four dyads.

When looking between the dyads, each had a different dynamic when it came to the setting the students were receiving special education services through. In the first dyad, one participant, Mark, received services in the self-contained classroom and one participant, Pete, was not receiving any special education services. This dyad only had one incident that caused a session to be interrupted and it was due to one of the participant's disinterest in PALS and refusal to participate.

In the second dyad, both participants, Nathan and James, received services in the self-contained classroom. This dyad had 19 of the total 22 incidents that caused an interruption in instruction. Out of the 19 incidents between this dyad, 53% (n=10) of them were due to an outside event preventing their participation in the PALS session, 10% (n=2) were dislike and refusal with the session material, 21% (n=4) were due to an issue with their partner, and 16% (n=3) were due to an issue between the student and instructor. For a description of these incidents see table 5 below.

In the third dyad, one participant, Chip, was served in the resource setting with an EBD diagnosis and one participant, Walt, was not receiving any special education services. This dyad

had two incidents that interrupted instruction, both because of outside incidents preventing participation in the PALS sessions.

The fourth dyad was constructed of two students, Dale and Paul, who were not receiving any special education services and this pair had zero incidents of interruption. They were able to work effectively together in order to complete the PALS sessions, however, many of those sessions were interrupted by other student's behavior which created a distraction during a number of these reading sessions.

Upon examination across the dyads, two themes emerged as a barrier to successfully implementing the PALS lessons, session refusal and an inability to get along with others. A total of 22 incidents were identified based on students' DBRS records. After isolating low DBRS ratings, the researcher then examined the student's daily behavior sheets to establish a more anecdotal account of what occurred during the PALS session. Of the 22 incidents, 12 were due to outside events that lead to the students refusing to participate in the PALS session, three were due to a student's lack of interest and therefore refusal to participate in the session, four were due to an issue between the student and their partner, and finally three were due to an issue between the student and the instructor.

Academic Outcomes

Does the implementation of PALS increase a student with EBD's reading fluency and comprehension? Though consistent data was taken on the oral reading fluency and comprehension of the participants, the researcher was unable to obtain complete data on the dependent variables of students that participated in the study. Due to issues that occurred during the PALS sessions, the researcher did not feel that the DIBELS Oral Reading Fluency data was a true reflection of the student's ability due to the amount of interruptions that occurred throughout

the sessions. PALS was implemented for a total of 21 school days. During each of those 21 days, there was some kind of interruption caused by a student. Due to consistent interruptions, the students were not able to experience the PALS curriculum in a successful manner.

Only two of the dyads completed the baseline phase and began the intervention phase. Nathan and James completed four weeks of baseline data and seven weeks of intervention data. Mark and Pete completed seven weeks of baseline data and four weeks of intervention data. Based on these initial data points none of the students with EBD showed improvements in oral reading fluency measures. Three of the four students with EBD, Mark, James, and Chip, showed improvements on their retell comprehension measures. The researcher put a stop to data collection after determining that students were not able to participate in the intervention with fidelity due to the multitude of interruptions. These interruptions are outlined in table 2 and ranged anywhere from incidents that occurred prior to the students entering the classroom for PALS instruction to disagreements that occurred between partners during the PALS lessons. The researcher felt that due to an inability for the students to participate successfully with the PALS curriculum that it was not in the students best learning interest to continue the study. The data that was collected, however, can be seen in figure 1 and 2 below.

Based on the collected DIBELS progress monitoring data, the three students in the self-contained program did not make gains in their oral reading fluency. Two of the students, Nathan and Mark, however, made minimal improvements on their retell comprehension. It is important to again note that the researcher feels this data is not a true representation of students' abilities due to their inability to participate in the PALS curriculum with fidelity, therefore it was impossible for the researcher to determine if these gains were happenstance or truly effected by the PALS program.

Figure 1

Student DIBELS Oral Reading Fluency Data

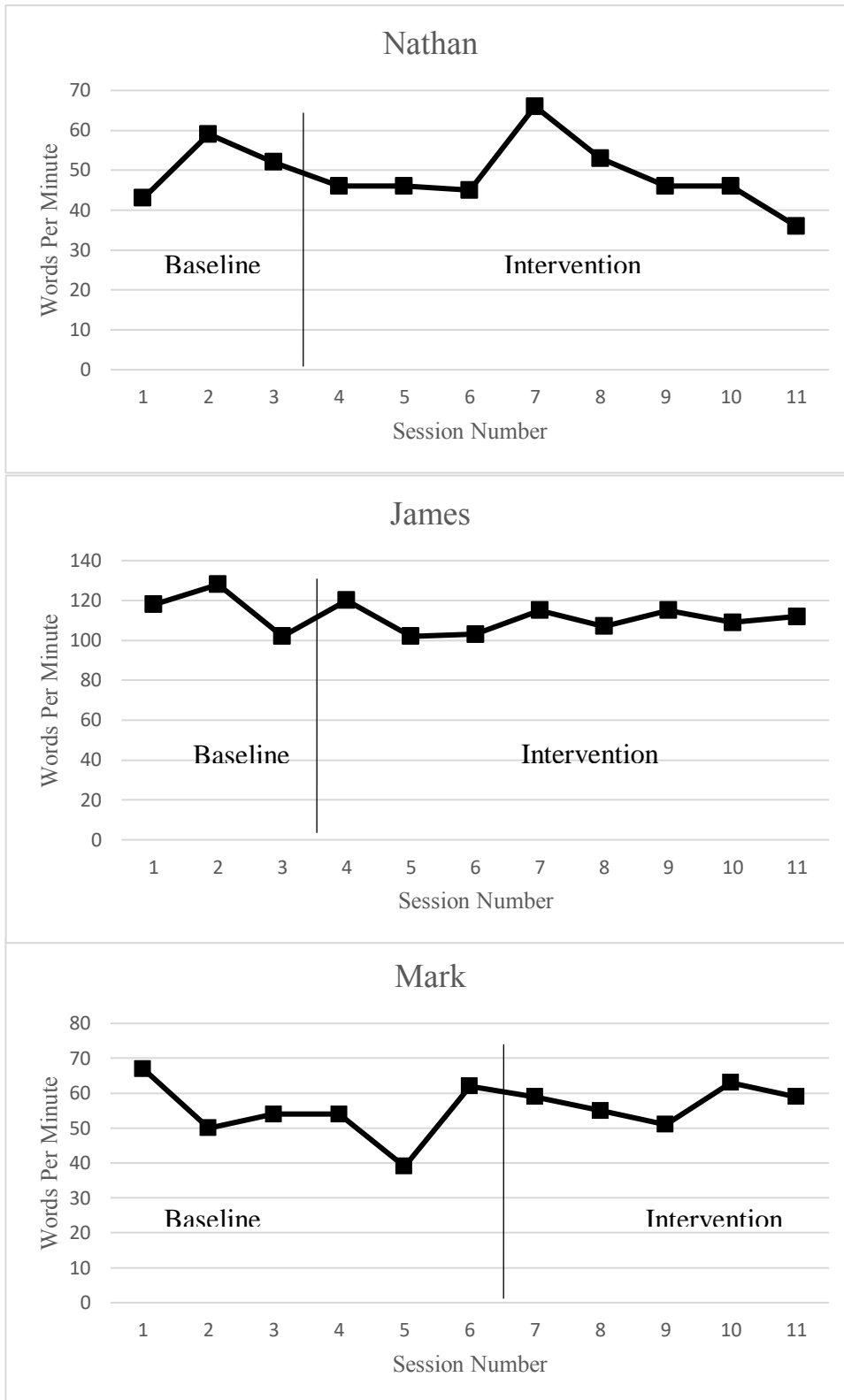
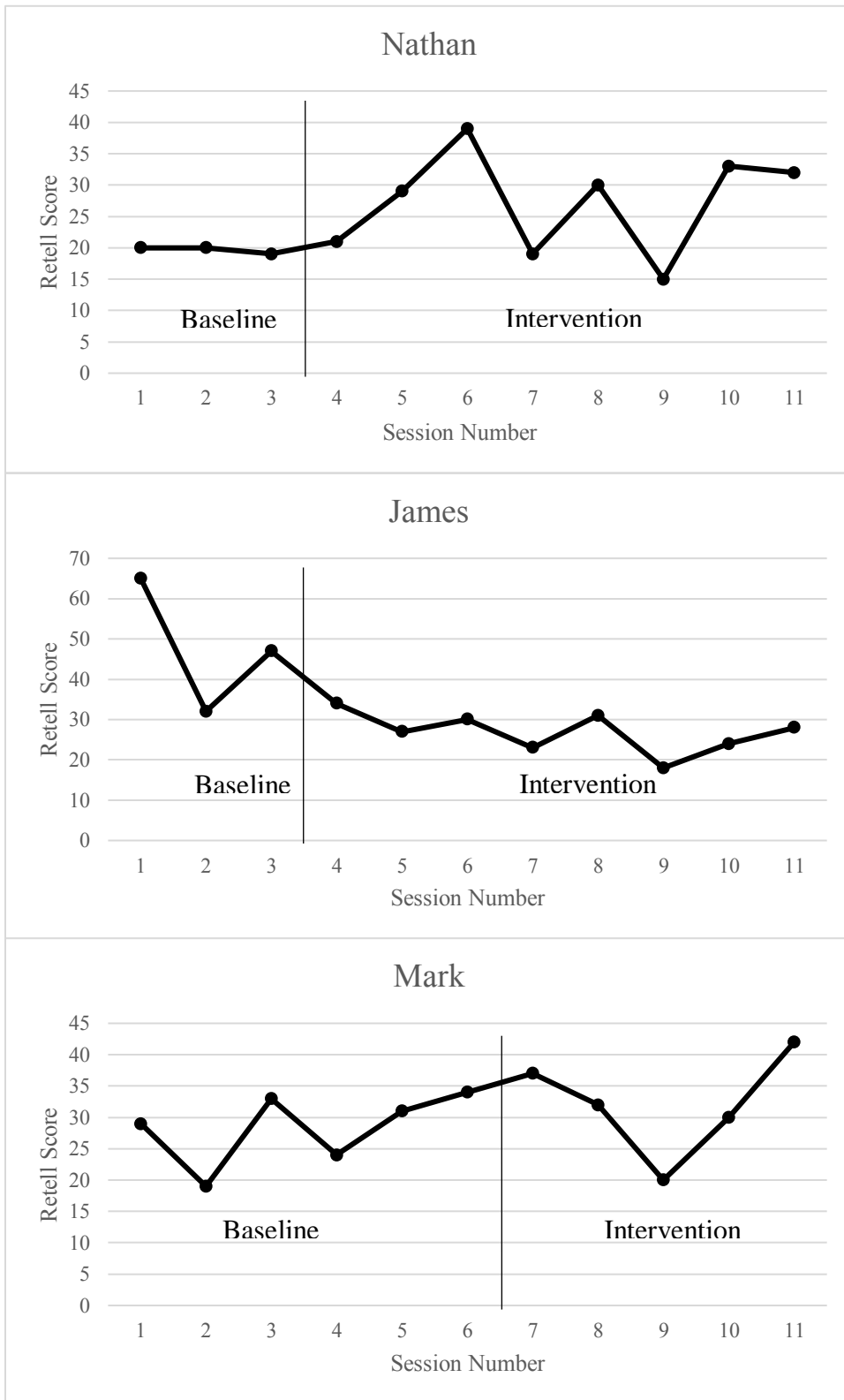


Figure 2

Student's DIBEL Retell Comprehension Scores



Behavioral Outcomes

Does the implementation of PALS increase a student with EBD's ability to work effectively and appropriately with peers? Based on the results from the students DBRS scores three of the four dyads were able to work effectively and appropriately with one another. The following three dyads, Mark & Pete, Chip & Walt, and Dale & Paul, did not have any issues between the partnership. The dyad of Nathan and James, however, had several issues between the two of them and were not able to effectively work together on four occasions. One of the four occasions were due to the boys goofing around with each other and not following adult instructions, the other three incidents were due to the student's in the dyad name calling, refusing to work with each other, or refusing to join the group/partner for the session.

