Teaching for Transfer of an Evidence-Based Reading Strategy: An Experimental Field Trial

A DISSERTATION
SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL
OF THE UNIVERSITY OF MINNESOTA
BY

Viveca Victoria Pinto

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

Dr. Kristen McMaster, Advisor
Dr. Stanley Deno, Co-advisor

April 2012

Acknowledgements

There are numerous people I would like to thank for helping me through the years. As I think about my years in graduate school, it makes me think of the saying, "It takes a village to raise a child." But I would also believe, "*It takes a village to complete a dissertation.*", and I would like to thank many people who have helped me on my journey to completing my dissertation.

First, I would like to thank my advisor, Kristen McMaster for her guidance throughout my graduate career right from advising me through my written and oral prelims, to providing me regular and meticulous feedback on countless drafts of my dissertation. Kristen, I thank you for being an excellent mentor and advocate for me. I would also like to thank you for always making the time to advise me through my graduate program and for providing me with opportunities to learn and grow. Second, I would like to thank my co-advisor, Stan Deno, for his guidance and support especially during the first few years in the program. Stan's expertise in research and challenging questions pushed me to think more clearly on issues pertaining to special education.

Next, I would like to thank my committee members, Chris Espin, Paul van den Broek and Asha Jitendra for their support, advice, and helpful feedback on my dissertation. Chris, your warm teaching made learning about research and learning disabilities more enjoyable. Paul, thank you for teaching me the value of writing to generate more ideas and to tighten my thinking of various issues. Asha, thank you for teaching me about math instruction and for your detailed feedback on my dissertation.

especially before a dead-line, and for the numerous sacrifices you have made over the

years, so that I could complete my dissertation. I could not do this without you. Sheldon,

I love you.

Dedication

This dissertation is dedicated to students who struggle with reading and reading

comprehension.

Abstract

The purpose of this study was to examine the effects of explicitly teaching for transfer of PALS, and to examine whether transfer training helped participants maintain the strategy taught. Sixty-two participants from two third-grade classrooms and one fourth-grade classroom participated in the study. A pretest-posttest-maintenance control group design was used, in which participants within classroom were matched on their one-min oral reading scores and assigned randomly to receive PALS plus transfer training ($n = 31$) or PALS practice only ($n = 31$). Proximal and distal measures were used to assess transfer. Proximal measures were defined as measures closely aligned to the intervention and included main idea identification of narrative and informational text. Distal measures assessed general reading competence and were not closely aligned to the strategy taught. A repeated measures ANOVA was conducted with time (pretest, posttest, and maintenance) as the within-subject factor, and treatment (PALS *vs.* PALS plus transfer training) as the between-subjects factor. On the main idea identification of narrative text, there was a significant main effect of time, but the main effect of condition and the interaction of time by condition was non-significant. On the main idea identification of informational text, there was a significant main effect of time, and the interaction of time by condition approached significance, with participants receiving PALS plus transfer training correctly identifying and producing more main idea statement ($ES = .04$). On the distal measures, there were significant main effects of time, but no significant effects of condition, or interactions of time by condition. Implications for educational practice and future research directions are discussed.

Table of Contents

Chapters

List of Tables

List of Figures

Chapter 1

Introduction

Teaching for Transfer of an Evidence-Based Reading Strategy: An Experimental

Field Trial

Reading for meaning is necessary for all students to learn from text; however, a large number of students do not acquire proficient levels of reading and therefore miss opportunities to learn from text. The 2011 National Assessment of Educational Progress (NAEP) data indicates that 34% of 4th graders performed below basic level in reading comprehension. Moreover, 80% of students with learning disabilities (LD) have reading difficulties (Lyon, Fletcher, Shaywitz, Shaywitz, Torgesen, Wood et al., 2001).

In an attempt to meet the needs of struggling readers and students with LD, researchers have conducted over 30 years of research in the area of comprehension instruction (National Reading Panel, 2000). Recent research syntheses (e.g., Gersten, Fuchs, Williams, & Baker, 2001; Swanson & Hoskyn, 2001; Vaughn, Gersten, & Chard, 2000) attest to the advances made in comprehension interventions for students with LD. Key findings of these syntheses were recently summarized by Faggella-Luby and Deshler (2008). Some of the findings supported across these reviews were: (a) explicit instruction improves outcomes for at-risk students and students with disabilities; and (b) teaching struggling readers what good readers and strategy users do, such as using cognitive strategies, improved reading comprehension outcomes of struggling readers.

What We Know About Good and Struggling Readers

Good strategy users know when and how to use strategies that help them comprehend text (Pressley, Goodchild, Fleet, Zajchowski, & Evans, 1989). They use prior knowledge and textual information to actively construct new meaning (Carnine, Silbert, Kame'enui, & Tarver, 2009), and use proactive rather than reactive strategies to comprehend a task (Mason, 2004). Struggling readers, on the other hand, are often unaware of the importance of reading for meaning (Graves, 1986) and consequently fail to understand the essence of the text. They are often characterized as inactive learners and may fail to actively monitor and evaluate their own comprehension (Torgesen, 1982). Furthermore, they have difficulties judging task demands and identifying possible strategies that work (Ryan, Ledger, Short, & Weed, 1982). Therefore, weaknesses in comprehension are often attributed to lack of metacognitive skills, such as comprehension monitoring and fix-up strategies to repair understanding. Also, a history of past failures may decrease a student's desire to read and consequently his or her motivation to persist with a difficult task (Guthrie & Davis, 2003). Therefore, struggling readers may need explicit strategy instruction to improve their reading comprehension skills.

Role of Explicit Instruction in Promoting Transfer

Explicit instruction refers to a systematic instructional approach that involves specific design and delivery components (Kame'enui, Carnine, Dixon, Simmons, & Coyne, 2002), including teaching big ideas (i.e., concepts and principles), making strategies conspicuous, scaffolding learning, integrating new knowledge with prior

2

knowledge, and building in judicious review (Kame'enui et al.). Delivery components for explicit instruction include opportunities for frequent student responding, appropriate pacing, providing adequate processing time, monitoring, and providing corrective feedback.

Explicit strategy instruction should include systematic introduction and practice of the strategy (Pressley, et al., 1989). The goal of the strategy, range of applicability, and the outcomes from using a strategy correctly should be explicitly conveyed to students (Pressley & Brown, 1987). Strategy instruction should also be conducted regularly and intensively (Ellis, Deshler, & Lenz, 1991); should include teacher modeling, guided and independent practice; and should include teaching for transfer. In short, strategy instruction that is overt and explicit is likely to improve reading outcomes for many students, including those with LD, struggling readers, and average-achieving students (Faggella-Luby & Deshler, 2008).

One approach that has been shown to improve reading outcomes for a diverse group of students, including students with disabilities, is Peer Assisted Learning Strategies (PALS) (Fuchs, Fuchs, Mathes, & Simmons, 1987). In PALS, a higher-performing reader is paired with a lower-performing reader to practice fluency and comprehension activities such as partner reading, retell, paragraph shrinking, and making predictions (see McMaster, Fuchs, & Fuchs, 2006). This instructional approach provides all students with increased academic engagement time, immediate corrective feedback, opportunities for high level of mastery of comprehension strategies, and increased time in active engagement with text. Additionally, PALS provides students the opportunity to

practice important strategies such as summarization (known as Paragraph Shrinking in PALS) an essential skill needed to learn from text and to read critically. Explicit teaching of comprehension strategies such as PALS may not have the desired effect unless students are taught to transfer the strategy to other situations or settings (Ellis, Lenz, & Sabornie, 1987). For students to achieve this goal, strategy transfer is essential. Therefore it is important to understand the factors necessary for transfer.

Factors Necessary for Transfer of Strategies

For transfer to occur, students need to have knowledge of critical skills as well as knowledge of strategy use (Ellis, Deshler, & Lenz, 1991). Knowledge of when to use a strategy is conditional knowledge that enables students to adapt the strategy and apply it to appropriate settings or tasks. It is important to teach conditional knowledge to students with LD and struggling readers, because these students often do not know when strategy use might be appropriate, resulting in a waste of time and resources allocated to learning new strategies (Ellis et al., 1991). Hence, explicit transfer training may help students gain conditional knowledge.

Explicit transfer training should involve informed training on when, why, what, and how to use a strategy with systematic feedback on strategy use (Chan, 1991). Students should be provided opportunities to discuss and elaborate on strategy use and modification of a strategy to meet the needs of the task. Hence, teachers need to emphasize transfer in the broadest sense (Ellis, Deshler, & Lenz, 1991) with shifting emphasis from learning to use a strategy in a particular domain, to learning how to use the strategy in other domains. Explicit transfer training should also involve procedures

for systematically changing variables that affect transfer such as the teacher, setting, materials, cues and reinforcers (Ellis, Lenz, & Sabornie, 1987).

Explicit transfer training should also promote student mindfulness with gradual transfer of control from teacher to student. Mindfulness involves how much students think when learning. Mindfulness is important as the more mindful one is of the process of learning, the better the learning outcomes (Salomon & Globerson, 1987). Mediating mindfulness is important because transfer does not spontaneously happen; instead, students need to reflect and think about the principle underlying the strategy learned. Additionally, students need to actively make connections between prior learning and the new learning task. Mediated mindfulness is a blend of direct explanation, modeling, instructional scaffolding, and guided practice (Wong, 1994). Teaching students the use of metacognitive strategies is one method of mediating mindfulness and is necessary for transfer (Borkowski et al., 1987).

Metacognition and its Role in Promoting transfer

For nearly three decades researchers have studied metacognition and its effects on the reading comprehension of students. Metacognition refers to "one's knowledge concerning one's own cognitive processes" (Flavell, 1976, p.232). It is the awareness of skills, strategies, and resources that are required for effective task performance. Thus, metacognition is an umbrella term representing many interacting processes and skills necessary for self-awareness of cognitive processes (Carr, & Borkowksi, 1989). Baker and Brown (1984) have suggested that metacognition has two components. The first component involves awareness of skills and strategies needed for successful task

5

completion. The second component involves a self-regulatory mechanism to ensure successful task completion including planning, testing, revising strategies, comprehension monitoring, and using fix-up strategies when comprehension breaks down. These two components are not independent but work in unison.

According to another metacognitive model, developed by Pressley, Borkowski, and O'Sullivan (1985), students possess general strategy knowledge, which is a general belief about the utility of strategies for successful task completion. This general belief involves attributions of success or failure. Attribution training involves changing a person's beliefs in the causes of failure and success to increase motivation and achievement (Robertson, 2000). Attribution training is thus another way of promoting mindfulness or self-awareness as it teaches students to attribute failures to inadequate strategy use or effort rather than lack of intelligence; and success to appropriate strategy use (Wong, 1994). Therefore, one of the goals of attribution training is to avoid learned helplessness, which often results in lack of strategy transfer (Chan, 1996). Past research has shown that attributions are correlated with school performance and its influences on the metacognitive system (i.e., self-concept and self-attributions) play a role in how and whether students use strategies to problem solve (Carr, & Borkowski, 1989). Therefore, attributional beliefs are an important aspect of metacognitive development.

In sum, components of metacognition include awareness of skills and strategies, self-regulatory mechanisms when utilizing a strategy, and attributions of strategy success and failure. Researchers have studied the effects of the above components of metacognition on reading outcomes for students with and without disabilities and have

deemed metacognitive knowledge to be important as it involves active processing of

information (Chan & Cole, 1986). Metacognitive awareness is also important as

differences in metacognitive skills differentiate more skilled readers from less skilled

readers (Brown, 1980; Ryan, 1981). Additionally, failure to establish a purpose for

reading, use a strategy, and monitor progress results in poor comprehension.

Furthermore, failure to transfer strategy knowledge may be attributed to lack of

metacognitive awareness (Ghatala, Levin, Pressley & Goodwin, 1986). Thus it is critical

to enhance students' metacognitive awareness and study the effects of metacognitive

instruction on all students including struggling readers and students with disabilities, in

order to promote transfer.

Definition of Transfer

Researchers have studied the effects of transfer or generalization for decades

(Paris & Oka, 1989). In the research literature, the terms transfer and generalization have

often been used interchangeably. Transfer has been defined and studied in various

literature such as behavior literature (e.g., Stokes & Baer, 1977); math literature (e.g.,

Noss, Hoyles, & Pozzi, 2002; Wagner, 2006) and in the literature on reading acquisition

such as decoding skills (e.g., Compton, et al., 2005). In their classic article on transfer,

Stokes and Baer (1977) defined transfer as "the occurrence of relevant behavior under

different non-training conditions (i.e., across subjects, settings, people, behaviors, and/or

time) without the scheduling of the same events in those conditions as had been

scheduled in the training condition" (p. 350). Similarly, Lenz, Alley, Schumaker, and

Deshler (1981) defined transfer as the extent to which a student uses and effectively

adapts a learned skill outside the setting in which it was learned. Still others (e.g., Wong, 1994) have defined transfer as spontaneous, unprompted and appropriate use of a previously learned strategy in tasks and/or situations that differ from those in which the strategies were originally learned. Wagner (2006) conceptualized transfer as flexible strategy use which is acquired through practice of complex examples.

Further, researchers have conceptualized transfer as near and far transfer. Near transfer involves appropriate strategy use to stimuli, settings, or tasks that are similar to those used during strategy learning. Far transfer involves appropriate strategy use to stimuli, settings, or tasks that are very different from those used during strategy training (Salomon, & Perkins, 1989; Wong, 1994). For the purpose of this dissertation, I have used these definitions of near- and far-transfer to examine the effects of transfer by students, including students with LD and struggling readers. In this study, transfer was measured by proximal and distal measures respectively. Proximal measures were defined as measures that were closely aligned to the intervention. Distal measures were defined as measures that were more generalized measures of reading that were not closely aligned to the intervention.

Purpose of my Study

The purpose of this study was to examine the effects of explicit training for transfer of PALS, which has been found to be generally effective for a diverse group of students including students with disabilities (Fuchs, Fuchs, Mathes, & Simmons, 1997). There are several reasons for further studying the effects of explicit transfer training.

First, despite years of research on cognitive and metacognitive strategies, few researchers have examined the effects of explicitly teaching cognitive and metacognitive strategies to promote transfer of those strategies for students with LD and struggling readers. Two studies (Chan, 1991; Lovett et al., 1996) explicitly taught students to transfer a learned strategy. In both studies, students transferred strategies on near transfer measures, but not on far transfer measures, and the effects of transfer were small (Chan, 1991) and nonsignificant (Lovett et al., 1996). For both studies, the duration of the interventions was long and intensive. Hence, future studies should replicate and extend these findings by manipulating variables such as the type of transfer instruction (i.e., explicit training versus more practice), duration, and using other generalized outcome measures.

Second, researchers have also examined the role of self-monitoring instruction in promoting strategy transfer (Chan, 1991; Jitendra, Cole, Hoppes, & Wilson, 1998; Jitendra, Hoppes, & Xin, 2000; 2000; Stevens, 1998). In these studies, Chan (1991) implemented a single strategy, Jitendra et al. (1998, 2000) used two strategies, and Stevens (1998) taught three strategies including self monitoring. A combination of strategy training and self monitoring helped students transfer strategies taught as measured by proximal measures; however, on far transfer measures, no transfer effects were observed in 3 of the 4 studies (Jitendra et al., 1998; 2000; Stevens, 1998). Additionally, the effects of self-monitoring could not be parsed out for two of the four studies (Jitendra et al., 2000; Stevens, 1998). Hence, additional research is needed on the relative effects of self-monitoring in strategy transfer.