Prior to beginning the baseline phase of the study, the researcher tried varying partnership arrangements in order to assess which grouping of students were going to work best for the actual intervention phase. Several dyad configurations were exasperated and it was determined that Nathan and James struggled to work effectively regardless of the pairing that was assigned. Nathan refused to work with two of the partners that were tried and James chose to name call or start arguments with one of the two other partners that were attempted. The researcher felt the best fit for a partnership was having Nathan and James work together, since Nathan only showed compliance and willingness to utilize the PALS curriculum when partnered with James.

Anecdotal observations tracked on student's daily behavior sheets were used to determine what caused a PALS session to go poorly. Only students in the self-contained classroom had daily behavior sheets (Mark, Nathan, James). The comments made on the student's behavior sheets helped the researcher identify what exactly caused the PALS sessions to go poorly. A

brief synopsis of these events are detailed in Table 5, as well as, a table displaying themes among the behavior incidents in figure 3.

Social Validity

Two para educators that were present during the PALS lessons completed the Intervention Rating Scale (IRP-15; Marten, Witt, Elliot, & Darveaux, 1985) once the study was completed. Based on the five-point scale, adults rated the appropriateness of the study in the area of oral reading fluency a three, in the area of comprehension a three, and in the area of targeted social behaviors a two. Educators were also given the opportunity to elaborate on any of these categories and noted that students were unable to make any significant gains in the areas of fluency and comprehension due to the constant interruption of outside events and/or behaviors during sessions. The educators also noted that PALS was easy to implement and a program that they felt comfortable and confident in facilitating with students in the EBD classroom. One of the raters noted that they wished students would have been more successful in getting along with peers and that she would have liked to have seen the strategy used in a whole group setting that students with EBD were a part of.

In addition, all three of the students identified as having EBD that took part in the study completed a social validity questionnaire. This questionnaire asked the student's opinions regarding their use of the strategy and whether or not they felt it was helpful and something that they might utilize in the future. All three students rated the PALS strategy with high ratings mainly in the fours and fives. They were also asked to comment on what they found most helpful and least helpful. Students comments included, "I liked getting to work with friends during reading", "I liked having a time limit, so that I wasn't having to read for a long time", "I didn't like working with certain students and wish I could have picked my partner each time", and "It

was hard to work with other kids that couldn't read as well as me." Overall, the questionnaire seemed to contradict the results of the study, in that students enjoyed the PALS lessons, but did not always participate appropriately.

Table 5

Student Social Validity Scores

Social Validity Question	Mark's Rating	Nathan's Rating	James' Rating
I think that I learned a lot about PALS	4	4	5
I think that using PALS helped me to become a faster reader and understand the pages better as I read them	4	4	4
I think that using PALS helped me to remember more about what I read	5	5	4
I enjoyed working with a partner during reading time	4	4	4
I am a faster reader now that I have completed the PALS lessons	5	5	5
It is easier for me to summarize what I've read now	4	4	5
I would be interested in continuing to work with the PALS intervention for Mustang Time	4	4	4
Average	4.29	4.29	4.43

Table 6*Incident Descriptions*

Student	Date	Incident Category	Incident Description
James	9/26	OE	James was stating that he didn't feel well. He refused to participate in PALS session
Nathan	9/27	OE	Prior to PALS, Nathan was flicking puzzle pieces around the room and was off task. When it came time for PALS, he refused to participate and began drawing on his assignments
Nathan	9/28	OE	Prior to PALS, Nathan shut down half way through his math assignment. When PALS began, he refused to join and instead began flinging parts of a pen around the room
Nathan	9/29	PI	Prior to PALS, Nathan was pretending to punch and kick adults. He began wandering the classroom. When PALS started, he sat at the group table but began throwing his folder around, scooting his chair away, and refusing to participate.
Nathan	9/30	OE	Prior to PALS, Nathan refused to participate in music or PE class. Once he was back in the classroom, he began messing with a pen contraption. He refused to give it to an adult, so it was taken. He then punched and scratched teacher.

James	10/5	SR	During beginning of PALS session James asked if he could work in another teacher's classroom during his break. The teacher explained that this could be discussed after PALS, the student then refused to follow directions for the remainder of the lesson.
Nathan	10/11	OE	Prior to PALS, Nathan was running through the hallways. He refused to join his class for music and PE. He began telling adults to "shut up" when any direction was given. During PALS, he refused to get with his partner and instead threatened to punch another student who was bothering him.
Nathan	10/12	OE	Prior to PALS, Nathan began stating he had ADHD which made him angry and that he wasn't going to work on school work. He was given options, but chose to slam the classroom door repeatedly. He continued to slam the door throughout the PALS session.
Mark	10/12	SR	Prior to PALS, Mark was playing on an iPad in class and refused to put it away when directed, so it had to be taken. Once the PALS session began, he refused to follow any adult directions and would not respond.
James	10/19	OE	Prior to PALS, James became agitated during a science lesson. He tried leaving the classroom without permission. He eventually went to the self-contained

classroom and was asked to remove his hat or was warned it would be taken for the day. He refused to take it off, so it was taken, and the student became physical towards adults and had to be restrained.

Chip	10/19	OE	Chip was upset from incident that happened in the morning. He was wandering the halls and did not join the PALS session.
Nathan	10/24	OE	Prior to PALS, Nathan shut down, refused to listen, and began breaking puzzle pieces and pencils. He threw the broken pieces around the room. He eventually calmed down, but once the PALS lesson began he refused to join group and participate.
James	10/24	AIS	James interrupted repeatedly throughout PALS lesson. When reminded by adults to raise his hand and not blurt out he responded by saying “why should I listen to you?” and continued to interrupt throughout lesson.
Nathan	10/25	PI	During partner reading session of PALS Nathan began fooling around with his partner and not following adult instructions.
James	10/25	PI	During PALS session, James was making rude comments towards other group members by calling them “stupid”. During partner reading he began fooling

around with partner and not following adult instructions.

James	10/31	AIS	James did not listen to instructions, so had to redo part of his assignment during PALS and became angry.
Nathan	10/31	OE	Prior to PALS session, Nathan became unresponsive and disengaged when given instructions. He was given choices of things to work on. Once PALS time came around, he refused to join the group and instead sat at a table away from the lesson.
James	11/1	AIS	During PALS lesson James became very argumentative and began talking back with most directions that were given to him.
Chip	11/2	OE	Child was upset from an incident that occurred during the class period prior to PALS and began wandering the hallways. He was unable to join the PALS session.
Nathan	11/3	OE	Nathan became frustrated with work first thing in the morning. He was refusing to accept adult assistance. Once PALS lesson began he refused to join and instead sat at a table in the corner.

Nathan	11/4	SR	Prior to PALS, Nathan refused to attend his general education class for spelling. Instead, he stayed in the self-contained room and began throwing things around the room. Eventually he calmed down, but then refused to join the PALS group when it was time.
Nathan	11/7	OE	Nathan was reluctant to work throughout most of the morning. He was telling adults “no” when given a direction. When PALS session began, he refused to join and instead sat with his head on his desk and colored on a sheet of paper near him.

Note. OE = outside event; SR = session refusal; PI = partner issue; AIS = arguing/interrupting session

Figure 3

Incident Description Flow Chart

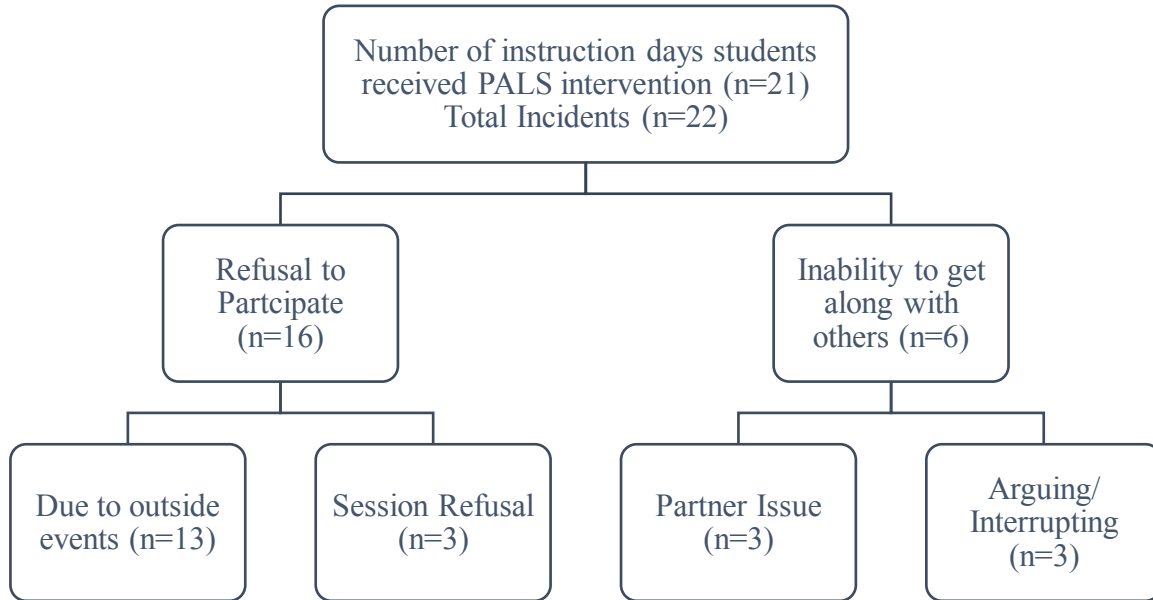
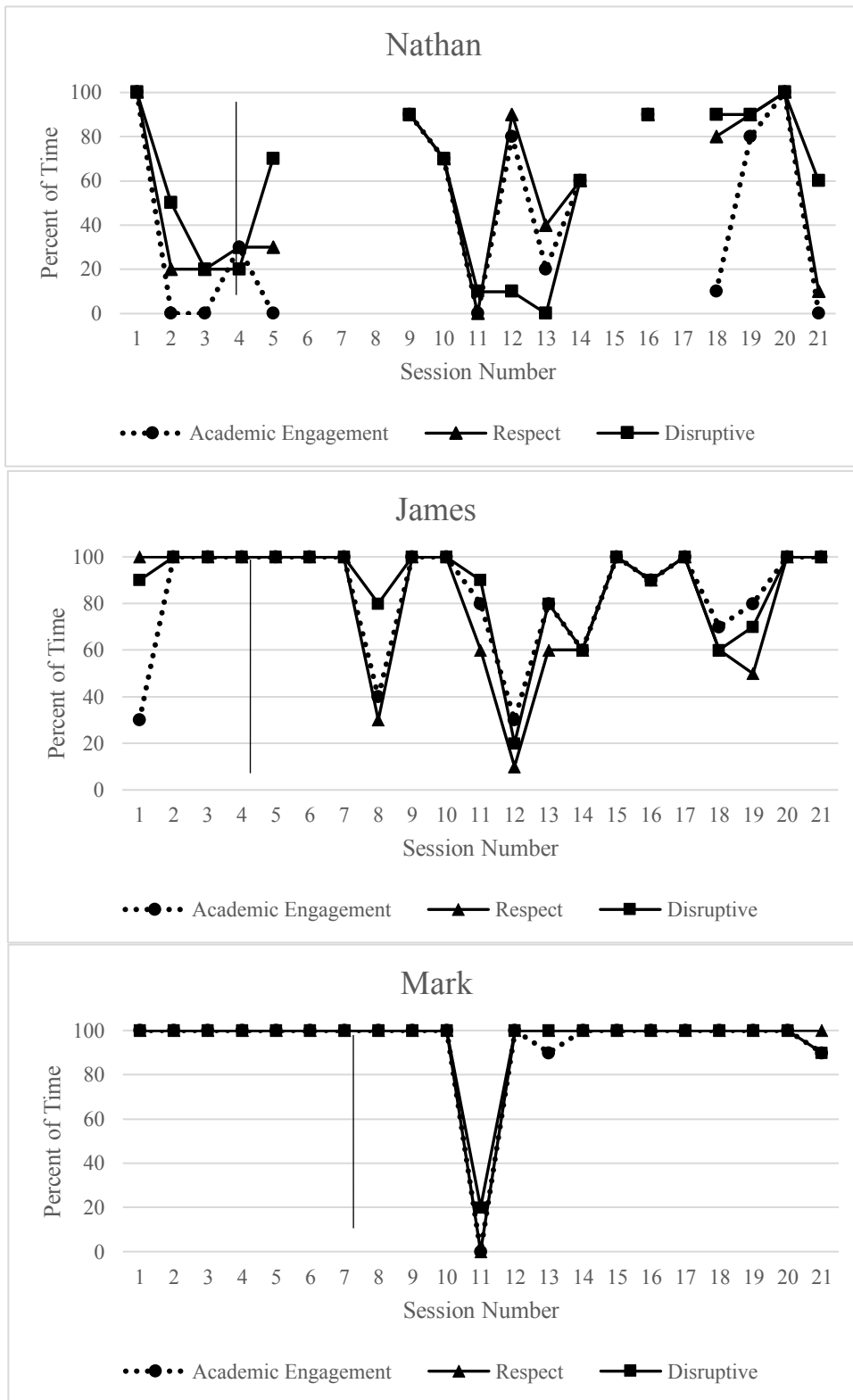


Figure 4
Student DBRS Data



Chapter 5 - Discussion

This chapter will discuss the effectiveness of the PALS reading curriculum with students identified with EBD, as well as, describe incidents that interfered with the successful implementation of PALS in the self-contained setting. Suggestions for why this intervention was unsuccessful and recommendations for additional research will be addressed. Each research question will be discussed, as well as limitations, and suggestions for future research.

Summary of Study

Day 1. PALS training began on a Monday in September. Students had been in school for just over a month and DIBELS data revealed that a large number of 5th grade students required explicit interventions to address both fluency and comprehension in both tier 2 and tier 3 reading groups. The first day of training went well and students seemed excited about the prospect of working in pairs to perform various reading tasks involved in PALS. James, however, was claiming not to feel well and therefore refused to participate in the first training session of PALS. James was taken to the nurse, did not have a fever, so was given the option to lie down or return to class. James chose to return to the self-contained room, but continued to refuse to participate in the lesson.

Day 2. Most of the students seemed anxious to continue learning about the PALS strategy, with the exception of Nathan. Prior to starting the tiered reading time, Nathan had participated well with his general education peers in physical education (PE). After PE, however, Nathan requested to work in the self-contained room rather than in his general education classroom. He was given this opportunity, but then refused to work once in the self-contained room. Instead, he began messing with a puzzle and throwing pieces of the puzzle around the room. When redirected, he stated that he was unable to work because his medication does not

allow him to focus. When it came time for the PALS lesson, Nathan had been off task and refusing to work for nearly 40 minutes. He continued to refuse to participate in the PALS training session, and instead drew on the back of the assignment he was supposed to have been working on previously and wandered the classroom. Both of these behaviors were a distraction to the seven other compliant students attempting to partake in the second training session of PALS.

Day 3. The third day of training was again interfered with due to Nathan's behavior. For most of the morning leading up to the PALS session, Nathan had been non-compliant. He was given several choices of assignments to work on in the self-contained classroom, but chose to pretend to punch and kick adults, wander the classroom, and continuously tell adults to "shut up" when redirected. Though he was able to turn things around for a brief period of time and complete a daily math assignment, when it came time for his tiered reading time, he began throwing his folder around, flipping the teacher off, and scooting his chair away from the group table where the lesson was taking place. These behaviors were distracting to the other seven students and interfered with their ability to practice the partner reading portion of the PALS curriculum.

Day 4. Day four of the PALS training sessions was again interrupted for a brief period of time by Nathan's behavior. Nathan had had music and PE class prior to the PALS lesson. Both of these class periods were unsuccessful due to Nathan's lack of participation. In both classes, Nathan left the room without permission and would not participate as intended. Upon returning to the self-contained classroom for tiered reading time, Nathan began making a contraption out of a ball point pen. When redirected and ask to put the contraption away, Nathan refused and began making inappropriate comments towards adults. Once the other students joined for the

PALS training session, Nathan sat to the side quietly, but refused to participate in the partner activities.

Day 5, 6, & 7. The students had now participated in a full week of PALS training sessions. The next two PALS sessions were conducted without any behavioral interruptions. The lesson was not interfered with again until the seventh day. On the seventh day, the session began smoothly. Shortly into the session, however, James began asking about his earned break time that would come after the session. When it was explained to him that he could discuss his break time after PALS, James became upset and refused to participate or follow adult directions for the remainder of the tiered reading time. Due to his refusal, he was unable to participate in the prediction relay component of PALS with his assigned partner.

Day 8 & 9. There was another successful day of training that took place between all eight participants. Day nine's session, however, was interrupted by a behavior incident from Nathan. Nathan had been refusing to participate with his peers for most of the morning. He refused to attend PE and music and instead was running around the school, telling adults to shut up and leave him alone. When it came time for PALS, Nathan refused to partner up with his assigned classmate and threatened to punch the student if he worked with him. Due to this incident, Nathan's partner worked with a para in the room rather than with Nathan to complete the partner activity.

Day 10. On day ten of the training sessions two different behavioral incidents were presented by two students. Prior to the session, both Nathan and Mark had been having trouble with compliance. Nathan had been stating that he had ADHD, which made him angry, and not want to work. He was given options of assignments to work on, but chose to slam the classroom door repeatedly instead of work. He continued to slam the classroom door throughout the PALS

session which was a huge distraction to the other six students attempting to participate. Mark, on the other hand, had been conducting an activity on the iPad in his regular education classroom. When it was time to put the iPad away, he refused and so it had to be taken by the classroom teacher. Following this incident, Mark entered the self-contained classroom to begin the PALS session, but refused to follow adult directions, respond to any requests, or participate in the training sessions.

Day 11, 12, & 13. Sessions 11 and 12 were successfully completed without behavior interferences. During session 13, Nathan and James were scheduled to start the intervention phase and begin the partner reading phase of the PALS curriculum. There were, however, two incidents that interfered with the completion of this PALS session. James became frustrated by a science response question activity in his general education classroom. Though adults attempted to assist him in correcting his response, he became extremely disrespectful and carried this behavior over to the PALS session that followed. After entering the self-contained classroom, James refused to remove his hat. He was given several opportunities to remove it and sit it next to him or put it in his backpack, but refused. His hat was then taken and James became physical towards adults, punching and kicking the teacher and a para. He had to be removed from the classroom. In addition to this disruptive incident, Chip was wandering the school hallways refusing to follow adult directions throughout the entire PALS session due to an incident that had occurred in the regular education classroom that morning.

Day 14, 15, & 16. Students again participated without the behavioral interruptions for sessions 14 and 15. The 16th session was again interrupted by two different behavioral events. Nathan had had a good morning of participating with his general education peers in math and spelling. Shortly before the PALS session began, however, Nathan became upset with a grammar

worksheet and began breaking pencils into tiny pieces that he then threw around the classroom. Though he calmed down briefly before the PALS sessions began, he was still non-compliant and refused to participate with his partner. James, though willing to participate in the session, presented an abundance of interruptive behaviors throughout the activities involved in the lesson. When redirected and asked to raise his hand he responded by telling adults to “shut up” and “leave him alone”. He continued to interrupt both the teacher and students eliciting responses.

Day 17. The 17th session was once again unsuccessful due to behaviors. Instead of following the expected procedures for partner reading, Nathan was purposefully trying to distract his partner James by making noises and messing with the timer they were supposed to utilize. James was unable to ignore Nathan’s inappropriate behaviors, and instead joined in and began calling other students names and refusing to follow the intended partner reading procedures.

Day 18, 19, 20, & 21. Sessions 18 through 20 were successfully completed without behavioral interruptions. Nathan and James were able to complete the partner reading and prediction relay components of PALS over these two session days. There were, however, two behavioral incidents that interfered with session 21. James did not follow the given instructions for tiered reading time so was requested to redo a portion and therefore became non-compliant. Rather than participate with his partner, he hid under the table and refused to follow adult directions. Prior to the PALS session, Nathan had had a compliant morning of working with his classmates in the general education setting throughout the morning. When it came time to begin PALS, however, Nathan became unresponsive, moved his chair away from his partner, and refused to work cooperatively to complete the assigned PALS activities.

At the conclusion of day 21, due to the abundance of interruptions to the student’s ability to participate effectively in PALS, the researcher decided to discontinue the intervention.