9

Third, researchers have examined the effects of explicit instruction (Chan, 1991; Lovett et al., 1996), self-monitoring (Chan, 1991; Jitendra et al., 1998, 2000; Stevens, 1998), self-regulated strategy development (Johnson, Graham, & Harris, 1997; Mason, 2004; Hagaman, & Reid, 2008) and attribution training (Borkowski, Weyhing, & Carr, 1988; Carr, & Borkowski, 1989; Short, & Ryan, 1994) in promoting transfer. Internal and external validity issues have compromised the findings of some studies (Chan, 1991; Lovett et al., 1995). For example, some researchers (Chan, 1991; Borkowski, Weyhing, & Carr, 1988) did not report fidelity of implementation, which is an important aspect of internal validity because it provides information regarding whether the strategy was implemented as planned.

Fourth, some researchers (Wong, & Jones, 1998; Short & Ryan) have failed to report information on the type of instructional grouping, setting, and intensity of instruction, limiting external validity of the studies. Information about setting and instructional grouping is essential to understand the effects of transfer across settings and therefore clear, precise documentation of setting, instructional grouping, and intervention description is needed for future replication and to facilitate research syntheses (Gersten, Baker, & Llyod, 2000; Gersten et al., 2005). Finally, given the small number of studies pertaining to transfer, additional research is needed to replicate (e.g., Borkowski, Weyhing, & Carr, 1988; Carr & Borkowski, 1989; Short, & Ryan, 1994) and extend the research on the effects of transfer of cognitive and metacognitive strategies (e.g. Chan, 1991; Jitendra et al., 1998, 2000).

Therefore, the purpose of this study was to examine the effects of explicit transfer training of the Paragraph Shrinking component of PALS- a generally effective approach to improving students' reading comprehension. It is important to extend the research to examine whether explicitly teaching for transfer is necessary or whether more practice with PALS would yield improved reading outcomes and transfer of the PALS strategy to other tasks. The following research questions were addressed in this study:

1. What are the effects of explicitly teaching students to transfer the paragraph shrinking component of PALS to different texts as measured by proximal and distal reading comprehension measures, compared to simply providing ongoing practice with PALS?

2. Does PALS plus transfer training help students maintain the strategy taught?

Chapter II

Literature Review

The concept of transfer, including where and how it occurs is not new, and has been studied for nearly a century (Barnett, & Ceci, 2002). However, little is known about the extent to which targeted strategies taught are transferred to real-world settings such as the classroom (Ellis, Lenz, & Sabornie, 1987). Additionally, far transfer has proven problematic for students with LD (Vaughn, Gersten, & Chard, 2000) especially when transferring strategies taught to expository text (Faggella-Luby & Deshler, 2008). The purpose of this study is to examine the effects explicitly teaching for transfer of PALS, an evidence-based reading approach. Specific research questions included: (1) What are the effects of explicitly teaching student to transfer the paragraph shrinking component of PALS to different types of text as measured by proximal and distal reading comprehension measures, compared to simply providing ongoing practice with PALS? (2) Does PALS plus transfer training help students maintain the strategy taught?

The purpose of this literature review is to examine the effects of teaching school-aged students, including struggling readers and students with disabilities to transfer strategies learned in the area of reading comprehension, either through explicit teaching or metacognitive instruction. First, I describe my methods for this literature review. Next, a critical review of the literature is provided. Finally, implications for research are discussed.

Method

Literature Search Procedures

First, broad searches of the literature on reading comprehension strategies for typical students, students with LD, reading disabilities, at-risk learners, and struggling readers were conducted using PsycINFO and ERIC databases from 1980 to 2008. The searches involved combining keywords including generalization, transfer, maintenance, strategy instruction, with reciprocal teaching, story grammar, story mapping, story schema, main idea identification, paraphrasing, summarization, question generation, mnemonics, strategy training, attribution training, attribution retraining, self-questioning, comprehension monitoring, self-regulated strategy development, metacognition, metacomprehension, and metamemory. Second, an ancestral search of research synthesis articles including a literature review of question generation approaches by Rosenshine, Mesister, and Chapman (1996); reviews of teaching reading comprehension strategies by Mastropieri and Scruggs (1997) and Gersten, Fuchs, Williams, and Baker (2001); vocabulary instruction by Jitendra, Edwards, and Sacks (2004); and a review of expository text comprehension by Gajria, Jitendra, Sood and Sacks (2007) were searched further to identify articles that could be potentially included in the review. Finally, a hand search of the following journals was conducted to locate the most recent literature: *Focus on Exceptional Children, Exceptional Children, Journal of Educational Psychology, Journal of Special Education, Learning Disabilities Research & Practice,* and *Remedial and Special Education*.

Inclusion criteria. To judge the appropriateness of each article for inclusion in this review, studies were evaluated using the following criteria. First, studies had to include school-age students with LD, or struggling readers. Second, studies had to include either explicit transfer instruction, or teach comprehension monitoring instruction, or metacognitive strategy instruction to help students transfer and/or maintain effects of the strategy taught. Studies that assessed for transfer or maintenance but did not explicitly teach for transfer, or teach comprehension monitoring or a metacognitive strategy were excluded (e.g. Gardill & Jitendra, 1999; Idol, 1987). Third, studies were included if they used experimental group, quasi-experimental group, or single subject design. Fourth, only studies in the area of reading comprehension were selected. Studies in which the primary intervention focused on phonological awareness, decoding, spelling, listening comprehension, and writing were excluded. Fifth, studies had to include at least two or more measures to assess the effectiveness of the intervention (i.e., one measure to assess the effectiveness of the intervention and another measure to assess transfer and/or maintenance. Sixth, only published studies in English were included. Unpublished doctoral dissertations were not included.

Coding structure. For this review, studies were coded according to the number of strategies taught to study participants. Studies were coded into three categories: (1) single strategy, (2) two strategies, and (3) three or more strategies. For all studies, the following features were coded: participant characteristics, design, intervention description, outcome measures, procedural fidelity, and findings. Transfer measures were coded as near or far transfer measures.

Near transfer measures were defined as measures that were closely aligned to the strategy taught. A measure was coded as a near transfer measure, if the measure assessed any of the following: (1) transfer of taught skills on unfamiliar text, (2) transfer of taught skills on unfamiliar text but same subject matter, (3) transfer of taught skills to different subject matter. Far transfer measures were defined as measures that assessed general reading competency of skills that were not closely aligned to the intervention. A measure was coded as a far transfer measure, if the measure assessed any of the following: (1) transfer of strategy to untaught skills on unfamiliar text, (2) transfer of strategy to untaught skills on different subject matter, (3) transfer of strategy to untaught skills on same subject matter, (4) transfer of strategy to global measures such as comprehension tests, standardized tests, reading grade, or, attribution tests, (4) transfer across testing stimuli, (5) transfer across testing format. Maintenance effects were evaluated and coded based on the elapsed time between treatment conclusion and the time when maintenance data were collected.

Calculation of Effect Sizes

For each study, effect sizes were calculated using Cohen's *d*, which is defined as the difference between the mean posttest score of the intervention group minus the mean posttest score of the control group divided by the pooled standard deviation. Interpretations for effect sizes are as follows: (a) .80 or greater are large effects, (b) at or near .50 is a moderate effect, and (c) .20 is a small effect (Cohen, 1988).

Results and Discussion

A total of 12 studies met the inclusion criteria and were organized into three broad categories: those that examined (1) a single strategy, (2) two strategies, and (3) three or more strategies. I chose to use this organizational scheme to learn whether two or more strategies provided additional value in promoting transfer or whether strong single strategies were sufficient in promoting transfer. Three studies used a single strategy (Chan, 1991; Lovett, Borden, Waren-Chaplin, Lacerenza, DeLuca, & Giovinazzo, 1996; Wong & Jones, 1982). Five studies included two strategies; based on the type of instruction, these were further subdivided into three subcategories: (1) main idea identification and self-monitoring (Jitendra, Cole, Hoppes, & Wilson, 1998; Jitendra, Hoppes, & Xin, 2000;), (2) story grammar instruction and attribution training (Short, & Ryan,1984), (3) Self-Regulated Strategy Development (SRSD) and summarization (Hagaman, & Reid, 2008; Mason, 2004). Four studies used three or more strategies and were further subdivided into four subcategories: (1) SRSD, story grammar, and goal setting (Johnson, Graham, & Harris, 1997); (2) topic sentence, main idea identification, and self-monitoring (Steven, 1988); (3) attribution training, topic sentence identification, and main idea identification (Borkowski, Weyhing, & Carr, 1988); and (4) attribution training, topic sentence identification, summarization, and question generation (Carr & Borkowski, 1989). Table 1 at the end of this chapter provides a summary of the study characteristics, definition of transfer, and effect sizes for studies included in the analysis.

Single Strategy Studies

      Self-questioning training. Chan (1991) examined the effects of generalization

instruction of a self-questioning strategy for main idea identification. Students with

reading disabilities (RD), chronological age-matched peers (CA), and reading ability

matched (RA) peers were assigned randomly to receive standard instruction (SI), which

includes self-questioning training and individual practice; or generalization instruction

(GI), which includes self-questioning training through cognitive modeling, overt external

guidance, overt self-guidance, faded self- guidance, and covert self-guidance. A 3 (group)

x 2 (instruction) x 3 (testing condition: pretest, cued, and uncued) repeated measures

design was used. Near transfer measures included main idea identification and sentence

rating, and were administered under cued and uncued conditions (see Table 1). During

the cued condition, participants were prompted to use the strategy and during the uncued

condition, no prompt was given. Far transfer measures included an experimenter-

constructed comprehension measure

      The effect size (ES) for the main idea identification in the cued condition for

participants with RD receiving GI was small (ES = 0.29). In contrast, in the uncued

condition, the effect size for the main idea identification measure was large (ES = 2.00),

suggesting that GI helped participants with RD transfer the strategy across settings.

Similarly, in the cued condition, on the main idea identification measure, RA matched

participants receiving GI outperformed RA matched participants receiving SI (ES =

0.76). In the uncued condition, for RA matched participants receiving GI, the effect size

on main idea identification measure was small (ES = 0.37).

When comparing the performance of participants with RD with RA matched participants who received GI instruction revealed that in the cued condition, RA matched participants outperformed students with RD on main idea identification (ES = 0.25). In contrast, in the uncued condition, participants with RD receiving GI outperformed RA matched participants (ES = 0.45). One possible reason for the decrease in performance by RA matched participants in the uncued condition, could have been that RA matched participants may have spontaneously used other strategies acquired instead of the newly learned GI strategy (Chan, 1991).

On sentence rating, in the cued condition, participants with RD who received SI outperformed participants with RD in the GI condition (ES = 0.30). However, in the uncued condition on the same measure, participants receiving GI outperformed SI participants, (ES = 1.00), indicating that participants with RD who received GI were more likely to transfer the strategy when not prompted by the teacher. When comparing the performance of participants with RD and RA matched participants who received GI instruction revealed that, in the cued condition, RA matched participants outperformed participants with RD on the sentence rating measure (ES = 0.09). In contrast, in the uncued condition, participants with RD outperformed RA matched participants on the sentence rating measure (ES = 0.64), suggesting that GI helped participants with RD transfer the strategy across settings.

On the comprehension measure, a distal measure, participants with RD who received GI outperformed SI students (ES= .40). However, when comparing participants

with RD and RA participants, a small effect size was found (ES = 0.05), with RA participants more comprehension questions correctly.

One strength of the study was that both conditions had comparable instruction (self-questioning training). The only difference between conditions was that participants in the GI condition were explicitly taught how to transfer the self-questioning strategy. Second, the order of conditions (cued and uncued) was counter-balanced to prevent an order effect. Third, multiple measures were used, consisting of two measures closely aligned to the intervention and one generalized measure. The use of multiple measures is recommended as no single measure can measure all aspects of the intervention (Gersten, Fuchs, Compton, Coyne, Greenwood, & Innocenti, 2005). Fourth, participant and treatment were clearly and adequately described for replication, an important aspect of external validity. However, internal validity may be limited due to possible treatment diffusion. Treatment diffusion could be an issue as the same teacher implemented both treatments and no fidelity of implementation data were reported. Fidelity of implementation is important to assess whether instruction was implemented as planned (Gersten, Baker, & Lloyd, 2000). Also, limited information was provided about the intervention agent's characteristics, decreasing the external validity of the study.

Wong and Jones (1982) examined the effects of self-questioning training on comprehension performance of students with and without LD. Participants were assigned randomly to receive self-questioning training or no training. A 2 (groups) x 2 (training) x 2 (predictions) x 4 (test days) factorial with repeated measures design was employed. To ensure all participants had similar main idea identification knowledge prior to self-

questioning training, all participants were given main idea identification instruction until 80% mastery was reached on three consecutive days.

The near transfer measures included the main idea identification and question generation. Far transfer measures included a comprehension and gist recall measure. Near-and-far transfer measures were assessed under two conditions (prediction and no-prediction) and participants were assigned randomly to either condition. Under the prediction condition, participants were asked to underline parts of the text they thought were important and would potentially appear on the test. No-prediction condition involved reading the passage and judging the quality of the writing.

On the main idea measure under the prediction condition, participants with LD who received self-questioning training predicted significantly more main idea units across test days in comparison control LD students. In contrast, differences in the main idea units predicted between experimental and control non-LD participants across test days were not significant, which may suggest that non-LD students may be spontaneously monitoring their own comprehension and self-questioning training for this group may not add value.

On the question generation measure, in the prediction condition, experimental participants with LD generated more good questions than did control non-LD participants across test days. In contrast, in the no-prediction condition, trained non-LD participants generated more good questions than did trained LD participants. Thus, it appears that asking LD participants to underline the main ideas helped them generate better questions, while this process interfered with non-LD participants' ability to generate good questions.

On the comprehension measure, experimental LD participants answered significantly more comprehension questions correctly than did control LD participants, indicating that trained students with LD demonstrated far-transfer of self-questioning training. Conversely, trained and untrained non-LD students did not differ in their comprehension performance, indicating that non-LD students did not transfer the strategy taught, or perhaps the self-questioning training had no additional benefits for non-LD students. On the gist recall measure experimental and control LD participants did not differ in their gist recall. No difference between trained and untrained LD participants could imply that main idea training (i.e., pretraining) was sufficient and self-monitoring training did not add value.

Study strengths include comparable groups, wherein both groups were given pre-training in main idea identification, and were exposed to the same materials. Thus, comparable conditions, along with random assignment and large sample size, increased internal validity. The control condition could have been further strengthened by asking control participants to practice main idea on their own, rather than judge the quality of the writing. Some limitations include no fidelity of implementation data, which decreases internal validity. External validity is also limited, as information about the setting and instructional grouping was not given, which are needed for replication. Additionally, the duration of the intervention was short and participants were tested immediately following treatment, which could lead to inflated effects.

Reciprocal teaching, text content, and structure program. Lovett et al., (1996) studied the effectiveness of three training programs in improving expository text

comprehension of seventh-and eighth-graders with LD. Participants were assigned

randomly to a Text Content Structure (TCS) program, Reciprocal Teaching (RT), or a

Classroom Survival Skills Program (CSS). The TCS program included activation of prior

knowledge, elaborating information, mapping of main ideas, and text structure analysis.

The RT program included summarization, questioning, clarifying, and predicting

information. Participants were given reminders to use the strategy learned with passages

read independently to increase transfer of the strategy to other materials and situations. In

both conditions, instruction was scaffolded, with responsibility gradually shifting from

teacher to student. The CCS program focused on academic problem solving,

organization, and study skills.