Ethically, the researcher felt it was no longer in the student's best interest to continue participating in the PALS lessons. With over half of the lessons being interrupted by behavioral incidents, the researcher felt there were other options for reading interventions that would better suit the student's academic needs.

Research Questions

The purpose of this research was to examine the effectiveness of PALS on 5th grade students identified with EBD. The study investigated two main research questions: (a) Does the implementation of PALS increase a student with EBD's reading fluency and comprehension and (b) does the implementation of PALS increase a student with EBD's ability to work effectively and appropriately with peers? Both of these questions will be explored and discussed in the following section.

Does the implementation of PALS increase a student with EBD's reading fluency and comprehension?

Students identified with an emotional or behavioral disorder often exhibit concurrent difficulties across academic subjects (U.S. Department of Education, 2004). Though this population struggles with academics, the body of research on effective strategies to improve these areas of concerns are relatively minute. PALS has been found to be an effective and cost-efficient method in the classroom, (Ramsey, Jolivette, & Patton, 2007). In this particular study, however, that was not the case. In contrast to previous studies (Locke & Fuchs, 1995; Ramsey, Jolivette, & Patton, 2007; Falk & Wehby, 2001) students with EBD that participated in PALS did not make gains in their behavior or in their reading skills.

As evident from the results discussed in detail above, this study indicates that the peer tutoring components within PALS were effective for some of the students from the general

education classroom, but not for students that were part of the district level program for students with EBD. This could most generally be explained by their difficulties in de-escalating from incidents that occur outside of the PALS sessions, staying on task, and cooperating with their peers. Combined, these prevented students from successfully participating in the PALS curriculum and therefore severely hampered the integrity of the study and the data on academic improvements and social skills.

Does the implementation of PALS increase a student with EBD's ability to work effectively and appropriately with peers?

Consistent with previous research (Barton-Arwood, Wehby, & Falk, 2005; Boulos, 2015; Falk & Wehby, 2001; and Wehby et al., (2003) students with EBD that participated in the PALS curriculum did not show any marked improvements in the area of behavior/social skills.

Research shows that this population struggles to form relationships with others, so requiring them to work cooperatively on academic tasks that are challenging for them may only increase their desire to escape the activity (Schoenfeld & Janney, 2008). Students with EBD display a wide variety of both internalizing and externalizing behaviors that significantly interfere with their abilities to form successful relationships both in and out of the school setting (Mihalas, More, Allsopp, & McHatton, 2009). The ability to get along with others and work collaboratively is perhaps one of the biggest foundations of the PALS curriculum. The heavy reliance on students to be the teachers or “coaches” is often a daunting task for students that struggle to take responsibility for their own learning, let alone another classmate whom they may or may not care for or have a relationship with.

According to a study conducted by Wentzel (2009) students who have positive social relationships with their peers are more engaged academically and overall have higher levels of

academic achievement. This idea gives precedence to the fact that all 22 of the detailed incidents that interfered with the PALS sessions were produced by students identified with an emotional/behavior disorder. These students struggle to form relationships with peers and there is often a great deal of anxiety created by requiring them to work with other students (Schoenfeld & Janney, 2008). This may in turn, produce an inability to focus on the task at hand.

The students in the EBD classroom also struggled with de-escalation. Twelve (55%) of the incidents that caused an ineffective PALS session were due to incidents that occurred outside of the PALS sessions. The PALS sessions occurred at 11:30 each day. Prior to the sessions, the 5th grade students had “specials” (Art, Music, or PE) and either science, social studies, or spelling classes. Often an event would occur in one of these settings that escalated the student and caused them to be unable to participate successfully in the PALS sessions. These problem behaviors have been described as “academic disablers”, in that they are barriers associated with a decrease in both social and academic performance (Gresham, 2015). When students entered the PALS sessions already escalated by a previous event, it was difficult for them to think rationally and clearly on the reading expectations and academic demands associated with PALS. One might consider adding some form of intervention to assist in de-escalating students prior to them participating in the PALS lessons.

Students escalation might also be contributed to the time of day that the sessions took place. The sessions occurred at 11:30 each day which was just before the students’ lunch and right after students had been around their peers for specials and a short period of academic work time. Several timing factors could be a contributor to students’ inability to effectively participate in the lessons, including hunger and lack of patience. Student’s may have exhausted their ability

to work cooperatively prior to attending the sessions and therefore having the sessions first thing in the morning may have been more beneficial.

Contextual Variables

An additional explanation for these issues that arose outside of the self-contained classroom have been defined as “contextual variables” (Losinski, Maag, Katsiyannis, & Ennis, 2014). Contextual variables are those that effect the setting for which behaviors occur in and can include, but are not limited to, setting events, antecedents, classroom operations, and classroom stimuli. It is important that educators examine each of these contextual factors when examining the behavior of students. Often, many of these variables may go unnoticed until they are examined in depth by a functional behavioral analysis (FBA). Once identified, however, contextual manipulations are quick and easy for educators to implement.

These four contextual variables noted above are inter-changeable and have overlapping definitions (Losinski, Maag, Katsiyannis, & Ennis, 2014). It might be difficult for an educator to decipher whether a variable is due to outside events or events that occur within the classroom itself. Educators can only be in so many places at once and so sometimes situations can go undetected unless the student is willing to share that an antecedent has occurred. Ultimately, contextual variables can be used synonymously when discussing events that effect student’s performance in the classroom. Considering that all of the events that caused the PALS sessions to be ineffective were due to contextual variables, one might consider the need for contextual interventions prior to students joining in on the PALS sessions. These contextual interventions as discussed in the research typically include time for validating feelings through the use of Check In/Check Out and Check, Connect, and Expect procedures (Yong, Cheney, 2013; Cheney, D., et al., 2010; Swoszowski et al., 2013). These strategies offer students a chance to share events that

happened and for teachers to assess students' mood. This also offers students an opportunity to reflect on situations and determine ways of handling their frustrations using coping strategies. Had some of these contextual interventions been utilized prior to a student entering the PALS sessions, students may have been more effective and better able to focus on the reading and partner work.

Importance of Null Results

Although studies with positive findings lend to educator's knowledge base and can help guide effective practices, studies that have null findings are just as important (Cook, 2017, Kratochwill, Levin, & Horner, 2017). Null effects play a role in establishing what policies and practices are ineffective and should therefore not be implemented with certain populations. It is, however, important to also note that a particular intervention should not be considered effective or ineffective based on the findings of one such study, hence the importance of replication (Coyne, Cook, & Therrien, 2016). Cook's (2017) synthesis of null results in the social sciences suggests that many researchers choose not to publish null results in fear that it will go against common beliefs. The lack of null results in the literature creates a publication bias or rather an underrepresentation of ineffective interventions written about in the literature.

Publication bias in the social sciences is created by a reviewer's preference to publishing studies with statistically significant effects. After all, practitioners are likely interested in successful outcomes that they can immediately adapt and put into their own practice (Kratochwill, Levin, & Horner, 2017). Publication bias, therefore, can create a misleading understanding of certain documented interventions by producing the idea that because one study worked for a certain population, this will be the same when transferred to a similar population. The U.S. Department of Education agrees with the importance of publishing and interpreting

negative results as evident by their statement in the 2013 Institute of Education Sciences (IES) Webinar in which they committed to “identifying what does not work and thereby encourage innovation and further research” (p. 4).

Though the detailed PALS study that assessed effectiveness on students with EBD was ineffective, it is still important to the literature. As noted by Kratchowill et al. (2017), these null results add to the literature by addressing when and where certain interventions are and are not successful. Students in the self-contained program, despite extensive positive behavior interventions already in place, were unable to successfully participate in the PALS curriculum. Thus, lending to an explanation for why PALS may not be an effective intervention for students with EBD or the idea that contextual interventions could be magnified to ensure a more successful PALS experience for students with EBD.

Limitations

Due to the ineffectiveness of the PALS study with students with EBD in the self-contained classroom, it is important to consider the multitude of limitations presented throughout this study. First and foremost, the researcher was unable to fully investigate the effects of PALS on the reading fluency and comprehension of participants due to the abundance of interruptions, events that occurred outside the sessions, and issues between partners. Students that partook in the sessions were never fully given an opportunity to excel in PALS and therefore fluency and comprehension data collection could not be utilized to determine the effectiveness of the intervention. The PALS program was designed to be taught every other day for 35-40 minutes for 17 weeks. Originally, the researcher had set out to conduct the sessions three days a week for 40 minutes in order to fit the school wide tiered systems of support schedule. However, only about half (42%) of the sessions were able to be conducted, thus reducing the students

experience with PALS and ultimately effecting the fluency and comprehension reliability of results.

Had the students had the opportunity to experience the full extent of the PALS sessions, the data would have been more complete and reliable in assessing the effectiveness of PALS on reading fluency and comprehension. For these reasons, the researcher felt that for ethical purposes the study should be ceased due to an inability to participate as PALS is intended. Even though many of the dyads were able to work cooperatively, their instruction was often interrupted by other student's behaviors and therefore their ability to improve in oral reading fluency could not be fully understood based on their limited exposure to a successful sequence of PALS sessions.

Secondly, not only was the study not able to be completed with fidelity, but the inability to complete the allotted PALS sessions resulted in the researcher also not being able to conduct any maintenance probes to further determine the effectiveness of the intervention. Not one of the dyads were able to complete the entire PALS intervention and therefore maintenance data was unavailable for any of the participants. Had the researcher been able to complete the study and provide maintenance data, valid and reliable results could have been interpreted for the effectiveness of PALS on fluency, comprehension, and targeted social behaviors. Future studies should include a maintenance phase in which several weeks of maintenance data is tracked once the PALS intervention has concluded. Gast and Ledford (2010) suggest that the maintenance phase, similar to baseline, should include at least three data points. Therefore, since student data on fluency and comprehension was taken weekly, the primary investigator would have needed to conduct an additional three weeks of data collection post intervention.

Another limitation to the study was the fact that students' behavior intervention plans were not reassessed throughout the PALS intervention. Had the participating students with EBD been given a functional behavior assessment throughout the study to adjust their BIP, they may have been able to more effectively participate in the PALS activities. Had the setting events and contextual factors that influenced students' participation been examined and addressed through behavioral interventions, students' behavior during the lessons may have been altered and more suitable for participation. Stichter and Conroy (2005) suggest the use of a structural analysis to assess and evaluate the presence of setting events in order to shift the FBA focus to antecedent and contextual factors. Adding a structural analysis component to the implementation of PALS with students with EBD would be a necessary component to a successful application of the intervention.

Historical threats to internal validity were also considered a limitation to the PALS study. History refers to intervening events that have the potential to influence the dependent variables (Christ, 2007). Any of the events that occurred during the school day prior to the PALS lessons might be considered an intervening event. For example, on day four of the PALS implementation, Nathan had issues that occurred during his morning classes that built momentum for noncompliance. This momentum carried over into the time that PALS was conducted and effected his ability to participate successfully with his partner. Though it is difficult to control for these threats to internal validity, it is crucial and can usually be done by manipulating the research design to rule out intervening events effecting the intervention phase of a study (Tawney & Gast, 1984).