Measures used to assess transfer included experimenter-developed tests and

standardized tests. Five different categories of measures were administered and assessed

strategy comprehension, content comprehension, text structure analysis, academic self-

help, and general academic achievement and reading through standardized test batteries.

A measure was considered a near transfer measure depending on which treatment was

received. For example, for the RT group prediction, summary, question, and clarifying

were taught skills and therefore were near transfer measures. The same measures were

considered far transfer measures for TCS and CSS groups as these skills were not taught.

Far transfer measures included generating titles, rating the importance of ideas, detecting

incongruities in paragraphs, semantic mapping, and text structural analysis. These skills

were not taught to RT and CSS participants and were far transfer measures for those

participants. Standardized tests of reading and achievement were far transfer measures for all participants.

Results on near transfer measures indicated that RT was superior to both the TCS and CSS programs (see Table 1). Thus, RT participants were able to generalize the skills they learned to untrained passages. However, on untaught skills, as measured by far transfer measures, no significant effects were found. On content comprehension, students in both the TCS and RT conditions performed better than did students in the CSS condition with the TCS participants demonstrating evidence of near transfer to untrained text. On the text structure analysis measure, both the TCS and RT groups outperformed the CSS group; however, the TCS group demonstrated statistically significant near transfer effects to uninstructed texts. There were no differences between groups on any of the standardized measures.

The above results suggest that students with LD can generalize strategies to untrained texts when given explicit instruction; however, they were not able to generalize training to untaught skills (i.e., far transfer). Additionally, students did not improve performance on standardized measures. This result is consistent with past research (see Faggella-Luby & Deshler, 2008) that has indicated that effects tend to be lower on generalized outcome measures in comparison to experimenter-developed measures that align closely to the intervention.

Although Lovett et al. (1996) used an experimental design with random assignment and two intensive treatment conditions, the control condition did not receive equivalent reading instruction, which could have inflated the effects. Additionally,

23

information about fidelity of implementation in each of the conditions was not available.

Lack of information on whether the intervention was implemented as intended makes it

impossible to establish causal relationships unequivocally (Gersten et al., 2000; Odom et

al., 2005). Thus, the internal validity was threatened. Similarly, external validity was

limited as the study was conducted partly in a pediatric hospital setting and in satellite

classrooms; thus, results cannot be generalized to typical classroom situations.

Two- Strategy Studies

      Main idea identification and self-monitoring. Two studies examined the effects

of main idea identification and self-monitoring on reading comprehension performance of

students with LD. Jitendra, et al., (1998) used a multiple probe design across students to

evaluate maintenance and transfer of main idea and self-monitoring instruction. Three

sixth-graders received main idea and self-monitoring instruction and a fourth student was

assigned to the control condition. The near transfer measure included main idea

identification on narrative text similar to training passages and the far transfer measure

included main idea identification using expository text. Near transfer and far transfer

measures were assessed using multiple choice and production response formats.

      On the near transfer measure, all treatment participants improved in main idea

identification, and self-monitoring instruction further improved main idea identification.

On near transfer maintenance probes, one student did not appear to maintain the strategy

taught, one student's scores reduced slightly, and one student appeared to maintain

effects. Scores for the control student remained relatively stable.

On the far transfer measure, following main idea instruction scores for the three treatments, participants improved from baseline. Self-monitoring instruction further improved main idea identification of expository text. On maintenance far transfer probes, all three treatment participants showed a decrease in performance but performed higher than did the control student.

A number of design features strengthened the internal validity of this study, including systematic and reliable observation, repeated measurement, treatment fidelity measurement, and changing a single variable at a time (Sidman, 1960). Also, an advantage of a multiple-probe design is that it is useful in measuring generalization of behaviors in each condition of the multiple baseline design (Kennedy, 2005). The use of a multiple-probe design allowed participants to be assessed after main idea and self-monitoring instruction, thereby permitting the researchers to study the effects of each instructional component separately. Studying the effects of both strategies separately helps determine the benefits of both strategies individually and whether additional components add value.

The researchers also provided clear descriptions of participants, treatment, measurement, and materials, allowing for future replication of the study. However, the use of narrowly defined researcher-developed measures with a few numbers of test items, and changes in the calibration of the test (i.e., changes in the number of test items across probes) decreased the internal validity of the study. Finally, the small number of participants limits generalizability.

Jitendra, Hoppes, and Xin (2000) examined the effectiveness of main idea and self-monitoring instruction on students with high incidence disabilities. Participants were stratified by grade and assigned randomly to an experimental (main idea identification and self-monitoring) or control group. Experimental condition participants were explicitly taught to select and generate main idea statements, and to use a self-monitoring strategy. No information about control group instruction was given.

A main idea identification measure using narrative text similar to training materials was the near transfer measure. The far transfer measure consisted of a main idea identification measure using expository passages from social studies text. Maintenance was measured on near transfer-and-far transfer measures 6 weeks following training. Near transfer-and-far transfer measures included production and selection-type items. On both measures, the experimental group statistically outperformed the control group on posttest and maintenance measures requiring selection responses (see Table 1). On near transfer production responses, experimental participants outperformed control participants on posttest. However, on maintenance near transfer-and-far transfer measures requiring production responses, neither group maintained intervention effects.

Some limitations included a small sample size, and the use of experimenter-developed measures that were closely aligned to the study as the only measures. Additionally, no information was given about the control group's reading instruction, limiting conclusions about what the observed effects mean (Gersten, Baker, & Lloyd, 2000). However, detailed description of participants, treatment, materials, and fidelity of implementation enhanced the internal and external validity of the study.

26

Story grammar and attribution training. Short and Ryan (1984) examined the effects of story grammar and attribution training on reading comprehension. Story grammar training was designed to increase comprehension monitoring, and attribution training was designed to increase general awareness of the role of effort in efficient reading. Participants were struggling readers who were assigned randomly to one of three groups: strategy training (story grammar), total training group (strategy and attribution training), or attribution only (control group). Fourteen skilled readers served as a contrast group at posttest. Maintenance was measured 3 days after training through free and probed recall measures. The far transfer measure consisted of the Reading Concept Inventory (Edwards, 1977), an error detection and correction test.

On the maintenance measures, there were no statistically significant differences between trained unskilled and skilled readers for probed and free recall measures. In the study the skilled readers did not receive instruction in either story grammar or attribution. Thus, no differences between skilled and less skilled readers may imply that skilled readers were active learners and were spontaneously using story grammar questions to monitor their comprehension.

To assess whether story grammar training was beneficial for unskilled readers, strategy trained participants were compared to attribution-only participants on free and probed recall measures. On free and probed recall measures, strategy trained participants outperformed attribution participants indicating that story grammar training was beneficial for less-skilled readers. To examine whether attribution training yielded additional value, total training participants were compared to strategy trained participants

27

on free and probed recalls. Results on free and probed recalls indicated no difference between total training and strategy trained groups suggesting that attribution training yielded no additional benefits.

On the far transfer measure, the Reading Concepts Inventory measure there were no significant differences between skilled and less-skilled participants in any of the three conditions (total training, strategy training, and attribution training). Thus no group was able to demonstrate metacognitive awareness or knowledge of the functions of reading as measured by the Reading Concepts Inventory task. Lack of transfer effects on the far transfer measure could also be due to the short duration of the intervention (3 sessions) which may have not been sufficient to effect long-lasting improvements on untaught skills such as error detection and correction.

Limitations of the study include the probable existence of practice effects due to similarities in training and testing sessions wherein participants practiced recall with a 3 min delay. Additionally, no information on fidelity of implementation was given, which limits the internal validity of the study. Lack of information regarding the setting, instructional grouping, and intervention agent, decreases the external validity of the study.

Self-Regulated Strategy Development and summarization. Hagaman and Reid (2008) examined the effects of Self-Regulated Strategy Development (SRSD) and "RAP" a summarization strategy in improving reading comprehension of three sixth-grade struggling readers. A multiple baseline across participants with multiple probes design was used. Recall was the near transfer measure, while an experimenter-developed

comprehension measure was the far transfer measure. Maintenance was also measured two weeks after training.

On the near transfer measure, all three students' recall of text improved from baseline to independent practice; during maintenance, mean percentage for main ideas recalled were maintained for two students but decreased for one. On the far transfer comprehension measure, all participants improved from baseline and maintained their performance two weeks later indicating that SRSD and RAP may have helped participants transfer strategy to unfamiliar text as well as to untaught skills.

There are several limitations in this study. First, the study includes a small sample size; findings would be strengthened if the study were replicated using larger samples. Second, the far transfer measure consisted of only six short-answer comprehension questions. Third, both treatment packages (SRSD and RAP) were given together; therefore, individual effects of each treatment component cannot be parsed out. Fourth, the duration of the intervention is not known. Finally, maintenance was measured after only two weeks, which could potentially overestimate maintenance effects. However, the researchers provided detailed participant descriptions, including selection criteria and the type of reading instruction students were receiving outside of the study. Further, the detailed description of the intervention allows for replication of the study, thereby increasing the external validity of the study. Treatment fidelity was observed using a checklist, capturing the accuracy, if not the quality, of implementation (Gersten et al., 2005).

Mason (2004) studied the effects of a combination of SRSD and a summarization strategy (Think Before, While and After Reading, TWA) and ReQuest (RQ) on reading comprehension of expository text. Participants were struggling fifth graders who were assigned randomly to TWA and SRSD or RQ, a reciprocal questioning strategy. The TWA and SRSD strategy was a nine-step self-regulatory strategy used before, during, and after reading. RQ taught students how to generate and answer questions about the text. Far transfer measures included main idea identification, oral retell, for the RQ participants; and written retell and main idea identification for participants in both conditions. Maintenance was assessed three weeks following treatment.

TWA and SRSD participants outperformed RQ participants on main idea, oral retell units, and oral retell main idea units and the effect sizes for these measures ranged from medium to large in favor of TWA and SRSD participants (see Table 1). On the far transfer measure that assessed retell and main idea identification using a different format (writing) there were no statistically significant differences between participants. On the maintenance measures, TWA and SRSD participants maintained the strategies taught over time and the effect sizes for these measures ranged from medium to large.

The authors' clear description of participants and intervention is useful in determining for whom and what intervention improved transfer of reading comprehension strategies. High levels of fidelity of implementation were indicated for each step as well as the overall quality of instruction, thereby increasing internal validity. However, the setting of the study was not reported which limits external validity. In addition, the use of written retells to assess far transfer could have masked the effects of

30

transfer, as writing requires an additional set of skills. An oral comprehension measure might have been more appropriate to assess text recall.

Studies Using Three or More Strategies

> **Self-Regulated Strategy Development, story grammar and goal setting.**

Johnson, Graham, and Harris (1997) used a combination of SRSD and goal setting and self-instruction to teach story grammar to fourth- through sixth-grade students with LD. The purpose was to examine the effectiveness of goal setting and self-instruction components both separately and combined in improving the acquisition, maintenance, and generalization of story grammar instruction. Participants with LD were assigned randomly to one of four conditions: (1) strategy instruction (ST), (2) strategy instruction plus goal setting (GS), (3) strategy instruction plus self-instruction (SI), or (4) strategy instruction plus goal setting and self-instruction (GS+ SI). Twelve normal achieving students served as a contrast group. On the far transfer measure, ST participants outperformed other participants (GS, SI, GS + SI). The results indicated that, following strategy instruction, students with LD were able to answer more questions about stories read in their regular reading groups and the addition of goal setting and self-instruction procedures did not improve performance. Moreover, on maintenance measures, ST participants maintained their performance over a 1-month period.

In sum, strategy instruction promoted transfer across setting and person (regular reading group and special education teacher) and maintenance of strategy instruction. The addition of self-regulation procedures did not appear to have any added benefit. A possible reason is that SRSD already has a self-regulation procedure built in; therefore,

additional self-regulation procedures could be overkill. Although this study demonstrated that strategy instruction in story grammar, and resulted in transfer of strategy, the results must be interpreted with caution due to a lack of an equivalent control group.

Topic sentence, main idea and self-monitoring. Stevens (1988) examined the relative effectiveness of four methods of teaching main idea identification to students in remedial reading classes in grades 6 through 11. Participants were assigned randomly to one of four conditions: (1) strategy training (ST), which included topic, main idea identification, and self-monitoring; (2) classification skills instruction (CT), which included classifying and categorizing lists of words to learn superordinate and subordinate relations in text along with topic and main idea identification; (3) combination training, which included a combination of strategy and classification skills instruction; and (4) control treatment, which consisted of practice on topic and main idea questions on expository paragraphs. All groups were taught through a computer- assisted instruction delivery system to counter teacher effects. Near transfer measure included main idea identification on different subject matter. Far transfer measures included inference questions on trained and untrained subject matter.

On the near transfer measure, ST participants outperformed CT, combined, and control participants and had a large effect size. On a far transfer inference measure on trained content matter, combined training participants outperformed other participants. Thus, the combination of strategy and classification training may have helped activate background knowledge or provided students with content knowledge they may have not previously possessed. However, on the near transfer main idea identification measure,

classification training did not add value. On the inference measure to different subject matter no significant effects or interactions were found, suggesting that none of the groups were able to transfer the strategy they learned to untaught skills and different subject matter.

The threats to internal validity for this study appear to be low as all groups were exposed to and given instruction on topic sentence and main idea. Additionally, computers were used to counter potential teacher effects.

Attribution training, topic sentence and main idea identification. Borkowski, Weyhing, and Carr (1988) examined the relative effects of attribution and summarization training on 75 students with reading disabilities ranging from 10 to 14 years. Participants were assigned randomly to one of four conditions: (1) Strategies Plus Complex Attribution condition consisting of attribution training during phase 1, and summarization and attribution training in phase two; (2) reading strategies plus attribution condition involving no attribution training in phase 1 but reading and attribution training in phase 2; (3) Attribution control group involving no attribution training in phase 1 or 2, but strategy training in phase 2, (4) Reading strategies control condition involving no attribution or reading strategy training in phases 1 or 2, but practiced summarization. Far transfer measures included antecedent attribution measure, Standford Diagnostic Reading test, and grades. Summarization was the maintenance measures, and was assessed four weeks after termination of treatment.

On all far transfer measures, there were no statistically significant improvements for any condition suggesting that there were no transfer effects on overall reading

comprehension, attribution belief and on semester grades. On the maintenance measure, reading strategy plus complex attribution training outperformed participants in the other condition (see Table 1).

Several limitations decrease the external validity of the study. First, the study did not provide information on how participants' met disability criteria (e.g., classification by implementing a screening measure and/or state criteria for disability classification). Second, information on key demographic variables such as grade was not reported. Third, information on instructional grouping, duration, and setting was not reported making it difficult to generalize the findings of the study to similar target populations. Internal validity may also be limited due to the lack of fidelity of implementation data. Lack of information on instructional time for each condition makes it difficult to determine whether each group got equivalent instruction time, which may confound the results of the study. Although the study had multiple far transfer measures, like Stanford Diagnostic Reading test, grade and an attribution test, it may have been useful to also include an outcome measure more closely aligned to the intervention.

Attribution training, topic sentence identification, summarization and question generation. Carr and Borkowski (1989) examined the effectiveness of attribution training in combination with strategy training with underachieving readers in grades three through five. Participants were assigned randomly to one of three conditions: (1) strategy training + attribution (S+A), (2) strategy only (S), or (3) no training. Far transfer measures included: recall, an attribution questionnaire, reading awareness scale,

and a self-esteem questionnaire and reading grade. Maintenance was assessed one year following post test via reading grade performance.