The final limitation identified by the researcher is that the student's perceptions on the social validity questionnaire could likely be considered inaccurate, dishonest, or exaggerated.

The researcher conducting the PALS study and questionnaire was also the student's primary case manager and teacher. During the questionnaire, she read the questions aloud for the students and then gave them time to respond to the scales and short answer questions. Many of the students answered favorably which was contradictory to their performance during the PALS sessions. A conclusion could therefore be made that students were attempting to provide answers that would satisfy the researcher/teacher. The way in which the questionnaire was presented may have results in students feeling uncomfortable providing their true perceptions of the PALS intervention. In future studies, the questionnaire should be given so that students can anonymously elicit responses and feel comfortable providing responses that will be not be judged by their teacher. Giving students the questionnaire online in which their handwriting and name can be left anonymous may be an encouraging alternative to providing unbiased participant responses.

Implications for Future Studies

The PALS program is a research-based method for teaching students to read more effectively. Two studies in particular examined the use of PALS and students with EBD (Sutherland & Snyder, 2007; Locke & Fuchs, 1995) and found that PALS improved students' disruptive behaviors, active responding, on task behaviors, reading fluency, and social interactions. These findings, however, were not confirmed in the PALS study detailed thus far. Several implications from the presented study should be considered by practitioners wishing to recreate similar studies with students identified with EBD.

One such consideration would be to have students with EBD participate in the PALS sessions with younger students instead of same age peers. Evidence from a study conducted by Franca & Kerr (1990) suggests that having students with disabilities work with younger students

may relieve some of the tension and anxiety students with emotional/behavioral disorders possess when working with same age peers. Students with EBD often find it difficult to communicate effectively with same age peers and struggle to form relationships with those close in age to them. Studies, however, detailed in the findings by Sutherland, Wehby, and Gunter (2000), suggest that when implementing cooperative based interventions involving older students working with younger students, evokes leadership skills, decision making skills, and allows the older students to work on building conflict management skills necessary for trust building and communication. Furthermore, Rutherford, Mathur, & Quinn (1998), recommend teachers monitor behavior during the cooperative learning process by assessment, direct instruction of social skills, and most importantly, time to practice such social skills. Offering students the opportunity to work with younger students, gives them an approachable occasion to practice mastering targeted social skills.

When considering one's own practice of cooperation, it is often much more daunting and intimidating to present or help teach colleagues that one might consider peers. Working with younger, less knowledgeable individuals, however, may be less anxiety producing and often presents one an opportunity to rehearse the skills necessary to work and get along with others. Through cooperative learning, exhibited in the PALS intervention, students encourage and support one another, assume the responsibility for both their own and others' learning, and employ targeted social skills necessary for group work (Johnson & Johnson, 1989). A meta-analysis conducted by Spencer, Simpson, & Oatis (2009) found nine studies that involved peer tutoring interventions and students with EBD. None of the identified studies, however, used cross-age peer tutoring, further demonstrating a need to expand on this realm of peer assisted learning strategies use.

Another consideration for developing a more successful PALS study would be to use the PALS intervention in a whole group setting in which students in upper elementary grades identified with EBD work with general education peers. Many studies (n = 9) outlined in the What Works Clearinghouse Intervention Report on PALS (U.S. Department of Education, 2012) involved students with EBD. Only two of those detailed studies, however, involved students with EBD participating in PALS in a general education setting (Locke, 1996; Tournaki & Criscitiello, 2003). Both of the two studies involved studies in either kindergarten, first, or second grade. Therefore, a gap in the literature still exists when considering a PALS study in the general education setting involving students with EBD in upper elementary grades. A large majority of students with EBD are served in regular school buildings, however, only approximately 25% of those students spend the majority of their day in the general education setting (Bradley, Doolittle, & Bartolotta, 2008). Thus, lending to the idea of developing interventions that can get students with EBD involved in the general education setting so that they can practice targeted social skills development with peers.

Prior to implementing either of the two considerations above, educators might consider the need for contextual interventions discussed previously. Such contextual interventions were left out of the PALS study described by the researcher, and this is perhaps a critical piece missing to the success of any such intervention with students with EBD. Despite the extensive positive behavioral supports already in place for students in this self-contained setting, students with EBD were unable to appropriately participate in the PALS sessions. Had the PALS curriculum been coupled with some type of social skills training to enhance a student's ability to work cooperatively with a peer, the curriculum may have been more effective. Providing students an additional opportunity to practice working cooperatively with peers that does not

focus on academic demands, may be helpful to its application regardless of the setting or partner participants being utilized.

Conclusions

This study was designed to determine the effectiveness of PALS on the reading fluency, comprehension, and targeted social skill deficits of students with EBD in a self-contained classroom. As a result of the data collected, the researcher was not able to determine any significant increases of the dependent variables due to an inability to complete the PALS lessons with fidelity. Student behaviors outside the PALS sessions and incidents between peers hindered the study from being successfully implemented over the intended time frame. Though these results were not ideal, they lead to a great deal of reflection and considerations for future research involving PALS and students with EBD.

References

- Adams, M.J., Bereiter, C., Carruthers, I., Case, R., Hirshberg, J., McKeough, A., et al. (2000). *Open Court Reading*. Columbus, OH: SRA/McGraw-Hill.
- Ayres, K. M., & Ledford, J. L. (2014). Dependent measures and measurement systems. In D. L. Gast & J. R. Ledford (Eds.), *Single case research methodology: Applications in special education and behavioral Sciences* (2nd ed., pp. 124-153). New York, OT: Routledge Publishers
- Barton-Arwood, S. M., Wehby, J., and Falk, K. B. (2005). Reading instruction for elementary-age students with emotional and behavioral disorders: Academic and behavioral outcomes. *Exceptional Children* 72(1), 7.
- Beach, R. (1993). *A teacher's introduction to reader-response theories*. Urbana, IL: National Council of Teachers of English.
- Beck, I. & McKeown, M. (2008). *StoryTown*. Orlando, FL: Houghton Mifflin Harcourt.
- Becker, W. C., & Carnine, D.W. (1980). Direction instruction. In B.B. Lahey & A.E. Kazdin (Eds.), *Advances in clinical child psychology* (pp. 429-473), New York: Plenum.
- Benner, G. B., Nelson, J. R., Ralston, N. C., Mooney, P. (2010). A meta-analysis of effects of reading instruction on the reading skills of students with or at risk of behavioral disorders. *Behavioral Disorders*, 35(2), 86-102.
- Bradley, R., Doolittle, J., & Bartolotta, R. (2008). Building on the Data and Adding to the Discussion: The Experiences and Outcomes of Students with Emotional Disturbance. *Journal of Behavioral Education*, 17(1), 4-23. doi:10.1007/s10864-007-9058-6
- Bomer, R., & Bomer, K. (2001). *For a better world: Reading and writing for social action*. Portsmouth, NH: Heinemann.

- Chafouleas, S. M., Kilgus, S. P., Jaffery, R., Riley-Timman, T. C., Welsh, M., & Christ, T. J. (2013). Direct behavior rating as a school-based behavior screener for elementary and middle grades. *Journal of School Psychology, 51*(3), 367-385.
- Chafouleas, S., Tillman, T., Theodore, C. (2010). *Direct Behavior Ratings Booklet*. University of Connecticut.
- Cheney, D., Lynass, L., Flower, A., Waugh, M., Iwaszuk, W., Mielenz, C., & Hawken, L. (2010). The Check, Connect, and Expect Program: A Targeted, Tier 2 Intervention in the School Wide Positive Behavior Support Model. *Preventing School Failure, 54*(3), 152-158.
- Christ, T. J. (2007). Experimental Control and Threats to Internal Validity of Concurrent and Nonconcurrent multiple baseline designs. *Psychology In The Schools, 44*(5), 451-459.
- Cochran, L., Feng, H. Cartledge, G., & Hamilton, S. (1993). The effects of cross-age tutoring on the academic achievement, social behaviors, and self-perceptions of low-achieving African-American males with behavioral disorders. *Behavioral Disorders, 18*, 292-302.
- Cook, B. G. (2017). Null Effects and Publication Bias in Special Education. *Behavioral Disorders, 42*(4), 149-158.
- Coyne, M. D., Cook, B. G., & Therrien, W. J. (2016). Recommendations for Replication Research in Special Education: A Framework of Systematic Conceptual Replications. *Remedial and Special Education, 37*, 244-253.

- Davis, J. (2011). The Effects of an Orton-Gillingham-based reading intervention on students with emotional/behavior disorders (Doctoral Dissertation). Retrieved from <http://search.proquest.com/docview/936507295/>
- Deno, S. L., Deno, D., Marston, D., & Marston, D. (1987). Test of reading fluency: Measures for screening and progress monitoring. Minneapolis, MN: Children's Educational Services.
- Dewey, J., and Dewey, E. (1962). *Schools of Tomorrow*. New York, NY: Dutton.
- Drummond, T. (1994). The student risk screening scale (SRSS). *Grants Pass, OR: Josephine County Mental Health Program*.
- Durkin, D. (1993). *Teaching them to read* (6th ed.). Boston, MA: Allyn & Bacon.
- Elliot, C.D. (2007). *Differential Ability Scales – Second Edition: Introductory and Technical Handbook*. San Antonio, TX: PsychCorp.
- Engelmann, S., Engelmann, O., & Davis, K. L. S. (1997). *Horizons*. Columbus, OH: SRA/McGraw Hill.
- Ennis, Lane, & Oakes. (2011). Score Reliability and Validity of the Student Risk Screening Scale: A Psychometrically Sound, Feasible Tool for Use in Urban Elementary Schools. *Journal of Emotional and Behavioral Disorders*. 20(4), 241-259.
- Everett, S., Sugai, G., Fallon, L., Simonsen, B., & O'Keeffe, B. (2011). SCHOOL-WIDE TIER II INTERVENTIONS: CHECK-IN CHECK-OUT GETTING STARTED WORKBOOK. *Center on Positive Behavioral Interventions and Supports Center for Behavioral Education and Research University of Connecticut*.
- Falk, K. B., & Wehby, J. H. (2001). The effects of peer-assisted learning strategies on the beginning reading skills of young children with emotional or behavioral disorders. *Behavioral Disorders*, 26(4), 344-359.