On the far transfer recall measure, students who received strategy plus attribution training had statistically significantly better posttest prose recall scores than did students in the strategy only or control condition (see Table 1). Students' recall scores in the control condition were not reliably different from those in the strategy only condition, indicating that attribution training did add value. On the strategy use measure, the strategy plus attribution group scored reliably higher than did those in the strategy only group and the control group, possibly suggesting that participants receiving combined training were more strategic than other participants.

On the attribution questionnaire, the strategy plus attribution group was more likely to modify self-attributions about effort than the strategy only group or the control group. In contrast, the strategy only group did not acquire reliably higher attributional beliefs than did the control group. On the Reading awareness measure, the strategy plus attribution condition had higher posttest reading awareness scores in contrast to the strategy only group and the control group. However, there was no significant difference between strategy plus attribution group and the strategy only group, suggesting that attribution did not add any additional value to increasing overall reading awareness. Final reading grades were higher for the strategy plus attribution group in comparison to the strategy only and control group. Similarly, at long term follow up, the strategy plus attribution group maintained significantly higher grades than the strategy only or control group. None of the groups improved on the self-esteem measure.

The results of this study demonstrated some promise for the use of attribution training along with strategy training to improve comprehension of struggling readers. However, there was no consistent relation between attribution, posttest reading grades, recall, and strategy use in the strategy plus attribution group. Therefore it is "difficult to tease out whether generalization of skills learned, or a temporary motivational boost, could have impacted the results" (Carr, & Borkowski, 1989, p.339). Another limitation, was the short duration of the study (3 weeks) which to examine whether the effects of attribution on general reading awareness. Additionally, the sample size of $N= 52$, resulted in small number of participants in each condition.

General Discussion

The purpose of this literature review was to examine the types of transfer strategies used, the outcome measures used to assess transfer, and the effect of transfer on the reading comprehension of students, including struggling readers and students with LD. A total of 12 studies met the criteria of either explicitly teaching for transfer or teaching a metacognitive strategy to help students transfer the strategy taught. From the 12 studies, 5 used expository text and 7 used narrative text. The grades ranged from 3rd to 11th grade with a majority of studies focusing on 6th graders with LD or struggling readers. Two studies explicitly taught for transfer, 4 studies taught a comprehension monitoring strategy, 3 studies taught SRSD, and 3 studies taught attribution training. The small number of studies on this topic suggests a need for more research that examines the effects of teaching students to transfer a strategy in the area of reading comprehension.

What do we know from research?

Although this review is limited to peer-reviewed studies and the number of studies reviewed was small, a few tentative conclusions can be drawn. First, we need to learn more about the effects of explicitly teaching for transfer and the effects of metacognitive instruction. Second, students can learn to transfer a strategy taught across settings, and people. On near transfer measures, such as transfer of taught skills to unfamiliar text, students with LD and struggling readers have demonstrated transfer with medium to large effect sizes. Third, on far transfer measures such as experimenter-developed comprehension measures, two studies (Chan, 1991; Johnson et al., 1997) demonstrated transfer of strategies taught to a more general outcome measure. Both these studies had fairly intense treatment dosage. Fourth, students with disabilities benefited from explicit transfer instruction, self-monitoring instruction and SRSD, despite some positive effects, more research is needed on the aforementioned components when used with other strategies due to the limited number of studies. Finally, attribution training did not add value to the strategy taught.

What do we still need to learn from research?

Based on the results of this review, students were able to demonstrate transfer on near transfer measures, but not on far transfer measures such as standardized tests. Given the small number of studies pertaining to transfer, additional research is needed to replicate (e.g., Short, & Ryan, 1984) and extend the research on the effects of transfer (e.g. Chan, 1991; Jitendra et al., 1998; 2000; Lovett et al., 1996). Future research on transfer could include answering the following questions: (a) Will explicit transfer

instruction help students with LD and struggling readers transfer strategies taught? (b) Can students with LD and struggling readers learn to transfer a strategy to untaught skills, or must all skills be taught? (c) Will increasing the duration and intensity of treatment promote far transfer? (d) Would transfer training have same effects if the intervention is implemented by the teacher?

Table 1. *Summary of Transfer Studies for Students with Learning Disabilities and Struggling Readers*

Citation	Sample Description	Intervention Description	Dependent Measure	Definition of Transfer	Maintenance	Results	ES
Chan (1991)	*n* = 60; (20 RD, 20 CA, 20 RA)	Generalization Instruction (GI) vs. Standard Instruction (SI)	Near transfer measure: Main idea, rating of sentences under cued and uncued conditions	Assessed transfer across settings (general education classroom) under cued and uncued conditions.	NA	For RD students Near transfer measure: Main idea GI > SI (cued) GI > SI (uncued)	0.29 2.00
	Grade 5and 6 (RD, CA), grade 3 (RA)	Small group instruction (*n* = 5-6);	Far transfer Measure: comprehension			Sentence rating SI > GI (cued) GI > SI (uncued)	0.30 1.00
		Duration:40 min x 25 weeks					
		Setting: Resource room				Far transfer measure: Comprehension	
		Text: Expository				GI > SI	0.40

Citation	Sample Description	Intervention Description	Dependent Measures	Definition of Transfer	Maintenance	Results	ES
Lovett, Borden, Waren-Chaplin, Lacerenza, DeLuca, & Giovinazzo, (1996)	*n* = 46 students with LD Grades 7 and 8	Reciprocal teaching (RT) vs. Text Content Structure (TCS) vs. Classroom Survival Skills (CSS) Small group instruction (*n* = 2); Duration: 25 sessions, (60 min x 4 per week), Setting: Pediatric hospital or satellite classroom in a school Text: Expository	Near transfer measures for RT: Prediction, summarizing, questioning, and clarifying. Far transfer measures for RT, and CSS groups: Comprehension strategy: Rating ideas, generating titles, and detecting incongruities Content comprehension: Fact, Inference Semantic mapping	Near transfer was measured by comprehension performance of taught skills on untrained text. Far transfer was measured by comprehension performance on untaught skills on untrained text and on performance on standardized tests	NA	Near transfer measures: Prediction RT > TCS RT > CSS TCS > CSS Summarization RT > TCS RT > CSS TCS > CSS Questioning RT > TCS RT > CSS TCS > CSS Clarifying RT > TCS RT > CSS TCS > CSS Far transfer measures: Rating ideas: RT > TCS RT > CSS TCS > CSS Generating titles: RT > TCS RT > CSS TCS > CSS	 1.16 1.36 0.35 0.85 1.15 0.21 1.60 1.75 0.06 1.77 2.64 0.18 0.18 0.67 0.45 0.07 0.73 0.49

Analysis of text structure:	Detecting incongruities:	
Structural analysis	RT = TCS	0.00
	RT > CSS	0.65
Other:	TCS > CSS	0.69
Academic self-help		
	Fact, Inference	
Standardized tests	RT = TCS	-0.07
	RT > CSS	1.25
	TCS > CSS	1.24
	Semantic Mapping	
	RT = TCS	-0.37
	RT > CSS	0.75
	TCS > CSS	0.82
	Structural Analysis	
	RT < TCS	-1.21
	RT > CSS	0.83
	TCS > CSS	1.72
	Academic Self-help	
	RT < TCS	-0.27
	RT < CSS	-2.02
	TCS < CSS	-1.40
	Standardized test	*Ns*

Citation	Sample Description	Intervention Description	Dependent Measure	Definition of Transfer	Maintenance	Results	ES
Wong & Jones (1982)	*n* = 120 (60 LD and 60 RA) Grade 8, and 9 (LD); grade 6 (non-LD)	Self-questioning training (SQ) vs. Control Pretraining- Both groups received main idea training till 80% criterion on 3 consecutive days was met. Instructional grouping: NR Duration:2 days x 2 hours each session Setting: NR Text: Expository	Near transfer measures: under prediction and no-prediction conditions Main idea identification; Questions generated Far transfer Measures: Comprehension questions Gist Recall	Near transfer was measured by performance on taught skills to different training passages. Far transfer was measured by performance on untaught skills such as comprehension and gist recall.		Near transfer measures: for LD Main idea: Prediction SQ > control Question Generation: Prediction SQ > control Question Generation: No Prediction control > SQ Far transfer measures: Comprehension : for LD SQ > Control Comprehension : non-LD SQ = Control	NR NR NR NR NR

Citation	Sample Description	Intervention Description	Dependent Measure	Definition of Transfer	Maintenance	Results	ES
Jitendra, Cole, Hoppes, & Wilson (1998)	*n* = 4 students with LD Grade 6	Main idea + self-monitoring instruction (MI + SM) vs. control Individual instruction, Duration: Main idea instruction: 40-50 min per session for 8 days till 90% mastery was met. Self-monitoring: 2 days till 80% mastery was achieved. Setting: Resource room Text: Narrative	Near transfer measures: Main idea identification using two formats: Production Multiple choice Far transfer Measures: Main idea identification using two formats: Production Multiple choice	Near transfer was measured by comprehension performance of taught skills on other narrative text similar to training passages Far-transfer was measured by comprehension performance of taught skills to expository text	Maintenance on near, and far transfer measures for students A, B, and C were obtained at 16, 10 and 6 weeks respectively	Near Transfer: MI improved main idea identification SM further improved main idea identification Far transfer: MI improved main idea identification SM further improved main idea identification Maintenance:Near Transfer 2 participants maintained effects Maintenance:Far Transfer Effects not maintained	

Citation	Sample Description	Intervention Description	Dependent Measure	Definition of Transfer	Maintenance	Results	ES
Jitendra, Hoppes, M. K., & Xin, Y.P. (2000)	*n = 33* (29 LD, 4 SED) (18 main idea + self-monitoring, 15 = control) Grades 6, 7, and 8	Main idea + self-monitoring instruction (MI + SM) vs. control Small group instruction (*n = 6*); Duration: 11-15 sessions x 20 min each Setting: School cafeteria (experimental) resource room (control); Text: Narrative	Near transfer measures: Main idea identification using two formats: Production Selection Far transfer measures: Main idea identification using two formats: Production Selection	Near transfer was measured by comprehension performance of taught skills on other narrative text similar to training passages Far-transfer was measured by comprehension performance of taught skills to expository text	Follow up 6 weeks after post test	Near transfer measures: Production MI + SM > control Selection: MI+SM > control Far transfer measure: Production MI + SM > control Selection: MI+SM > control Maintenance: Near transfer measures: Production MI + SM > control Selection: MI+SM > control Maintenance: Far transfer measures Production MI + SM > control Selection: MI+SM > control	0.95 2.12 0.65 1.48 0.02 0.60 0.12 0.76

Citation	Sample Description	Intervention Description	Dependent Measure	Definition of Transfer	Maintenance	Results	ES
Short & Ryan (1984)	*n* = 56 (46 less skilled and 14 skilled) Grade 4	Total strategy (strategy + attribution training) vs. strategy training vs. attribution training Individual instruction; Duration: 3 sessions for 30-35 min Setting: NR Text: Narrative	Far transfer measures: Reading Concepts Inventory Error correction and detection task	Far transfer was measured by performance on untaught skills	Maintenance was measured through free and probed recall 3 days after training.	Maintenance: Free and probed recall Skilled = less skilled Strategy trained > Attribution trained Total training = attribution training Far transfer measures: Reading Concepts Inventory Skilled = less skilled (all conditions)	NR NR NR NR
Hagaman, & Reid (2008)	n = 3 (struggling readers) Grade 6	Multiple baseline Self-regulated strategy development (SRSD) + RAP Individual instruction; Setting: Quiet hallway; Duration: NR Text: Expository	Near transfer measure: Percentage of text recalled Far transfer measure: Short answer comprehension questions	Near transfer was measured by performance on taught skill (paraphrasing) to different text. Far transfer was measured by performance on untaught skill (answering implicit/explicit questions) to unfamiliar text.	Maintenance was measured 2 weeks after independent practice	Near transfer measure: All participants improved from baseline to independent practice. Maintenance: Near transfer measure: 2 out of 3 students maintained effects over time. Far transfer measure: All participants improved from baseline to independent practice Distal measure: All participants maintained effects over time.	

Citation	Sample Description	Intervention Description	Dependent Measure	Definition of Transfer	Maintenance	Results	ES
Mason (2004)	$n = 32$ ($n =$ 27struggling readers; $n=$ 5 students with disabilities) Grade 5	TWA + SRSD vs. ReQuest (RQ) Small group instruction ($n = 4$); Setting: NR; Duration: 11-15 sessions for 20 min; Text: Expository	Far transfer measure: For RQ Main idea Summary Oral retell quality Oral retell information units Oral main idea units Far transfer measure for both groups: Written retell quality Written retell information units Written retell main ideas Maintenance: Main idea Summary Oral retell quality Oral retell information units Oral retell main idea units	Far transfer was measured on performance a taught skill to a different task (i.e. written format). Far transfer was measured by performance on an untaught skill	Maintenance was measured 3 weeks after training	Far transfer measures: RQ Main idea TWA+ SRSD >RQ Summary TWA+ SRSD >RQ Oral retell quality TWA+ SRSD >RQ Oral retell units TWA+ SRSD >RQ Oral retell main idea units TWA+ SRSD >RQ Far transfer measures both groups Written retell quality RQ = TWA + SRSD Written retell units RQ = TWA + SRSD Written retell main idea TWA + SRSD = RQ Maintenance: Main idea TWA+ SRSD >RQ Summary TWA+ SRSD >RQ	2.10 0.50 1.16 0.83 0.76 0.17 *ns* 0.03 *ns* 0.09 *ns* 1.19 0.46 0.43

						Oral retell quality TWA+ SRSD >RQ	0.58
						Oral retell units TWA+ SRSD >RQ	0.60
						Oral retell main idea units TWA+ SRSD >RQ	

Citation	Sample Description	Intervention Description	Dependent Measure	Definition of Transfer	Maintenance	Results	ES
Stevens (1988)	$n = 47$ struggling readers Grades 6-11	Strategy instruction (ST) vs. classification instruction (CT) vs. combined strategic + classifications instruction (combined) vs. practice only (control) Individual computer assisted instruction; Setting: Computer lab; Duration: Time varied as lessons were self-paced; Text: Expository	Near transfer measure: Main idea identification on same subject matter Far transfer measures using generalization text: Main idea identification Inference questions Far transfer measure using training text : Inference questions	Near transfer was measured by performance on taught skills on same subject matter used in training Far transfer was measured by performance on taught skills to different subject matter Far transfer was also measured an untaught skill (i.e. inference questions) on same and different subject matter	No	Near transfer measures: Main Idea Combined > ST — 0.64 Combined > CT — 0.87 Combined > control — 1.93 ST > Control — 1.50 CT > Control — 0.72 ST > CT — 0.45 Far transfer measures on generalization text : Main idea: ST > Combined — 0.13 Combined > CT — 0.86 Combined > Control — 1.37 ST > Control — 1.41 CT > Control — 0.57 ST > CT — 0.94 Inference questions: ST > Combined — 0.28 CT > Combined — 0.31 Combined > Control — 0.47 ST > Control — 0.93	

						Results	ES
						CT > Control	0.81
						ST > CT	0.08
						Far transfer measures on training text: Inference questions:	
						Combined > ST	0.69
						Combined > CT	1.27
						Combined > control	0.93
						Control > ST	0.05
						Control > CT	0.45
						ST > CT	0.23

Citation	Sample Description	Intervention Description	Dependent Measure	Definition of Transfer	Maintenance	Results	ES
Carr, & Borkowski (1989)	$n = 50$ struggling readers ($n = 19$ Strategy + attribution; $n = 20$ Strategy training; $n = 11$ control) Grades 3, 4, and 5	Strategy + Attribution (S+ A) vs. Strategy only (S) vs. Control Small group instruction ($n = 5\text{-}7$) Duration: 30 min x 2 per week for 3 weeks Setting: NR Text: Narrative	Far transfer measures: Recall Strategy use Attributional beliefs questionnaire Reading Awareness 4th quarter reading grade Self-esteem questionnaire Maintenance Reading grade	Far Transfer was measured by recall performance on an untaught skill (i.e. recall) Far transfer was also measured by standardized tests such as the Attributional Belief Questionnaire, Reading awareness scale, & self-	Maintenance was measured one year following posttest	Far transfer measures: Recall: S +A > S	0.57
						S+A > Control	0.93
						S > Control	0.65
							ns
						Strategy Use:	
						S+A > S	
						S+A > Control	0.80
						Control > S	0.67
							0.10
						Attributional Beliefs	
						S+A > S	
						S+A > Control	0.62
						S = Control	0.64
							0.00
						Reading Awareness	
						S+A > S	
						S+A > Control	0.15

	esteem questionnaire	S = Control	*ns*
			1.03
		Reading Grade	1.66
		S+A > S	
		S+A > Control	
		S > Control	0.60
			0.87
		Maintenance:	0.37*ns*
		Reading Grade	
		S+A > S	
		S+A > Control	
		S > Control	0.68
			1.16
			0.57

Note. LD = learning disabilities; ES = effect size; NR = not reported; *ns* = nonsignificant.

<center>**Chapter III**</center>

<center>**Method**</center>

This study was conducted in two phases. The primary purpose of Phase 1 was to collect pilot data on the appropriateness and feasibility of the experimenter-developed measures to be used in Phase 2, the experimental field trial. The following data were collected on the measures: (a) clarity of the testing directions, (b) appropriate number of test items, (c) total test time for each experimenter-developed measure, and (d) examination of floor and ceiling effects of each measure. The primary purpose of Phase 2 was to examine the effects of explicitly teaching students to transfer PALS.

Participants and Setting

Participants in Phase 1 were fourth graders ($N = 90$) from three classrooms in a public school in Minneapolis, MN. The school consisted of 9.1% Native American, 28.4% African American, 2.4% Asian American, 44.7% Hispanic American, and 15.3% White students. All participants who had parental consent and participant assent were included in the pilot study.

Participants for Phase 2 were third and fourth graders ($N = 62$) from a large urban school district and a suburban school district in Minnesota. Two classes of third-grade participants were in South Washington County Public Schools ($n = 45$) and one class of fourth-grade participants was in Minneapolis Public Schools ($n = 17$). Within each class, participants were matched on their oral reading scores and assigned randomly to either experimental (PALS + transfer training; $n = 31$) or control (PALS; $n = 31$) conditions. Of the 62 participants, two moved to different schools (after 12 and 18 intervention sessions,

50

respectively), yielding a final sample size of 60 participants, consisting of $n = 29$

participants in the experimental condition and $n = 31$ participants in the control condition.

Table 2 presents specific demographic information on participant characteristics by study

group.

Table 2. *Demographic Characteristics of Participants by Study Group*

Variable	PALS		PALS + Transfer Training			
	n = 31		n = 29			
	n	(%)	*n*	%	χ^2	*p*
Age in years					2.06	.55
9 years	16	51.6	14	45.2		
10 years	14	45.2	14	45.2		
11 years	1	3.2	0	0		
12 years	0	0	1	3.2		
Grade					.02	.88
Grade 3	23	74.2	22	71.0		
Grade 4	8	25.8	7	22.6		
Sex					5.34	.02*
Male	9	29	17	58		
Female	22	71	12	41.9		
Race						
African American	1	3.2	3	9.7	3.85	.42
Caucasian	17	54.8	21	67.7		
Hispanic	10	32.3	6	19.4		
Asian/Indian	2	6.5	0	0		
Other	1	3.2	1	3.2		
Free or Reduced Lunch					.02	.87
No free-reduced lunch	23	74.2	21	67.7		
Receives free-reduced lunch	8	25.8	10	32.3		
Special Education					2.39	.30
No IEP	30	96.8	26	83.9		
Has IEP	1	3.2	4	12.9		
In process	0	0	1	3.2		
ELL Status						
Non-ELL	25	80.6	24	77.4	0.26	.60
ELL	6	19.4	7	22.6		
Reading Help					4.85	.18
No assistance	20	64.5	22	71		
Resource teacher	1	3.2	3	10.3		
ELL teacher	6	19.4	4	13.8		
Other	4	12.9	0	0		

Note. $p < .05*$

Measures

Participants in Phase 1 and Phase 2 were administered proximal and distal

measures. Proximal measures were defined as measures that were closely aligned to the

intervention. Distal measures were defined as measures that assessed general reading

competency of skills such as reading/decoding and comprehension of text that were not

closely aligned to the intervention. Table 3 outlines the proximal and distal measures

administered in Phase 1 and Phase 2 of the study.

Table 3. *Data Collection Schedule*

Measures	Phase 1	Phase 2		
		Pretest	Posttest	Maintenance
Proximal Measures	Narrative Selection Narrative Production Expository Selection Expository Production	Narrative Expository	Narrative Expository	Narrative Expository
Distal Measures	Oral Reading CRAB	Oral Reading Maze CRAB MAP	Oral Reading Maze CRAB MAP MCA	Oral Reading Maze

Proximal measures. The proximal measures administered in Phase 1 included:

(a) main idea identification of narrative text using multiple choice format, (b) main idea

identification of narrative text using production format, (c) main idea identification of

informational text using multiple choice format, and (d) main idea identification of

informational text using production format. Based on the trial of the proximal measures

53

in Phase 1 (described below), one main idea identification measure of narrative text and one main idea identification measure of informational text was administered in Phase 2.

Main idea identification of narrative text and informational text. The main idea identification measures were experimenter-developed. For Phase 1, six narrative and six informational text forms were developed to evaluate main idea identification. Of the six measures of narrative and informational text that were developed, participants in each class were administered two narrative and two informational measures consisting of a production and selection response format. Table 4 provides the mean of the readability estimates of the measures administered in Phase 1.

Table 4. *Mean Readability Estimate of the Measures Administered in Phase 1*

| Readability | Narrative | | Expository | |
| | Selection | Production | Selection | Production |
Index	M	M	M	M
Spache	3.3	3.2	3.5	3.5
Dale-Chall	3.0	2.3	3.0	2.6
Flesch-Kincaid	2.4	3.2	3.3	4.3

For the production format of each type of text genre, the following questions were included on each test: (a) What is the main idea of this paragraph?; (b) What is the most important idea of this paragraph?; (c) What is the gist of this paragraph?; and (d) What is the summary statement for this paragraph? The first two questions were repeated three times in each paragraph, and the last two questions were repeated twice.

For the selection format main idea identification measures, the examiner read the question and answer choices. Students were given 30 s after all the answer choices were read to answer the question. The selection question items consisted of four multiple

choice responses. Each item stated the main idea of the paragraph in 10 words or less. For the production format the student was given 1 min 30 s to write their response to the question after the examiner read the question aloud. No help was given to students in interpreting any of the questions; instead students were asked to *"Try your best."* Refer to Appendix A for sample measures and Appendix B for test administration directions.

Based on data collected in Phase 1, one narrative and one information text passage was selected to use as dependent measures at pretest, posttest and maintenance in Phase 2. The measures were selected based on the text length, readability formulae, student interest, and testing time. During the administration of the measure in Phase 1, it was observed that administering four measures (main idea identification of narrative and informational text requiring selection and production responses), resulted in student fatigue and consequently guessing on test items. Thus, for Phase 2, instead of having 10 selection items and 10 production items for narrative and information text, the final main idea identification measure had six selection items, and four production items of each type of text genre.

The final main idea identification of narrative text measure consisted of a 595-word passage with a total of 10 paragraphs, created from the James Town Publishing Reading Series. The readability estimate for the text was 2.5 for the Flesch-Kincaid readability level, 3.4 for the Spache formula, and 3.0 for the Dale-Chall formula. Cronbach's alpha was calculated to estimate internal consistency reliability of the narrative measure. At pretest, on the narrative measure, $\alpha = .54$, at posttest, $\alpha = .59$, and at maintenance $\alpha = .43$. Refer to Appendix G for Cronbach's alpha reported with

reliability analysis. The final main idea identification of information text measure consisted of 663 word passage with a total of 10 paragraphs, created from the Scott Foresman Basal Reading Series (Pearson Education Inc., 2008). The readability estimate for the text ranged from 4.3 for the Flesch-Kincaid readability level, 3.81 for the Spache formula, and 3.0 for the Dale-Chall formula. At pretest, on the informational measure, α = -.13, at posttest, α = .48, and at maintenance α = .26. Refer to Appendix G for Cronbach's alpha reported with reliability analysis.

For the narrative and informational text selection format items, each response received a score of one for a correct response or zero for incorrect response. For the narrative and informational text production format items, each response was scored on a rubric for two different components of main idea that is taught in PALS and the PALS plus transfer training condition. Refer to Appendix C for scoring rubric. Each response could yield a total of two points; one point for the correct who/what (most important characters in the paragraph), and one point for the correct main idea. Partial credit was also given for a partially correct who/what, or a partially correct main idea. Each main idea identification measure had a total score of 14 points.

Distal measures. The distal measures administered in both phases included: (a) a 1-min oral reading measure, and (b) the Comprehensive Reading Assessment Battery (CRAB, L.S. Fuchs, & Hamlett, 1989). For Phase 2, CBM maze (Fuchs, & Fuchs, 1992), the Northwest Evaluation Association Measures of Academic Progress (NWEA/MAP; 2011), and Minnesota Comprehensive Assessments (MCA-II; 2011) were also included as distal measures.

Oral reading measure. The oral reading measure was individually administered and consisted of a 1-min reading sample from the CRAB reading passage. The passage consisted of a 400-word traditional folktale written by Jenkins, Heliotis, Haynes, and Beck (1986) at approximately a second-to-third grade level using Fry's readability formula (as cited in Fuchs, Fuchs, Mathes, & Simmons, 1997). As the student read, omissions, insertions, mispronunciations, and substitutions were recorded as errors. If the student perseverated on a word for more than 3 s, no help was provided, the student was asked to move on, and the word was counted as an error. Self-corrections and errors caused by speech-related problems were not considered errors. Errors made by the student while reading were not corrected, and no decoding assistance was given. The total score was the number of words read correctly in 1 min. Data for the one-min oral reading measure were scored by the examiner, and double checked by either the researchers or other data scorers. Test-retest reliability has been reported to range from $r = .93$ to .96 (L.S. Fuchs, Deno, & Marston, 1983).The correlation of the CBM oral reading measure with the Stanford Achievement Reading comprehension subtest has been reported as $r = .91$ (see Hosp, & Fuchs, 2005). Refer to Appendix A for sample measure.

Comprehensive Reading Assessment Battery (CRAB). Following the one-minute oral reading sample, the student continued to read the rest of the CRAB reading passage for 2 min, for a total of 3 min. There was no disruption of the reading process between the 1- and 3-min marks. After 3 min, the examiner asked the student 10 comprehension questions and recorded the student's response to each question verbatim. If the student

responded "I don't know" five consecutive times, the test was terminated. For the number of questions answered correctly, test-retest reliability has been reported as $r = .92$, and the correlation of the CRAB with the Stanford Achievement Reading Comprehension subtest has been reported as $r = .82$ (see Fuchs, Fuchs, & Kazdin, 1989). Cronbach's alpha on the CRAB measure at pretest was $\alpha = .65$ and at posttest $\alpha = .68$. Refer to Appendix A for the sample measure, Appendix B for administration directions, and Appendix G for reliability analysis.

Scoring of the comprehensive reading assessment battery was based on a set of answers by the developers of the test (L.S. Fuchs, & Hamlett, 1989). Responses were scored as 1 for a correct answer or 0 for an incorrect answer, for a total of 10 points. If the correct answer as described in the rubric was mentioned, the response was given full credit. If the response was incorrect or included information that distorted the answer, no credit was given for that response. No partial credit was awarded. Two data scorers coded responses. Inter-rater agreement ranged from 98.2% to 99.9% for all data scorers. For specifics of the rubric used to score each answer, refer to Appendix C.

CBM maze. The CBM maze was a group-administered measure, and participants were administered two equivalent forms of the measure. Each maze passage had an average of 680 words. The first sentence of each passage was unchanged; following which every seventh word was deleted and replaced by three choices with one possible correct choice. Participants were required to circle the best answer, and had to circle as many maze choices as they could get through in 2 min 30 s. After 30 s had passed, the examiner gave the students the following prompt, *"Remember, circle a word even if you*

58

are not sure of the answer.'' The total score was the number of correct choices recorded, which was obtained by subtracting the number of correct maze choices from the incorrect maze choices. The average correct choices across the two maze passages were used in the analysis. The maze passages and procedures were the same as those used in previous PALS research. Alternate-form reliability coefficients have been reported to range from $r = .69$ to .91, the reliability of the estimated growth rates between the maze and the California Achievement Test is reported as $r = .66$ (Shin, Deno, & Espin, 2000), and the correlation between the number of words read and the correct maze choices has ranged between $r = .77$ to .86 (Fuchs & Fuchs, 1992). Refer to Appendix A for measures and Appendix B for test administration directions.

Northwest Evaluation Association Measures of Academic Progress (NWEA/MAP; 2011). The NWEA/MAP is a standardized achievement test in Reading, Language Usage, Mathematics, and Science. It is a nationally-normed test which allows for classroom and district comparisons of performance across the country. The reading test of the NWEA/MAP is an untimed computer-based adaptive assessment. The first test item is at grade level and depending on the accuracy of the answer the computer selects either more difficult or easy items. The test questions are multiple-choice and focus on word meaning and vocabulary expansion, literal comprehension, interpretive comprehension, and evaluative comprehension of narrative and informational text. The score is reported in Rauch units called a RIT score. The concurrent validity coefficient with the Stanford Achievement Test has been reported as $r = .87$ and test-retest reliability was $r = .95$ (NWEA Technical Manual, 2003).

Minnesota Comprehensive Assessments (MCA-II). The Minnesota

Comprehensive Assessments (MCA-II) are standardized tests in reading, mathematics,

and science that are administered annually to students in Minnesota. The state uses the

MCAs as an accountability measure to determine whether schools are making adequate

yearly progress (AYP) towards state academic standards. For the reading portion of the

test, only the Reading and Literature strand which includes vocabulary expansion,

comprehension, and literature is assessed. Test questions require students to identify

antonyms, synonyms, and multiple meanings of words, main ideas and supporting details

of passages, answer literal, inferential, evaluative and interpretive comprehension

questions, make predictions and draw conclusions based on information available in the

text. Specific technical data on the measure could not be located.

Dependent Variables

The dependent variables in the study included the following: (a) total correct main

ideas selected and produced on the main idea identification of narrative text; (b) total

correct main ideas selected and produced on the main idea identification of informational

text; (c) words read correctly (WRC) on the oral reading measure; (d) total number of

CRAB questions correctly answered; (e)correct maze choices; (f) MCA score; and (g)

MAP RIT score.

Independent Variables

The independent variable was the type of reading instruction participants

received. The two treatment conditions were PALS and PALS plus transfer training.

PALS was the control condition, and PALS plus transfer training was the experimental

condition. Below is a description of instruction prior to the commencement of the study, including a description of instruction for the control and experimental conditions.