- Franca, V. M., & Kerr, M. M. (1990). Peer tutoring among behaviorally disordered students: Academic and Social Benefits to Tutor and.. *Education & Treatment of Children, 13*(2), 109.
- Freire, Paulo. (1996). *Pedagogy of the oppressed*. Westminster, London, UK: Penguin Random House Publishing.
- Fuchs, D., & Fuchs, L. S. (2006). Introduction to response to intervention: What, why, and how valid is it? *Reading Research Quarterly, 41*(1), 93-99.
- Fuchs, D., Fuchs, L. S., Mathes, P. G., & Simmons, D. C. (1997). Peer-assisted learning strategies: Making classrooms more responsive to diversity. *American Educational Research Journal, 34*(1), 174-206.
- Garrett, T. (2008). Student-Centered and Teacher-Centered Classroom Management: A Case Study of Three Elementary Teachers. *Journal of Classroom Interaction 43*(1), 34-47.
- Garwood, J. D., Brunsting, N. C., & Fox, L. C. (2014). Improving reading comprehension and fluency outcomes for adolescents with emotional-behavioral disorders: Recent research synthesized. *Remedial and Special Education, 35*(3), 181-194.
- Gast, D. & Ledford, J. (2014). *Single Case Research Methodology Application in Special Educaiton and Behavioral Sciences*. New York, NY: Routledge.
- Good, R. H., & Kaminski, R. A. (Eds.). (2002). *Dynamic Indicators of Basic Early Literacy Skills* (6th ed.). Eugene, OR: Institute for the Development of Educational Achievement. Retrieved from <https://dibels.uoregon.edu/assessment/index/material/>
- Gresham, F. (2015). Evidence-based social skills interventions for students at risk for EBD. *Remedial and Special Education, 36*(2), 100-104.

- Gresham, F. M., Sugai, G., & Horner, R. H. (2001). Interpreting outcomes of social skills training for students with high-incidence disabilities. *Exceptional children*, 67(3), 331-344.
- Griffith, A., Trout, A., Hagaman, J., & Harper, J. (2008). Interventions to improve the literacy functioning of adolescents with emotional and/or behavior disorders: A review of the literature between 1965 and 2005. *Behavior Disorders*, 33(3), 124-140.
- Hamre, B. K., & Pianta, R. C. (2001). Early teacher–child relationships and the trajectory of children's school outcomes through eighth grade. *Child development*, 72(2), 625-638.
- Houghton Mifflin Harcourt. (2008). *Storytown Language Arts Curriculum*. Boston, MA: Harcourt School Publishers.
- Individuals with Disabilities Education Act, Pub. L. 105-17.20 (U.S.C.A. § 1400 et seq. 1990, Reauthorized July 1997).
- Institute of Education Sciences. (2013). *Administrative Requirements Webinar*.
- Johnson, D. W., & Johnson, R. T. (1989). Cooperative Learning: What Special Education Teachers Need to Know. *The Pointer*, 33(2), 5-10.
- Kauffman, J. (2005). *Characteristics of emotional and behavioral disorders of children and youth* (8th ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Kauffman, J. M., Cullinan, D., & Epstein, M. H. (1987). Characteristics of students placed in special programs for the seriously emotionally disturbed. *Behavioral Disorders*, 12(3), 175-184.
- Kazdin, A. E. (1992). *Research design in clinical psychology* (Vol. 3). Boston: Allyn and Bacon.
- Klein, A. (2015). *Providing Differentiated Reading Instruction to Meet the Individual Needs of Students*. (White Paper). Learning A-Z Inc.

- Kratochwill, T.R., Levin, J.R., & Horner, R.H. (2017). Negative Results: Conceptual and Methodological Dimensions in Single-Case Intervention Research. *Remedial and Special Education*, 0741932517741721. doi: 10.1177/0741932517741721
- Lane, K. L., Barton-Arwood, S. M., Nelson, J. R., & Wehby, J. (2008). Academic performance of students with emotional and behavioral disorders served in a self-contained setting. *Journal of Behavioral Education*, 17(1), 43-62.
- Lilly, E., and Green, C. (2004). Early Literacy. Excerpt from *Developing Partnerships with Families Through Children's Literature*.
- Locke, W. R., & Fuchs, L.S. (1995). Effects of peer mediated reading instruction on the on-task behavior and social interaction of children with behavior disorders. *Journal of Emotional and Behavioral Disorders*, 3, 92-99.
- Maddox, J. (2018). *Jake Maddox Sports Series*. Chicago, IL: Capstone Publishing.
- Marten, B. K., Witt, J. C., Elliott, S. N., & Darveaux, D. X. (1985). Teacher judgments concerning the acceptability of school-based interventions. *Professional Psychology: Research and Practice*, 16, 191-198.
- Mathes, P. G., Howard, J. K., Allen, S. H., & Fuchs, D. (1998). Peer-assisted learning strategies for first-grade readers: Responding to the needs of diverse learners. *Reading Research Quarterly*, 33(1), 62-94.
- McMaster, K. L., Fuchs, D., & Fuchs, L. S. (2006). Research on peer-assisted learning strategies: The promise and limitations of peer-mediated instruction. *Reading & Writing Quarterly*, 22(1), 5-25.

- Menzinger, B., & Jackson, R. (2009). The effect of light intensity and noise on the classroom behaviour of pupils with Asperger syndrome. *Support for Learning*, 24(4), 170-175. doi:10.1111/j.1467-9604.2009.01420.x
- Mihalas, S., Morse, W. C., Allsopp, D. H., & Alvarez McHatton, P. (2009). Cultivating caring relationships between teachers and secondary students with emotional and behavioral disorders. *Remedial and Special Education*, 30(2), 108-125. doi:http://dx.doi.org.er.lib.k-state.edu/10.1177/0741932508315950
- Myles, B.S., Cook, K.T., Miller, N.E., Rinner, L., and Robbins, L.A. (2000). *Asperger Syndrome and Sensory Issues*. Kansas: Autism Asperger Publishing Co.
- National Center for Education Statistics (NCES). (2017). *The Condition of Education 2017*. Washington, D.C.: U.S. Department of Education, Institute of Education Statistics.
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: reports of the subgroups*. Washington, DC: U.S. Government Printing Office.
- National Institute for Literacy. (2008). Developing early literacy: A scientific synthesis of early literacy development and implications for intervention. Retrieved from <http://lincs.ed.gov/publications/pdf/NELPReport09.pdf>
- Nelson, J. R., Lane, K. L., Benner, G. J., & Kim, O. (2011). A best evidence synthesis of literacy instruction on the social adjustment of students with or at-risk for behavior disorders. *Education & Treatment of Children*, 34(1), 141-162.
- Northwest Evaluation Association. (2015). *Measures of Academic Progress*. Portland, OR: NWEA.

- Piaget, J. (1969). *The Psychology of the Child*. New York, NY: Basic Books.
- Pierce, C.D., Reid, R., & Epstein, M. H. (2004). Teacher-Mediated Interventions for Children with EBD and their Academic Outcomes: A Review. *Remedial and Special Education*, 25(3), 175-188.
- Samuels, S. J., Farstrup, A. E. (2011). *What research has to say about reading instruction*. Newark, DE: International Reading Association.
- Schieffer, C., Marchand-Martella, N.E., Martella, R.C., Simonsen, F.L., & Waldron-Soler, K.M. (2002). An Analysis of the Reading Master Program: Effective Components and Research Review. *Journal of Direct Instruction*, 2, 87-119.
- Schoenfeld, N.A., & Janney, D. M. (2008). Identification and Treatment of Anxiety in Students with Emotional or Behavioral Disorders: A Review of the Literature. *Education & Treatment of Children*, 31(4), 583-610.
- Scruggs, T. E., Mastropieri, M. A., & Casto, G. (1987). The Quantitative Synthesis of Single-Subject Research: Methodology and Validation. *Remedial and Special Education*, 8, 24-33.
- Shank, G. D. (2006). *Qualitative research: A personal skills approach* Upper.
- Skinner, B.F. (1976). *About behaviorism*. New York, NY: Random House Inc.
- Spencer, V.G., Simpson, C.G., & Oatis, T.L. (2009). An Update on the Use of Peer Tutoring and Students with Emotional and Behavioral Disorders. *Exceptionality Education International*, 19(1), 2-13.
- Stanovich, K. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly*, 16, 32-71.

- Steinberg, Z., & Knitzer, J. (1992). Classroom for emotionally and behaviorally disturbed students: Facing the challenge. *Behavioral Disorders, 17*, 145-158.
- Stichter, J., & Conroy, M. (2005). Using Structural Analysis in Natural Settings: A Responsive Functional Assessment Strategy. *Journal of Behavioral Education, 14*(1), 19-34.
- Strickland, D. (1990). Emergent Literacy: How Young Children Learn to Read. *Educational Leadership, 47*(6), 18.
- Sutherland, K. S., & Snyder, A. (2007). Effects of reciprocal peer tutoring and self-graphing on reading fluency and classroom behavior of middle school students with emotional or behavioral disorders. *Journal of Emotional and Behavioral Disorders, 15*, 103-118.
- Swoszowski, N. C., Jolivette, K., & Fredrick, L. D. (2013). Addressing the social and academic behavior of a student with emotional and behavioral disorders in an alternative setting. *The Journal of Classroom Interaction, 48*(1), 28-36. Retrieved from <http://search.proquest.com.er.lib.k-state.edu/docview/1434095903?accountid=11789>
- Swoszowski, N. C., McDaniel, S. C., Jolivette, K., & Melius, P. (2013). The Effects of Tier II Check-in/Check-out Including Adaptation for Non-Responders on the Off-Task Behavior of Elementary Students in a Residential Setting. *Education & Treatment Of Children, 36*(3), 63-79.
- Ramsey, M.L., Jolivette, K., & Patton, B. (2007). Peer-Assisted Learning Strategies (PALS) for Reading in the EBD Classroom. *Beyond Behavior, 17*(1), 2-6.
- Reid, R., Gonzalez, J. E., Trout, A., Epstein, M. H. (2004). A meta-analysis of the academic status of students with emotional/behavioral disturbance. *The Journal of Special Education, 38*(3), 130-143.

- Reschly, A. L., & Christenson, S. L. (2006). Prediction of dropout among students with mild disabilities: A case for the inclusion of student engagement variables. *Remedial and Special Education, 27*(5), 276-292.
- Resnick, M.J. (1987). The use of seriously emotional disturbed student as peer tutors: Effects of oral reading rates and tutor behaviors. *Dissertation Abstracts International 49* (05).
- Resnick, L. & Weaver, P. A. (1979). *Theory and Practice of Early Reading*. Hillsdale, NJ: Erlbaum Associates.
- Rosenblatt, L. (1978). *The reader, the text, the poem: The transactional theory of the literary work*. Carbondale: Southern Illinois University Press.
- Rutherford, R.B., Mathur, S.R., & Quinn, M.M. (1998). Promoting Social Communication Skills Through Cooperative Learning and Direct Instruction. *Education and Treatment of Children, 21*, 354-369.
- Tawny, J. W., & Gast, D. L. (1984). *Single Subject Research in Special Education*. Columbus, OH: Merrill.
- Thum, Y. M. & Hauser, C. (2015). *NWEA 2015 MAP Norms for Student and School Achievement Status and Growth*. Portland, OR: NWEA.
- Tompkins, G., Campbell, R., Green, D., & Smith, C. (2014). *Literacy for the 21st century*. Pearson Australia.
- Tournaki, N., & Criscitiello, E. (2003). Using Peer Tutoring as a Successful Part of Behavior Management. *Teaching Exceptional Children, 36*(2), 21-25.
- University of Oregon, Center on Teaching and Learning. *Kameenui, E., & Simmons, D. (2008b, August). Introduction to the school wide model pretest: What do you know about reading*. Eugene, O. R.