PALS is a supplementary peer-tutoring program developed by researchers at Vanderbilt University. PALS for Grades 2-6 focuses on reading fluency and comprehension (Mathes, Fuchs, Fuchs, Henley, & Sanders, 1994; Fuchs et al., 1997) through three main activities: Partner Reading with Retell (reading text to partner and retelling events in sequence); Paragraph Shrinking (identifying the main idea); and Prediction Relay (making predictions about what will happen next). In PALS, a higher-performing reader is paired with a lower-performing reader, and students in each pair take on the role of being the Coach (the tutor) and the Reader (the student) for each PALS activity. The roles are reciprocal, and each student takes turns being the Reader and Coach for each activity. Pairs change after every four weeks.

Prior to beginning the experimental part of the study, all students learned to implement PALS activities and practiced using the strategy with their peers. Teachers used scripted lessons to teach students each PALS activity. During the training sessions, students learned to implement each PALS activity with their partner and received guided practice and feedback from the teacher. Teachers reported implementing, on average, 12 - 15 PALS sessions for 45 min each. Fidelity of implementation data were collected prior to implementation of the experimental condition to ensure that participants had mastered the PALS procedures as prescribed by the PALS developers. Refer to fidelity of implementation section for specifics on the fidelity checklist including Table 5 for specific information on teacher and student implementation of each PALS activity prior

61

to being assigned randomly to continue with PALS or receive PALS plus transfer training.

For the study, Prediction Relay, one of the PALS activities, was dropped and replaced by Paragraph Shrinking Writing. Prediction Relay was dropped because the research questions focused on transfer of skills learned during Paragraph Shrinking, and Partner Reading and Paragraph Shrinking have been identified as core elements of PALS. Paragraph Shrinking Writing was included as the additional component, because the proximal dependent measures required participants to write their response to the question. Hence, participants in both conditions received practice in this skill.

Instruction for the control condition. Each PALS session was conducted by the classroom teacher 3 times a week, 45 min per session, for a total of 30 sessions with a group of 12- 15 students.   Intervention materials were the same as those described in the PALS Grades 2-6 Reading Manual developed by the researchers at Vanderbilt University (Fuchs, Fuchs, Simmons, & Mathes; 2008). For each PALS activity, pairs read authentic texts such as chapter books and informational books at the lower readers' instructional level. The first activity is Partner Reading with Retell. During Partner Reading, the higher performing reader reads first for 5 min while the lower reader takes on the role of the coach and monitors the reading process and fixes mistakes. At the end of 5 min, the lower reader rereads the same text for 5 min; and the higher reader is the Coach who monitors the reading process, and provides feedback on reading errors. When the Reader makes a mistake the Coach points to the word and says "Check it." If the Reader does not know the word, the Coach says, "That word is _____. What word?" The Reader then repeats

the correct word. Next, the Coach tells the Reader, "Good. Reread the sentence." The Reader rereads the sentence and continues to read. The Coach also marks one point for each sentence the Reader reads.

Following Partner Reading, the higher performing reader (the Coach) asks the lower performing reader (the Reader) to retell what he or she just read. The Coach asks the Reader the following question, "What happened first?" The Reader answers the questions. Then the Coach asks the Reader, "What happened next?" and continues to ask "What happened next?" until the Reader retells everything he or she read, or the timer rings after 2 min. The Coach then gives the Reader 10 points for completing Retell.

The second PALS activity is Paragraph Shrinking, and focuses on comprehension skills through main idea identification. For the first 5 min, the higher performing reader (the Reader) reads a paragraph and the lower performing reader (the Coach) monitors the reading process and uses the correction procedure for decoding errors described in the previous paragraph. After reading a paragraph, the Coach asks the Reader three Paragraph Shrinking questions. The three Paragraph Shrinking questions are: (a) *"Name the most important who or what; (b) Tell the most important thing about the who or what; and (c) Say the Main Idea in 10 words or less."* If the Reader makes a mistake on either of the first two questions, the Coach provides feedback using a 3-step procedure. The Coach first says, "Check it" in response to the incorrect response. The Reader corrects his or her answer. If the Reader still gives an incorrect response, the Coach says, "Let me give you a hint" and provides an appropriate hint. For example, the Coach may tell the Reader, "You have too many whos or whats in your answer." If the Reader does not give

the correct answer the second time, the Coach provides the answer. If the Reader makes a mistake on the third question, and does not say the main idea in 10 words or less, the Coach tells the Reader to "Shrink it." Roles are switched after 5 min, and the lower performing reader becomes the Reader and the higher performing reader becomes the Coach. Subsequently, whoever is the Reader always reads new text, and shrinks each paragraph into a main idea statement.

The third PALS activity is Paragraph Shrinking Writing. The activity is similar to Paragraph Shrinking. The higher performing reader is the Reader, who reads, shrinks, and writes the main idea for 5 min. After answering the three Paragraph Shrinking questions mentioned in the previous paragraph, the Coach asks the Reader to "Write the main idea in 10 words or less." When the Reader writes out the main idea, the Coach can provide the Reader with help in recalling his or her main idea statement. The correction procedures are similar to those mentioned in Partner Reading and Paragraph Shrinking. Pairs switch roles after 5 min, and the roles are reversed.

Instruction for the experimental condition. PALS plus transfer training was defined as explicitly teaching participants to transfer the Paragraph Shrinking strategy to different types of text (for e.g., narrative and informational text), in different settings (e.g., at school and at home), and when reading specific word phrases that imply main idea identification (e.g., most important idea, summary statement, and gist). The intervention sessions were conducted by the researcher three times a week, 45 min per session. Transfer training instruction comprised training lessons and practice lessons. Materials were developed by the researcher, and included scripted lessons, sample

64

training passages, student prompt cards, student activity-sheets, goal setting sheets, and a star chart. Sample training passages were taken from passages used by McMaster et al. (2012) and from a short story book (Kwapong, 2007).

There were 9 training lessons and 21 practice lessons, for a total of 30 sessions. Training lessons were interspersed with practice lessons to ensure mastery of the content. Refer to Appendix D for details on the sequence of transfer training instructional activities and instructional scripts used. Students in the transfer training condition practiced all of the PALS activities completed by students in the control condition, except during training lesson days. During practice lessons, transfer training students practiced Partner Reading with Retell, Paragraph Shrinking, and Paragraph Shrinking Writing. The practice time for each PALS activity was exactly the same as for those in the control condition.

PALS plus transfer training instruction occurred in a group of approximately 12 students. Similar to the control condition, students worked in pairs and each pair consisted of a higher and lower performing reader. Every four weeks, pairs were changed. All lessons were scripted and followed a direct instruction format that included the model, lead, test paradigm (Carnine, Silbert, Kame'enui, & Tarver, 2009). Each lesson began with an explicitly stated lesson objective, the rationale for learning main idea identification, teacher modeling using think-aloud procedures, guided practice, independent practice, and ending with a review of key elements learned. During guided and independent practice, student performance was monitored and corrective feedback

was provided. Following is a brief description of the transfer training instructional program. Scripts of the lessons are available in Appendix D.

The first three lessons were review lessons to ensure that students recalled how to carry out the PALS activities following Winter break. Lesson 1 included a review of Partner Reading with Retell and correction procedures during Partner Reading. Lesson 2 involved a review of Paragraph Shrinking and the correction procedures outlined under, "Instructional procedures for the control condition." Lesson 3 reviewed how to shrink short paragraphs into main idea statements. Lesson 4 taught students to produce the main idea of a paragraph where the main idea was not explicitly stated. How to generate implicit main idea statements was modeled using think-aloud procedures, followed by guided practice and independent practice. Lesson 5 taught students to use the Paragraph Shrinking strategy with different types of reading materials, such as narrative text, informational text, chapter books, picture books, magazines, newspapers, and graphic novels. Students completed a worksheet identifying different types of reading materials and two examples of each type of reading material they could use to implement the Paragraph Shrinking strategy. Finally, each pair was given a choice of different reading materials, and they practiced Paragraph Shrinking with reading materials of their choice. Refer to Appendix E for student materials used during instruction.

Lesson 6 focused on learning when and where Paragraph Shrinking could be used. Students were taught that they could use Paragraph Shrinking when: (a) reading a paragraph, (b) answering comprehension questions, (c) reading a social studies or science topic, (d) reading a book independently, and (e) reading a newspaper or magazine.

Students also learned to identify settings where they could use the Paragraph Shrinking strategy, such as during reading class, social studies, or science class, during silent reading time, and at home. Next, students were taught to set goals to use Paragraph Shrinking in different settings, and with different reading materials. Every time the student met his or her goal of using the strategy independently, the student colored in a star on a star chart. The star chart had seven columns, one column for each day of the week. There were a total of 10 stars in each column (see Appendix E for sample Star Chart). The student would receive five points per star colored on their PALS point sheet. After Lesson 6 training was completed, students always ended the session by telling their partner whether they met their previous goal, marked points for meeting goals, and set a new goal.

Lesson 7 taught students to identify different words/phrases that imply main idea identification, and students were taught to use the strategy when they came across those specific words. The specific words/ phrases learned were: (a) main idea, (b) most important idea, (c) gist, and (d) summary statement. Students continued to work in pairs for this activity. The Coach would ask the Reader one of four questions based on the different words learned, such as, "What is the main idea of this paragraph?; What is the most important idea of this paragraph?; What is the gist of this paragraph?; and, What is the summary statement for this paragraph?" The Reader would then answer the question using a prompt card which reminded the reader of each step. Each step involved mentioning the three Paragraph Shrinking questions that were described in the "Instructional procedures for the control condition."

There were two major differences between the steps used in the control condition and the transfer training condition. The first difference was that the Coach asked the Reader one of the questions mentioned in previous paragraph instead of the three Paragraph Shrinking questions. For example, the Coach said, "What is the main idea of the paragraph?" instead of asking the Reader one of the three Paragraph Shrinking questions. The second difference is that the Reader answered the Coach by mentioning each of the Paragraph Shrinking questions and stopping after each question to give the Coach the answer. For example, the Reader said, "To answer the question, 'What is the main idea of this paragraph?' I can use the Paragraph Shrinking strategy. First, I will name the most important who or what." Next, the Reader provided the answer and proceeded to the next step until all the steps were completed (for complete steps see prompt card in Appendix E). For this activity, both the Reader and the Coach had a prompt card. The Reader used an A4-sized Paragraph Shrinking prompt card, listing the five steps outlined in Lesson 7, and the Coach had four question prompt cards (see Appendix E), one for each question (i.e., main idea, most important idea, gist, and summary statement). The question prompt cards consisted of four 2-by-8- inch cards on a binder ring. Each question was written on one prompt card. When the Reader finished answering one question asked by the Coach, the Reader would read another paragraph. Next, the Coach would ask the Reader the second question on the question prompt card. Pairs took turns being the Reader and the Coach. Each student read and shrank paragraphs for 5 min each before switching roles.

Lesson 8 focused on teaching students to self-monitor when using the Paragraph Shrinking strategy. The procedures were similar to those taught in Lesson 7, but now after reading a paragraph each student asked himself or herself one of the four questions (i.e., main idea, most important idea, gist, and summary statement) using the question prompt card mentioned in Lesson 7. Next, the Reader answered the question using the self-monitoring prompt card provided (see Appendix E for complete steps). For the self-monitoring procedure, the student stopped after each step and answered "Yes" or "No" to whether the step was completed correctly. There were two main differences between Lesson 7 and Lesson 8. First, for paragraph shrinking, each student worked alone. Second, each student monitored himself or herself during Paragraph Shrinking. Each student had his or her own reading material, self-monitoring prompt card, and question prompt cards on a binder ring.

Lesson 9 involved fading the use of the self-monitoring prompt card during Paragraph Shrinking. Students continued to work on their own and monitor themselves during the activity, but the prompts on the card were shorter for each step. Specific details of each step are available in Appendix E.

Procedures

Training of data collectors. Data were collected by the researcher, two clinical staff with Doctorate degrees in Special Education, three Doctoral students in Special Education, and two Masters students. All data collectors had experience teaching and working with students. Prior to data collection, each data collector was provided training by the researcher on the administration of each measure and interrater agreement was

collected for each data collector. Interrater agreement was computed by dividing the number of agreements by agreements plus disagreements multiplied by 100. Interrater agreements ranged from 98.4 % to 99.6%.

Data collection procedures.   Data collection for Phase 1 was conducted in the month of October. For Phase 2, data collection for pretest, posttest, and maintenance was conducted in the months of December, April, and May respectively. For Phase 1 and Phase 2, testing procedures for the individually administered measures took approximately 10 min and involved the administration of a one-min and three-min reading sample, followed by the administration of the CRAB comprehension questions. All the main idea identification measures were group-administered. The testing administration procedures were the same across conditions and across time points. There were three testing sessions for each data collection time point consisting of two group testing formats and one individual testing format. Each group testing format started with the administration of one maze passage and one main idea identification measure. The order of administration of the main idea identification measures was counterbalanced across classrooms.

Instructional procedures. Participants in the control condition received instruction from their classroom teacher while participants in the experimental condition received instruction from the researcher in a designated space with desks and a wooden partition in the hallway in one school, and in a designated classroom in another school. The researcher (a doctoral student) implemented instruction in the experimental condition, while three teachers (two females, one male) implemented instruction in the

control condition. The interventionists had either a Masters' or a Bachelors degree, and their teaching experience ranged from 15 years to 45 years (M = 30 years). Teachers in the control condition had two years experience implementing Peer Assisted Learning Instruction (PALS) – the control intervention. The researcher had seven years experience supporting teacher implementation of PALS and conducting PALS professional development in reading.

   Scoring procedures. Measures were scored by the researcher and a group of doctoral and Masters students. Prior to data scoring all identifying information was redacted and scorers were blinded to the condition of the students whose protocols they scored. Each measure was scored by group of three people. All data scorers completed 3 hours of training on how to score the assigned measure. During the training session, the researcher provided the scoring rubric for each question and practiced scoring a common group of 10 tests. Next, data scorers completed another common group of 10 tests to compute inter-rater agreement. Once data scorers were at 85% agreement, each data scorer continued to score different tests. All data scorers met once a week during the scoring process to discuss scoring questions. The researcher rescored 25% of each group of tests scored by the data scorers to ensure that inter-rater agreement was at or above 85% agreement.

   Scoring procedures for main idea identification of narrative and informational text. Answer keys for the main idea measures were created by the researcher. Prior to scoring, one Associate Professor, five Doctoral students, and one Masters student provided answers to the selection and production items for both the narrative and

informational text; in order to establish consensus on the main idea for each paragraph. Scoring for the main idea measure of narrative text was completed by the researcher, and one Doctoral and Masters student. Scoring for the main idea of informational text was completed by the researcher and four Doctoral students. Interrater agreement for each main idea identification ranged from 98.6% to 99.2%.

PALS review session. All participating teachers had 1-2 years of experience implementing PALS. In early October, the researcher met with participating teachers for a total of two sessions of 45 min each. During these sessions, an overview of the study purpose was given, and a review of each of the PALS activities was conducted. Teachers were also given opportunities to practice each of the PALS activities taking turns to be the reader and the coach. Implementation issues, such as how to pair students appropriately, motivational issues, how to organize the class for PALS, and how to implement PALS with fidelity were also discussed.

Treatment fidelity

Checklists were developed to assess treatment fidelity in PALS and PALS plus transfer training. Each checklist consisted of items based on specific instructor and participant behaviors. An item on the checklist was scored as "+" if the behavior was observed 80% of the time, "-" if the behavior was not observed 80% of the time, and "NA" if the behavior was not observed. Prior to study participation, treatment fidelity observations were conducted to ensure that students had mastered the PALS activities. Refer to Table 5 for specific information on fidelity of treatment by class. Treatment fidelity observations during the study were conducted by a University Professor and a

Doctoral student in Special Education. Prior to treatment fidelity observations, a 20-min

instructional session on completing the check list was conducted.