- U. S. Department of Education. (2004). Individuals with Disabilities Education Improvement Act of 2004 (IDEIA). Retrieved October 20, 2005 from <http://www.ed.gov/>
- Vanderbilt Kennedy Center. (2015). *About Peer Assisted Learning Strategies*. Nashville, TN: Vanderbilt Kennedy Center for Research on Human Development.
- Vaughn, S., Levy, S., Coleman, M., & Bos, C. S. (2002). Reading instruction for students with LD and EBD: A synthesis of observation studies. *The Journal of Special Education, 36*(1), 2-13.
- Vygotsky, L. (1978). *Mind in society: The development of higher mental processes*. Cambridge, MA: Harvard University Press.
- Wagner, M. M. (1995). Outcomes for youths with serious emotional disturbance in secondary school and early adulthood. *The Future of Children, 90*-112.
- Wagner, M., & Cameto, R. (2004). The Characteristics, Experiences, and Outcomes of Youth with Emotional Disturbances. A Report from the National Longitudinal Transition Study-2. Volume 3, Issue 2. *National Center on Secondary Education and Transition, University of Minnesota (NCSET)*.
- Wangsgard, N. (2008). The perceptions of students with emotional and behavioral disorders regarding the learning to read process. (Doctoral dissertation). University of Northern Colorado, Greeley Colorado.
- Wechsler, D. (2003). *Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV)*. San Antonio, TX: The PsychCorp.
- Wehby, J. H., Falk, K. B., Barton-Arwood, S., Lane, K. L., & Cooley, C. (2003). The Impact of Comprehensive Reading Instruction on the Academic and Social Behavior of Students with Emotional and Behavioral Disorders. *Journal of Emotional and Behavioral*

- Disorders, 11(4), 225-238. Retrieved from <http://search.proquest.com.er.lib.k-state.edu/docview/214900585?accountid=11789>*
- Wehby, J.H., Lane K. L., & Falk, K. B. (2003). Academic instruction for students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders, 11*, 194-197.
- Wentzel, K. (2009). Peers and academic functioning at school. In K. Rubin, W. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 531–547). New York, NY: Guilford Press.
- Wentzel, K., & Watkins, D. (2002).
- What Works Clearing House. (2012). *WWC Intervention Report: Peer Assisted Learning/Literacy Strategies*. Washington, DC: U.S. Department of Education.
- Wood, K. D., & Blanton, W. E. (Eds.). (2009). *Literacy instruction for adolescents: Research-based practice*. Guilford Press.
- Yin, R. K. (2003). Case study research: design and methods, *Applied social research methods series*. Thousand Oaks, CA: Sage Publications, Inc.
- Afacan, Y., & Erbug, C. (2009). An interdisciplinary heuristic evaluation method for universal building design. *Journal of Applied Ergonomics, 40*, 731-744.
- Yong, M., & Cheney, D. A. (2013). Essential Features of Tier 2 Social-Behavioral Interventions. *Psychology in the Schools, 50(8)*, 844-861. doi:10.1002/pits.21710

Appendix A - Student Risk Screening Scale

STUDENT RISK SCREENING SCALE (SRSS; Drummond, 1994)

School: _____ Teacher: _____ Date: _____

Directions: Each classroom teacher will fill in the names of the students in alphabetical order (use additional sheets of the Scale as needed). Rate all of the students on each behavior using the following scale:

0 = NEVER 1 = 1 RARELY 2 = OCCASIONALLY 3 = FREQUENTLY

At the bottom of page 2, please summarize the number and percent of students in each risk category.

The total scores range from 0 to 21, forming three risk categories:

(L) Low Risk (0 to 3) (M) Moderate Risk (4 to 8) (H) High Risk (9 to 21)

Student Name	Steal	Lie, Cheat, Sneak	Behavior Problem	Peer Rejection	Low Academic Achievement	Negative Attitude	Aggressive Behavior	Total (0 to 21)	Risk (Circle)
1.									L M H
2.									L M H
3.									L M H
4.									L M H
5.									L M H
6.									L M H
7.									L M H
8.									L M H
9.									L M H
10.									L M H
11.									L M H
12.									L M H
13.									L M H
14.									L M H
15.									L M H
16.									L M H
17.									L M H
18.									L M H

Source: T. Drummond (1994), The Student Risk Screening Scale (SRSS). Used with permission.

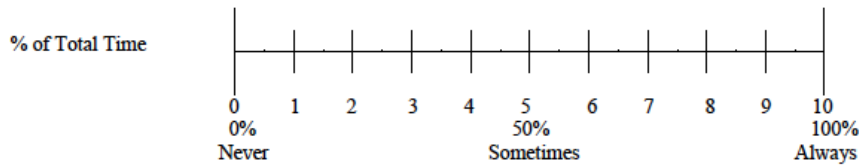
Appendix B - Daily Behavior Rating Scale Form

Direct Behavior Rating (DBR) Form: 3 Standard Behaviors

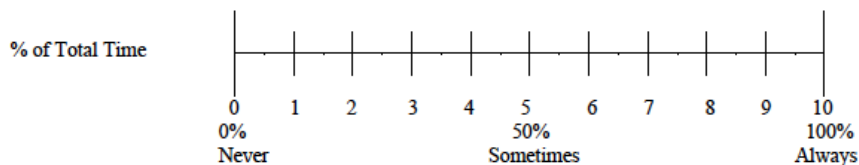
Date: M T W Th F	Student: Rater:	Activity Description:
Observation Time: Start: _____ End: _____ <input type="checkbox"/> Check if no observation today	Behavior Descriptions: Academically engaged is actively or passively participating in the classroom activity. For example: writing, raising hand, answering a question, talking about a lesson, listening to the teacher, reading silently, or looking at instructional materials. Respectful is defined as compliant and polite behavior in response to adult direction and/or interactions with peers and adults. For example: follows teacher direction, pro-social interaction with peers, positive response to adult request, verbal or physical disruption without a negative tone/connotation. Disruptive is student action that interrupts regular school or classroom activity. For example: out of seat, fidgeting, playing with objects, acting aggressively, talking/yelling about things that are unrelated to classroom instruction.	

Directions: Place a mark along the line that best reflects the percentage of total time the student exhibited each target behavior. Note that the percentages do not need to total 100% across behaviors since some behaviors may co-occur.

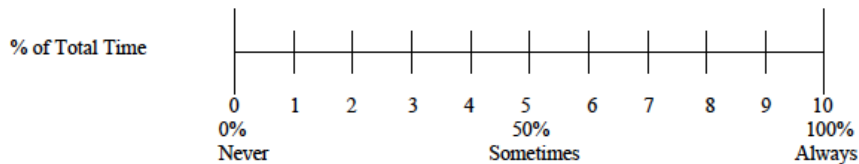
Academically Engaged



Respectful



Disruptive *



* Remember that a lower score for "Disruptive" is more desirable.

V1.4 DBR Standard Form was created by Sandra M. Chafoules, T. Chris Riley-Tillman, Theodore J. Christ, and Dr. George Sugai.
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Downloadable from www.directbehaviorratings.org.

Appendix C - Sample Blank Daily Behavior Sheet

Name:				Date:		% Needed:	95%
Time	Subject	B.1.	B.2.	Comments/Explanation			\$ Earned
8:15-8:30		1	1				
8:30-8:45		1	1				
8:45-9:00		1	1				
9:00-9:15		1	1				
9:15-9:30		1	1				
9:30-9:45		1	1				
9:45-10:00		1	1				
10:00-10:15		1	1				
10:15-10:30		1	1				
10:30-10:45		1	1				
10:45-11:00		1	1				
11:00-11:15		1	1				
11:15-11:30		1	1				
11:30-11:45		1	1				
11:45-12:00		1	1				
12:00-12:15		1	1				
12:15-12:30		1	1				
12:30-12:45		1	1				
12:45-1:00		1	1				
1:00-1:15		1	1				
1:15-1:30		1	1				
1:30-1:45		1	1				
1:45-2:00		1	1				
2:00-2:15		1	1				
2:15-2:30		1	1				
2:30-2:45		1	1				
2:45-3:00		1	1				
3:00-3:15		1	1				
3:15-3:30		1	1				
3:30-3:45		1	1				
Points/Points Possible		30	30	Behavior 1:	2:	0	
		100%	100%	Goal Met?:	Sign: _____		
Percentage Total		100%					

Appendix D - DIBELS Progress Monitoring Booklet Example

20 DIBELS® Oral Reading Fluency

Level 1/Progress Monitoring 20

Total words: _____

Errors (include skipped words): - _____

Words correct: = _____

Star Pitcher

0 My big sister is on the high school softball team. She is the pitcher. 14

14 She tries to throw the ball so that the batter cannot hit it. My sister is 30

30 a very good pitcher. In one game, she threw the ball so well that the 45

45 other team could not get even one hit. After that game, she got her 59

59 picture in the newspaper. The headline said "Star pitcher throws no- 70

70 hitter." I liked that headline. It called my sister a star. 81

81 My parents and I go to as many of my sister's games as we can. 96

96 We sit with all the other fans. Some of the fans go to my sister's school. 112

112 Other fans just like to watch softball. All the fans clap when my sister 126

126 throws the ball past the batter. If the batter misses the ball three times, 140

140 she is out. When that happens, the fans cheer. 149

149 Being a star pitcher takes a lot of practice. Sometimes my sister takes 162

162 me to practice with her. I sit very quietly and watch her work on her 177

177 pitching. She also runs and works out to stay in shape. My sister says that 182

182 being in shape is an important part of softball. She says it also keeps you 207

207 healthy. Sometimes we go for short runs together so I can be in shape. 221

221 100. 222

222 I like watching my sister play softball. Even when her team doesn't 234

234 win, I know my sister is a star. 242

20 DIBELS® Oral Reading Fluency

Level 1/Progress Monitoring 20

Retell: Star Pitcher

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25																																											
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94

Retell Total: _____

Quality of Response:
(Note: if the student provides only a main idea, it is considered one detail.)

1 Provides 2 or fewer details **3** Provides 3 or more details in a meaningful sequence

2 Provides 3 or more details **4** Provides 3 or more details in a meaningful sequence that captures a main idea

Retell Response Patterns:

Summarizes

Repeats the same detail

Retells the passage verbatim

"Speed reads" the passage (i.e., reads quickly with no phrasing or intonation) and has limited retell relative to number of words read

Talks about own life related to passage

Other

Appendix E - PALS Implementation Fidelity Checklist

Grades 2-6 Reading PALS Implementation Checklist Fidelity Time 1 2 3

Teacher: _____ School: _____ Observer: _____
 Timeslot: _____ # of Students Present: _____
 Grade: _____

PALS OVERALL _____ Start Time _____ End Time _____

circle = behavior observed
 blank = behavior not observed
 crossed out = not applicable

Classroom Arrangement/Set-up Checklist

Value	Getting Ready for PALS	Start Time	End Time
1	Get Ready in 1-2 minutes		
1	Higher performing readers are paired with lower performing readers		
1	Students are seated next to their partners, and books are placed between them		
1	Students should know who their partner is for the day		

Teacher Materials

1	Training Overheads, if applicable		
1	Timer		

Student Materials

1	Books with page numbers marked (1 pt for book, 1 pt for page marked)		
1	Pencils		
1	Questions Cards		
1	Point Sheets		

Comments: _____

Partner Reading

Teacher Behaviors

Value	1	Prompts students to begin activities		
1	Prompts students to switch roles			
1	Keeps students on task and following PALS rules			
1	Teacher monitors at least two pairs (1 point for each pair)			
1	Teacher awards extra points for good PALS behaviors			
1	Teacher provided positive feedback, if applicable			
1	Teacher provided corrective feedback, if applicable			
1	Partner Reading: Start Time	Switch roles	End Time	
	(Each Reader must have an opportunity to read for 5 minutes to earn 1 point.)			
1	Retell Start time	End Time		
	Reader 2 retells the story for 1 minute (2nd-3rd) or 2 minutes (4th-6th)			

Student Behaviors

Reader 1 _____ & Reader 2 _____

Value	1	Reader 1 reads aloud from book for 5 minutes.		
1	Reader 2 corrects mistakes using the correction procedure			
	<i>Correction Procedure: "Stop, you missed that word. Can you figure it out? (waits 4 seconds) If reader figures it out, "Good. Read the sentence again." OR if reader continues to struggle: "That word is _____. What word? Read the sentence again."</i>			
1	Reader 2 awards 1 point for each correctly read sentence			

Pairs switch jobs

1	Reader 2 reads SAME text for 5 minutes			
1	Reader 1 corrects mistakes using the correction procedure above			
1	Reader 1 awards 1 point for each correctly read sentence			
1	Reader 2 retells the story for 1 minute (2nd-3rd) or 2 minutes (4th-6th)			
1	Students mark 10 points for retelling the story.			

Comments: _____

Partner Reading continued

Reader 1 _____ & Reader 2 _____

Value	
1	Reader 1 reads aloud from book for 5 minutes.
1	Reader 2 corrects mistakes using the correction procedure <i>Correction Procedure: "Stop, you missed that word. Can you figure it out? (waits 4 seconds) If reader figures it out: "Good. Read the sentence again." OR If reader continues to struggle: "That word is _____. What word? Read the sentence again."</i>
1	Reader 2 awards 1 point for each correctly read sentence

Pairs switch jobs

1	Reader 2 reads SAME text for 5 minutes.
1	Reader 1 corrects mistakes using the correction procedure above
1	Reader 1 awards 1 point for each correctly read sentence
1	Reader 2 retells the story for 1 minute (2nd-3rd) or 2 minutes (4th-6th)
1	Students mark 10 points for retelling the story.

Comments:

Paragraph Shrinking

Teacher Behaviors

Value	
1	Prompts students to begin activities
1	Prompts students to switch roles
1	Keeps students on task and following PALS rules
1 1	Teacher monitors at least two pairs (1 point for each pair)
1	Teacher awards extra points for good PALS behaviors
1	Teacher provided positive feedback, if applicable
1	Teacher provided corrective feedback, if applicable
1	Paragraph Shrinking: Start time Switch roles End Time (Each Reader must have an opportunity to read and shrink for 5 minutes to earn 1 point.)

Student Behaviors

Reader 1 _____ & Reader 2 _____

Value	
1	Reader 1 reads aloud from NEW TEXT for 5 minutes. <i>Summarization of each paragraph</i>
1	Reader 1 names the most important "who" or "what" in the paragraph
1	Reader 2 awards 1 point for correct answer
1	Reader 1 states the most important thing about the "who" or "what"
1	Reader 2 awards 1 point for correct answer
1	Reader 1 states the main idea in 10 words or less
1	Reader 2 awards 1 point for correct answer
1	Reader 2 helps fix answers using the correction procedure: <i>Correction Procedure: "That's not quite right. Skim the paragraph and try again."</i>

Pairs switch jobs

1	Reader 2 reads aloud from NEW TEXT for 5 minutes. <i>Summarization of each paragraph</i>
1	Reader 2 names the most important "who" or "what" in the paragraph
1	Reader 1 awards 1 point for correct answer
1	Reader 2 states the most important thing about the "who" or "what"
1	Reader 1 awards 1 point for correct answer
1	Reader 2 states the main idea in 10 words or less
1	Reader 1 awards 1 point for correct answer
1	Reader 1 helps fix answers using the correction procedure above

Comments:

Paragraph Shrinking continued

Student Behaviors

Reader 1 _____ & Reader 2 _____

Value	
1	Reader 1 reads aloud from NEW TEXT for 5 minutes.
	<i>Summarization of each paragraph</i>
1	Reader 1 names the most important "who" or "what" in the paragraph
1	Reader 2 awards 1 point for correct answer
1	Reader 1 states the most important thing about the "who" or "what"
1	Reader 2 awards 1 point for correct answer
1	Reader 1 states the main idea in 10 words or less
1	Reader 2 awards 1 point for correct answer
1	Reader 2 helps fix answers using the correction procedure:
	<i>Correction Procedure: "That's not quite right. Skim the paragraph and try again."</i>

Pairs switch jobs

1	Reader 2 reads aloud from NEW TEXT for 5 minutes.
	<i>Summarization of each paragraph</i>
1	Reader 2 names the most important "who" or "what" in the paragraph
1	Reader 1 awards 1 point for correct answer
1	Reader 2 states the most important thing about the "who" or "what"
1	Reader 1 awards 1 point for correct answer
1	Reader 2 states the main idea in 10 words or less
1	Reader 1 awards 1 point for correct answer
1	Reader 1 helps fix answers using the correction procedure above

Comments:

Prediction Relay

Teacher Behaviors

Value	
1	Prompts students to begin activities
1	Prompts students to switch roles
1	Keeps students on task and following PALS rules
1.1	Teacher monitors at least two pairs (1 point for each pair)
1	Teacher awards extra points for good PALS behaviors
1	Teacher provided positive feedback, if applicable
1	Teacher provided corrective feedback, if applicable
1	Prediction Relay: Start time _____ Switch roles _____ End Time _____ (Each Reader must have an opportunity to read and predict for 5 minutes to earn 1 point.)

Student Behaviors

Reader 1 _____ & Reader 2 _____

Value	
1	Prediction sequence continues for 5 minutes.
1	Reader 1 predicts what will happen in the text
1	Reader 2 awards 1 point for a reasonable prediction
1	Reader 1 reads a half page of NEW TEXT
1	Reader 2 awards 1 point
1	Reader 2 asks Reader 1 to confirm whether prediction came true
1	Reader 1 confirms or disconfirms prediction
1	Reader 2 awards 1 point
1	Reader 1 makes a new prediction

Pairs switch jobs

1	Prediction sequence continues for 5 minutes.
1	Reader 2 predicts what will happen in the text
1	Reader 1 awards 1 point for a reasonable prediction
1	Reader 2 reads a half page of NEW TEXT
1	Reader 1 awards 1 point
1	Reader 1 asks Reader 2 to confirm whether prediction came true
1	Reader 2 confirms or disconfirms prediction
1	Reader 1 awards 1 point
1	Reader 2 makes a new prediction

Comments:

Prediction Relay continued

Student Behaviors

Reader 1 _____ & Reader 2 _____

Value

- 1 Prediction sequence continues for 5 minutes. _____
- 1 Reader 1 predicts what will happen in the text _____
- 1 Reader 2 awards 1 point for a reasonable prediction _____
- 1 Reader 1 reads a half page of NEW TEXT _____
- 1 Reader 2 awards 1 point _____
- 1 Reader 2 asks Reader 1 to confirm whether prediction came true _____
- 1 Reader 1 confirms or disconfirms prediction _____
- 1 Reader 2 awards 1 point _____
- 1 Reader 1 makes a new prediction _____

Pairs switch jobs

- 1 Prediction sequence continues for 5 minutes. _____
- 1 Reader 2 predicts what will happen in the text _____
- 1 Reader 1 awards 1 point for a reasonable prediction _____
- 1 Reader 2 reads a half page of NEW TEXT _____
- 1 Reader 1 awards 1 point _____
- 1 Reader 1 asks Reader 2 to confirm whether prediction came true _____
- 1 Reader 2 confirms or disconfirms prediction _____
- 1 Reader 1 awards 1 point _____
- 1 Reader 2 makes a new prediction _____

Comments:

Student Points Teacher Points Total Points
_____ % _____ % _____ %

Overall Suggestions/Comments:

Appendix F - Social Validity Questionnaire (Student)

PALS Student Survey

The purpose of this survey is to gather feedback on what you thought about the PALS intervention. This survey is anonymous. Please be honest with your response.

Read each statement below. Decide if you strongly disagree, disagree, agree, and strongly agree and place an 'X' in the corresponding box.

	1 Strongly Disagree	2 Disagree	3 Agree	4 Strongly Agree
I think that I learned a lot about PALS				
I think that using PALS helped me to become a faster reader understand the passages better as I read them.				
I think that using PALS helped me to remember more about what I read.				
I enjoyed working with a partner during reading time				
I am a faster reader now that I have completed the PALS lessons				
It is easier for to summarize what I've read now				
I would be interested in continuing to work with the PALS intervention for Mustang Time.				

Answer the following two questions:

What do you think was the most helpful thing about PALS?

What do you think was NOT helpful about PALS?

Appendix G - Social Validity Questionnaire (Teacher)

Intervention Rating Scale IRP - 15

Item	1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Agree	5 Strongly Agree
This was an acceptable intervention for the child's problem behavior					
Most Teachers would find this intervention appropriate for other behavior problems					
This intervention should prove effective in changing the child's problem behavior					
I would suggest the use of this intervention to other teachers					
The child's behavior problem is severe enough to warrant this intervention					
Most teachers would find this intervention suitable for the behavior problem					
I would be willing to use this intervention in the classroom setting					
This intervention would be appropriate for a variety of children					
This intervention would <i>not</i> result in negative side effects for the child					
This intervention is consistent with those I have used in classroom settings					
This intervention was a fair way to handle the child's problem behavior					
This intervention was reasonable for the problem behavior					
I liked the procedures used in this intervention					
This intervention was a good way to handle the child's problem behavior					
Overall, this intervention was beneficial for the child					

Marten, Witt, Elliot, & Darveaux, 1985