Table 5. *Fidelity of implementation prior to experimental part of the study*

Component	Percent Accuracy		
	Class 1	Class 2	Class 3
General Teacher Implementation			
Organization and set-up	100	100	100
Monitoring and motivation	100	100	100
Partner Reading	100	100	100
Partner Reading monitoring and motivation	100	100	100
Retell	100	100	100
Retell monitoring and motivation	100	100	100
Paragraph Shrinking	100	100	100
Paragraph Shrinking monitoring and motivation	100	100	100
Paragraph Shrinking writing	100	100	100
Paragraph Shrinking writing monitoring and motivation	100	100	100
Student Implementation			
Partner Reading general student implementation	100	100	100
Partner Reading Pairs one and two	100	92.68	95.74
Retell general student implementation	100	100	100
Retell Pair two	33.33	100	100
Paragraph Shrinking general student implementation	100	100	100
Paragraph Shrinking pairs three and four	98.68	88.76	64.47
Paragraph Shrinking writing general student implementation	100	100	100
Paragraph Shrinking writing pair five and six	91.02	93.15	82.85

Note. Percent accuracy = (total number of positive ratings/ total number of positive and negative ratings) x 100

Treatment fidelity of PALS. Treatment fidelity was assessed using the *Reading*

PALS Implementation checklist which was used as part of a scaling-up IES study

examining the effects of teacher implementation of PALS on student achievement (Fuchs

et al., 2010).   The fidelity observation checklist consisted of a detailed checklist of teacher and student behaviors for each PALS activity. The first section of the checklist consisted of items related to general teacher implementation of PALS that included items relating to classroom organization and set-up for PALS, and monitoring and motivating procedures used by the during the beginning and end of PALS. The second section of the checklist consisted of items related to teacher implementation, and student implementation of each specific PALS activity.

For each PALS activity, items related to teacher implementation consisted of: implementation time for each PALS activity; teacher monitoring of student implementation; and positive reinforcement provided by the teacher to specific pairs or the whole group. Items related to specific student implementation included: implementation of each activity by the Coach and the Reader; the use of PALS correction procedures when appropriate; marking points; and on-task and co-operative behavior of the Reader and the Coach. For each PALS activity, two pairs were observed implementing the activity. Percentage accuracy was calculated for teacher implementation and student implementation for each PALS activity. Percent accuracy consisted of total number of positive ratings, divided by the total number of positive and negative ratings, multiplied by 100. Refer to Table 6 for teacher and student implementation information by class.

Table 6. *Fidelity of implementation of PALS condition by class*

Component	Percent Accuracy		
	Class 1	Class 2	Class 3
General Teacher Implementation			
Organization and set-up	100	100	100
Monitoring and motivation	100	100	100
Partner Reading	100	100	100
Partner Reading monitoring and motivation	50	100	100
Retell	100	100	100
Retell monitoring and motivation	100	100	100
Paragraph Shrinking	100	100	100
Paragraph Shrinking monitoring and motivation	100	100	100
Paragraph Shrinking writing	0	100	100
Paragraph Shrinking writing monitoring and motivation	100	100	100
Student Implementation			
Partner Reading general student implementation	100	100	100
Partner Reading Pairs one and two	97.67	95.45	87.17
Retell general student implementation	100	100	100
Retell Pair two	100	100	100
Paragraph Shrinking general student implementation	100	100	100
Paragraph Shrinking pairs three and four	100	90.27	100
Paragraph Shrinking writing general student implementation	100	100	100
Paragraph Shrinking writing pair five and six	88.09	91.25	94.9

Note. Percent accuracy = (total number of positive ratings/ total number of positive and negative ratings) x 100

Treatment fidelity of PALS plus transfer training. Treatment fidelity for PALS

plus transfer training was conducted by an Associate Professor. Fidelity of student

implementation was observed and consisted of a checklist similar to the checklist used in

75

the PALS condition. Items for Partner Reading, Retell, and Paragraph Shrinking Writing

were the same as the items used in the control condition. Items for Paragraph Shrinking

consisted of items for teacher and student implementation. Teacher implementation items

were similar to those used in the control condition. Items for student implementation

included: (a) implementing all prescribed steps of the strategy, (b) using self-monitoring

steps, (c) marking points, and (d) on-task and co-operative behavior. Treatment fidelity

for student implementation was observed by an Associate Professor. Refer to Table 7 for

information on teacher and student implementation of PALS plus transfer training by

class.

Table 7. *Fidelity of implementation of PALS plus transfer training by class*

Component	Percent Accuracy		
	Class 1	Class 2	Class 3
General Teacher Implementation			
Organization and set-up	100	100	100
Monitoring and motivation	100	100	100
Partner Reading	100	100	100
Partner Reading monitoring and motivation	100	100	100
Retell	100	100	100
Retell monitoring and motivation	100	100	100
Paragraph Shrinking	100	100	100
Paragraph Shrinking monitoring and motivation	100	100	100
Paragraph Shrinking writing	100	100	100
Paragraph Shrinking writing monitoring and motivation	100	100	100
Goal setting	100	100	100
Student Implementation			
Partner Reading general student implementation	100	100	100
Partner Reading Pairs one and two	94.59	95.45	91.66
Retell general student implementation	100	100	100
Retell Pair two	100	100	100
Paragraph Shrinking general student implementation	100	100	100

Paragraph Shrinking pairs three and four	60.81	100	92.85
Paragraph Shrinking writing general student implementation	100	100	100
Paragraph Shrinking writing pair five and six	94.44	94.73	94.54

Note. Percent accuracy = (total number of positive ratings/ total number of positive and negative ratings) x 100

Regular Language Arts Observation

A Reading Language Arts observation was conducted by the researcher during a 45-min structured reading instruction time in each participating classroom. To document the reading activities conducted by the teacher, a literacy checklist developed by (Fuchs et al., 2010) was used. The literacy checklist included the following domains: (a) phonemic awareness, (b) phonics, (c) fluency instruction, (d) vocabulary instruction, (e) instruction in comprehension strategies, (f) independent reading practice, (g) oral language development, (h) development in activation of background knowledge, and (i) non-instructional time. A momentary time sampling method was used to check-off items observed in all the domains. An item was checked-off if it was observed in a 2-min time interval across the 45-min observation period.

The literacy checklist also included a post-observation checklist that was modified by Fuchs et al., (2010) based on Gersten, Dimino, and Jayanthi's (2007) observation scale to rate items concerning teacher instructional behavior. The quality of reading instruction for each of the 10 domains mentioned in the previous paragraph, were rated on a 1-4 scale (1 = minimal/erratic, 2 = partially effective, 3 = good, 4 = excellent, and N/A = Not observed). One item relating to management/ responsiveness to students was observed and rated on a 4-point scale (1 = minimal/poor, 2 = fair, 3 = good, 4 = excellent). Student engagement was rated on a 3-point scale (1= few student's engaged,

2 = many students' engaged much of the time, 3 = most students engaged most of the

time, and N/A= Not observed).

All three participating teachers spent a majority of the observation session on

comprehension activities and activation of background knowledge. Comprehension

activities included questioning the author, answering comprehension questions, and using

graphic organizers such as Venn diagrams to compare and contrast information. All three

participating teachers used informational text for their instruction. Instruction in one

classroom also focused on analytic phonics instruction for 15 min in a small group

format. The instructional format also varied by classroom. One classroom incorporated

whole group instruction, while one classroom used a combination of whole group and

small group format. The third classroom used a whole group and peer-mediated format.

Classroom Atmosphere Behavior Rating Scale (CARS)

The Classroom Atmosphere Behavior Rating Scale was administered during

fidelity observations in the control condition, during student implementation fidelity

observations for the experimental condition, and during Reading Language Arts

observations. The rating scale comprises 10 categories which are used to assess the

classroom atmosphere. The categories include: student compliance, students' ability to

handle transitions, students' ability to follow rules, level of cooperation, and students'

level of interest/enthusiasm/involvement, on-task behavior, and classroom support of

student effort. Each category is rated on a scale of 1-6 (i.e., 1 = very high, 2= moderately

high, 3 = average, 4 = moderately low, 5 = low, 6= unable to code). Results indicate that

across conditions, students were generally compliant and the classroom atmosphere was

supportive of student effort. For specific results of the CARS by condition, refer to Table

8.

Table 8. *Classroom Atmosphere Rating Scale prior to study participation, by condition, and during reading language arts observation*

Categories	Class 1	Class 2	Class 3
Prior to study participation[a]			
Student compliance during structured time	Avg	MH	MH
Transitions	MH	VH	MH
Following rules	MH	VH	MH
Level of cooperation	Avg	MH	Avg
Student's level of interest/enthusiasm/involvement	Avg	MH	Avg
Classroom is focused and on-task	Avg	MH	Avg
Classroom is supportive of student's efforts	MH	MH	MH
Reading Language Arts Observation[b]			
Student compliance during structured time	Avg	MH	Avg
Transitions	MH	MH	Avg
Following rules	MH	MH	Avg
Level of cooperation	Avg	MH	Avg
Student's level of interest/enthusiasm/involvement	Avg	MH	Avg
Classroom is focused and on-task	Avg	MH	Avg
Classroom is supportive of student's efforts	Avg	MH	MH
PALS Condition			
Student compliance during structured time	MH	VH	MH
Transitions	MH	VH	MH
Following rules	MH	VH	MH
Level of cooperation	MH	MH	MH
Student's level of interest/enthusiasum/invovlement	MH	MH	Avg
Classroom is focused and on-task	VH	MH	Avg
Classroom is supportive of student's efforts	MH	MH	Avg
PALS Plus Transfer Training Condition			
Student compliance during structured time	Avg	MH	VH
Transitions	Avg	Average	VH
Following rules	Avg	VH	MH
Level of cooperation	Avg	VH	Avg
Student's level of interest/enthusiasm/involvement	Avg	VH	Avg
Classroom is focused and on-task	Avg	VH	Avg
Classroom is supportive of student's efforts	Avg	VH	MH

Note. Avg= Average- behavior is observed between 60% and 80% of the session; MH= moderately high- behavior is observed at least 80% of the session; VH= very high- behavior is observed through the observation period. [a]Observation of all participants prior to random assignment. [b]Observation of all participants during regular language arts instruction.

Social Validity

A social validity questionnaire developed by the researcher was administered to participants in the control and experimental condition. The purpose of the questionnaire was to ascertain participant satisfaction of the intervention. The questionnaire had three main categories: perceived strategy effectiveness, strategy use, and strategy satisfaction. Refer to Appendix G for sample social validity scale used for the experimental and control conditions. The categories on the questionnaire for both the experimental and control were the same, but items within each category varied to reflect overall PALS use for the control condition and Paragraph Shrinking strategy use in the experimental condition. Refer to Tables 27, 28, and 29 in the chapter three for specific results.

Research Design

A pretest-posttest-maintenance control group design was used to examine the efficacy of transfer training. Participants were first rank ordered based on their one-minute oral reading scores and then assigned randomly to experimental (transfer training) or control conditions (practice of PALS). Sample size was estimated using G*power, a program that estimates sample size and effect sizes based on alpha levels and power values (Erdfelder, Faul, & Buchner, 1996). A power-analysis based on a 3 x 2 repeated measures ANOVA (RM-ANOVA) was conducted that indicated that a sample size ($N= 40$) was necessary to show adequate power (1- *β error probability*= 0.95) to detect a moderate effect size of $d = 0.50$ (Faul, Erdfelder, Lang, & Buchner, 2007).

Data Analysis

The data were analyzed using a 3 x 2 repeated measures analysis of variance (RM-ANOVA) with time (pretest, posttest, and maintenance) as the within-subjects factor and treatment (PALS vs. Transfer Training) as the between-subjects factor. A RM-ANOVA was conducted because it requires fewer subjects without sacrificing statistical power, and it permits comparisons in performance across time and treatment (Lomax, 2000). A separate analysis was conducted for each measure (main idea identification of narrative text, main idea identification of expository text, the CRAB, the oral reading measure, CBM maze, and NWEA/MAP measure). Bonferroni adjustments were used to decrease the chance of making a Type I error (false positives). Adjustments were made by taking the amount of comparisons divided by the standard $\alpha = .05$. The Bonferroni adjustment, while controlling for Type 1 error, is often criticized for not controlling for Type II error (false negatives). That is, when the number of dependent variables is large, statistical level can be too small to detect subtle but important effects due to reduced power. Hence, the Holm-Bonferroni method, which is less conservative and has a smaller risk of Type II error, was used (Holm, 1979). This method first rank orders all the p-values, and compares the smallest p-value to α/k (k = number of comparisons; in this case, $p = .05$ divided by three ($p = 0.016$). If the first comparison is significant, the next smallest p-value is compared to $\alpha/(k-1)$, and this process is continued until the p-values are not significant. All the remaining p-values below the nonsignificant

81

p-value are considered nonsignificant. An independent samples *t*-test was computed to examine differences between PALS and PALS plus transfer training on the MCA score. Effect size calculations for the main effects were interpreted using Cohen's guidelines: (a) .02 as a small effect size, (b) .13 to .25 as a medium effect size, (c) .26 and larger is considered a large effect size (Cohen, 1988).

Chapter IV

Results

The purpose of this study was to examine the effects of explicitly teaching for transfer of PALS, an evidence-based practice that has been shown to improve reading outcomes for diverse groups of students. My specific research questions included the following: (1) What are the effects of explicitly teaching students to transfer the paragraph shrinking component of PALS to different texts as measured by proximal and distal reading comprehension measures, compared to simply providing ongoing practice with PALS? (2) Does transfer training help students maintain the strategy taught? The proximal measures were defined as measures closely aligned to intervention. The distal measures were global reading comprehension measures that were not closely aligned to the intervention. The study used a true experimental design where participants were matched on their one-min oral reading scores and assigned randomly within class to an experimental (PALS plus transfer training) or control (PALS) condition.

In this chapter, preliminary data analysis, which includes examining the internal consistency reliability of the proximal measures and testing for the underlying assumptions of repeated measures analysis of variance (RM-ANOVA), are first discussed. Next, results for each RM-ANOVA finding are presented. The results are organized by proximal and distal measures, with the descriptive statistics presented first,

followed by the findings for each RM-ANOVA. Finally, results of social validity

questionnaire administered to participants in both conditions are presented.

Preliminary Data Analysis

Preliminary data analyses on the proximal measures were first conducted to

examine internal consistency reliability of the proximal measures (main idea of narrative

and informational text). Cronbach's alpha for each proximal measure at each time point

(pretest, posttest, and maintenance) was calculated. Refer to Appendix G for Cronbach's

alpha, including scale mean and variance if item deleted, and corrected item-total

correlation for the proximal measures at each time point. Next, Pearson's correlations

were calculated to examine the relations among the various measures at pretest, posttest,

and maintenance. The correlations between the proximal measures (main idea

identification of narrative and informational text) and the Comprehensive Reading

Assessment Battery (CRAB) were low to moderate ($r = .26$ to $r = .50$). The correlations

between the distal measures were moderate to high ($r = .50$ to $r = .86$). Refer to

Appendix G for correlation table.

Prior to interpreting the results of the RM-ANOVA, the following underlying

assumptions of RM-ANOVA were tested: normality, homogeneity of the variance

(homoscedasticity), and sphericity. The assumption of normality was tested by

examining: Q-Q plots of the residuals (see Figures 8-40 in Appendix G); and means, SDs,

skewness, and kurtosis for each dependent variable. Skewness should be within -2 to + 2

range and kurtosis should be within -3 to +3 range when data are normally distributed

(Field, 2005). The skewness and kurtosis statistics of the variables were less than 2 and 3 respectively, which indicated that the assumption of normality of all variables were satisfied.

To test the assumption of homogeneity of the variance, scatter plots of the residuals of each dependent variable were examined (see Figures 41-57 in Appendix G). The spread of the residuals for all dependent variables appeared similar across the independent variables. Furthermore, the Levine's test was non-significant for all the dependent variables, except for the maintenance narrative main idea identification measure. However, the ratio of the standard deviation of the two groups (PALS and PALS plus transfer training) was less than 4:1 (i.e., 2.61 for PALS, and 1.57 for PALS plus transfer training). Thus, the underlying assumption of homogeneity of variance was not seriously violated. To test the assumption of sphericity, the results of Mauchly's sphericity test was used. The assumption of sphericity was not violated for all the dependent measures, except the narrative main idea identification measure, and the CBM maze measure, hence the Greenhouse-Geisser estimate was used as it is a more conservative F-test (Lomax, 2000). Thus, the assumptions underlying RM-ANOVA were satisfied and hence a separate RM-ANOVA analysis was carried out for each dependent measure.

Data Analysis

The data were analyzed using a 3 x 2 RM-ANOVA with time (pretest, posttest, and maintenance) as the within-subjects factor and treatment (PALS vs. PALS plus transfer training) as the between-subjects factor. A RM-ANOVA analysis was conducted

because it is economical in that fewer participants are required without sacrificing statistical power, and it permits comparisons in performance across time and treatment (Lomax, 2000). A Holm-Bonferroni method instead of a Bonferroni adjustment was used to control for Type 1 error. The Bonferroni adjustment is often too conservative when controlling for Type I error, resulting in a statistical level that is too small to detect subtle but important effects due to reduced power. Hence, the Holm-Bonferroni, a less conservative method, which has a smaller risk of Type II error was used (Holm, 1979). Refer to *Method* section for specific information on the Holm -Bonferroni method calculation. RM-ANOVA results are first discussed for proximal measures, followed by results for the distal measures.

Proximal Measures

Proximal measures were administered at pretest, posttest, and maintenance, which included the main idea identification of narrative text and informational text. Both proximal measures consisted of 10 items each and had two response formats: selection and production. A total combined score which consisted of the number of correct main ideas selected and produced for each proximal measure was used in the analysis. The total combined score for each proximal measure consisted of a total of 14 points: 6 points for the selection items, and 8 points for production items. Below I report results for the main idea identification of narrative text, followed by results for the main idea identification of informational text.

Main idea identification of narrative text. Descriptive data analysis of

participants' overall performance across conditions and time were first calculated. Table

9 summarizes the descriptive statistics for each condition across time.

Table 9. *Descriptive Statistics (Means and* SD*s) and Skewness and Kurtosis for Main Idea Identification of Narrative Text Across Conditions*

Condition	*n*	*M*	*(SD)*	Skewness	Kurtosis
			Pretest		
PALS	31	6.22	(2.65)	-0.06	-1.00
Transfer Training	31	5.67	(2.23)	-0.10	-1.12
Total	62	5.95	(2.44)	-0.01	-0.96
			Posttest		
PALS	31	6.98	(2.49)	0.26	-0.35
Transfer Training	29	6.75	(2.54)	-0.32	-0.71
Total	60	6.87	(2.50)	-0.03	-0.53
			Maintenance		
PALS	31	7.33	(1.57)	0.08	-0.59
Transfer Training	29	6.94	(2.62)	0.27	-1.12
Total	60	7.15	(2.13)	0.11	-0.67

Note. Main idea identification of narrative texts included selection and production items consisting of a total score of 14 points.

A 3 x 2 RM-ANOVA with time as the within-subject factor and condition as the

between-subjects factor was conducted to examine the significance of the obtained

differences on main idea identification of narrative text. The RM-ANOVA revealed a

significant main effect of time, $F(2, 99.87) = 6.07$, $p = .005$, $\eta^2 = .095$, on main idea

identification of narrative text. The $\eta^2 = .095$ revealed a small effect size for the main

effect of time (Cohen, 1988). Follow-up *t*-tests on the main effect of time indicated that

participants in both conditions correctly identified and produced more main idea

statements at maintenance ($M = 7.15$, $SD = 2.13$), $t(59) = 3.296$, $p = .002$ than at pretest

($M = 5.99$, $SD = 2.47$). There was no significant difference in the number of main ideas

correctly identified and produced at posttest ($M = 6.87$, $SD = 2.50$) t (59) = 2.22, p = .03

(Holm-Bonferroni adjusted α = .02) than at pretest ($M = 5.99$, $SD = 2.47$); and at

maintenance ($M = 7.15$, $SD = 2.13$), $t(59) = 1.00$, p = .32 than at posttest ($M = 6.87$, SD

= 2.50). A Holm-Bonferroni adjustment was used (see Table 10), and indicated that only

the first comparison was significant, and that the rest of the comparisons were

nonsignificant.

Table 10. *P-values for the Follow-up t-tests on the Main Effect of Time on the Narrative Measure.*

| Order	Comparisons for time on the Narrative measure	p	α	Adjusted α	Significance
1	Pretest and maintenance	.002	.05	.016	Significant
2	Posttest and pretest	.03	.05	.025	Not-significant
3	Maintenance and posttest	.321	.05	---	Not-significant

The RM-ANOVA for the main effect of condition did not reveal a significant

effect (1, 572.95) = .612, $p = .437$, $\eta^2 = .001$. There was no statistically significant

interaction of time by condition, $F(2, 99.87,) = .071$ $p = .908$, $\eta^2 = .001$. Refer to Table

11 for a summary of the RM-ANOVA results for narrative text and Figure 1 for a line

graph of the results.

Table 11. *Results of RM-ANOVA on Main idea Identification of Narrative and Informational Text*

Main Idea	Type III Sums of Squares	df	Mean Square	F	Error	p	η^2
Time	44.099	2[a]	25.610	6.07	99.872	.005	.095
Condition	6.045	1	6.045	.612	572.950	.437	.01
Time*Condition	.516	2[a]	.300	.071	99.872	.908	.001

[a]Greenhouse Geisser was used since the assumption of sphericity was violated (df = 1.72).

Figure 1. *Line graph for Main Idea Identification of Narrative Texts Across Time and Condition*
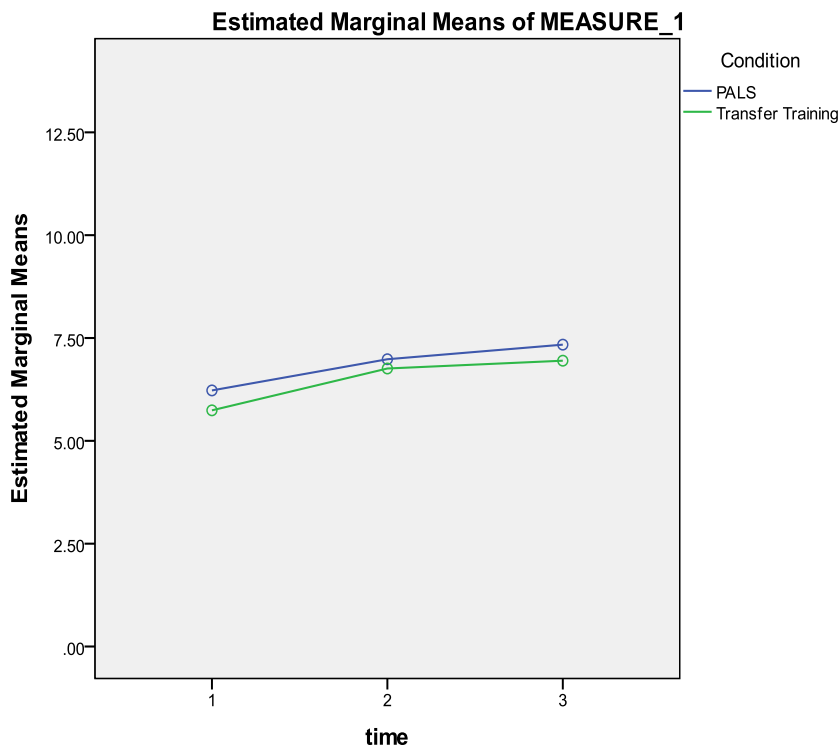
Main idea identification of informational text. Table 12, summarizes the

descriptive statistics for each condition across time.

Table 12. *Descriptive Statistics (Means and* SD*s) and Skewness and Kurtosis for Main Idea Identification of Informational Text Across Conditions*

Condition		Pretest			
	n	*M*	*(SD)*	Skewness	Kurtosis
PALS	31	7.74	(1.01)	-0.17	1.84
Transfer Training	31	7.24	(1.68)	-0.77	0.51
Total	62	7.49	(1.40)	-0.92	1.69
		Posttest			
PALS	31	7.24	(1.68)	-0.01	-0.81
Transfer Training	29	7.39	(2.20)	-0.15	1.37
Total	60	7.31	(1.94)	-0.74	1.15
		Maintenance			
PALS	31	7.74	(1.34)	-0.44	0.33
Transfer Training	29	78.41	(1.80)	0.76	-0.10
Total	60	10.20	(2.00)	-0.36	-0.14

Note. Main idea identification of informational texts included selection and production items consisting of a total score of 14 points

The RM-ANOVA revealed a statistically significant main effect of time, $F(2, 116) = 4.75$, $p = .01$, $\eta^2 = .076$ (a small effect size) on main idea identification of informational text. . Follow-up *t*-tests indicated that participants in both conditions correctly identified and produced correct main idea statements at maintenance ($M = 10.20$, $SD = 2$), $t(59) = 2.824$, $p = .006$, than at posttest ($M = 7.31$, $SD = 1.94$). However, there was no statistically statistical difference between the number of correct main idea statements identified and produced at posttest ($M = 7.31$, $SD = 1.94$), $t(59) = -.684$, $p =$

.49, than at pretest ($M = 7.50$, $SD = 1.42$). Based on the Holm-Bonferroni adjustment, only the first comparison was significant (see Table 13).

Table 13. *P-values for the follow-up t-tests on the main effect of time on the main idea identification of informational text*

Order	Comparisons for time on the informational measure	p	α	Adjusted α	Significance
1	Posttest and maintenance	.006	.05	.016	Significant
2	Pretest and maintenance	.027	.05	.025	Not-significant
3	Pretest and posttest	.49	.05	---	Not-significant

The RM-ANOVA for the main effect of condition did not reveal a significant effect (1, 251.864) = .122, $p = .728$, $\eta^2 = .002$. The interaction for time by condition approached significance $F(2,116) = 2.59$, $p = .07$, with a small effect size, $\eta^2 = .043$. Based on the Holm-Bonferroni adjustment, there were no significant differences (see Table 14). Follow-up *t*-tests revealed no significant difference at pretest between participants receiving PALS ($M = 7.74$, $SD = 1.01$), $t(49.294) = 1.417$, $p = .025$ (Holm-Bonferroni α = .016), than participants receiving PALS plus transfer training ($M = 7.24$, $SD = 1.68$). Similarly, at posttest there was no significant statistical difference between the number of correct main idea statements identified and produced by participants receiving PALS ($M = 7.24$, $SD = 1.68$), $t(58) = -.306$, $p = .61$, and participants receiving PALS plus transfer training ($M = 7.39$, $SD = 2.20$). At maintenance there was no significant statistical difference between participants receiving PALS ($M = 7.74$, $SD = 1.34$), $t(58) = .121$, $p = .12$, and participants receiving PALS plus transfer training ($M =$

8.41, *SD* = 1.80). Table 15 summarizes the RM-ANOVA results and Figure 2 for a line

graph of the results discussed.

Table 14. *P-values for the follow-up t-tests on the interaction of time by condition on the main idea identification of informational text*

Order	*Comparisons for time by condition on the informational measure*	*p*	*α*	*Adjusted α*	*Significance*
1	Pretest	.025	.05	.016	Not-significant
2	Maintenance	.121	.05	---	Not-significant
3	Posttest	.61	.05	---	Not-significant

Table 15. *Results of RM-ANOVA on Main idea Identification of Informational Text*

Main Idea	*Type III Sums of Squares*	*df*	*Mean Square*	*F*	*Error*	*p*	η^2
Time	18.956	2	9.478	4.750	116	.010	.076
Condition	.531	1	.531	.122	251.864	.728	.002
Time*Condition	10.345	2	5.173	2.592	116	.079	.043

Figure 2. *Line Graphs for Main Idea Identification of Informational Text Across Time and Condition*
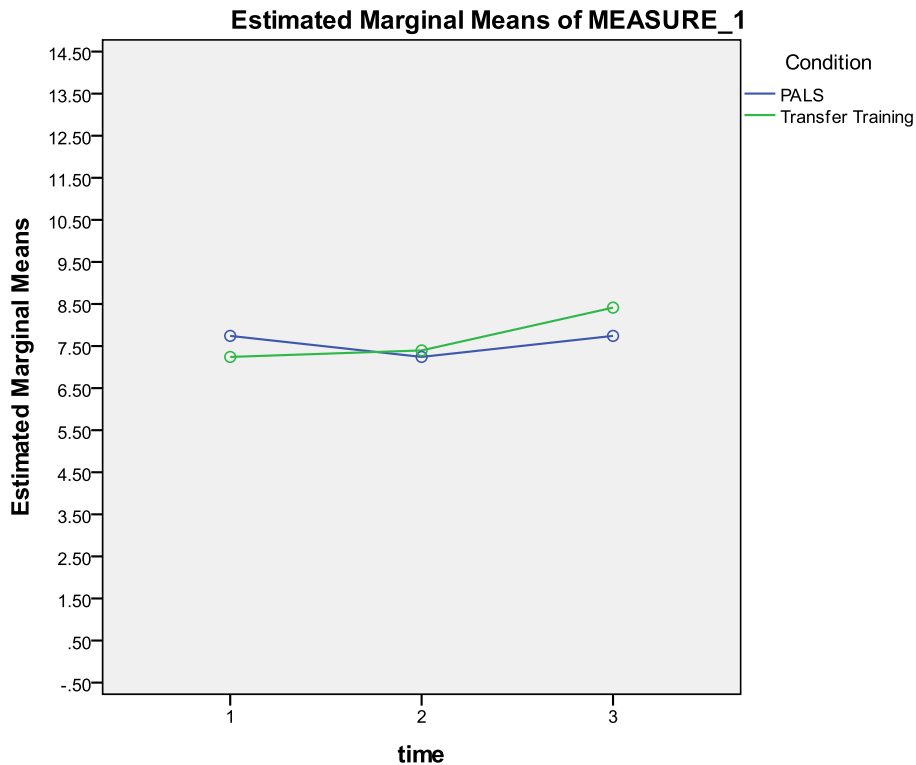
Distal Measures

Distal measures that were administered at pretest, posttest, and maintenance included the one-min oral reading measure and the CBM maze. The Comprehensive Reading Assessment Battery (CRAB) and the Northwest Evaluation Association Measures of Academic Progress (NWEA/MAP) were administered at pretest and posttest. The Minnesota Comprehensive Assessments (MCA-II) were administered in spring of the school year. The results for this section include the following distal measures: one-min oral reading, CBM maze, the CRAB, the NWEA/MAP, and the MCA-II.

One-min oral reading. Table 16 reports the descriptive statistics for the number of words read correctly in one min for pretest, posttest, and maintenance across conditions.

Table 16. *Descriptive Statistics (Means and* SD*s) and Skewness and Kurtosis for One-Min Oral Reading Across Conditions*

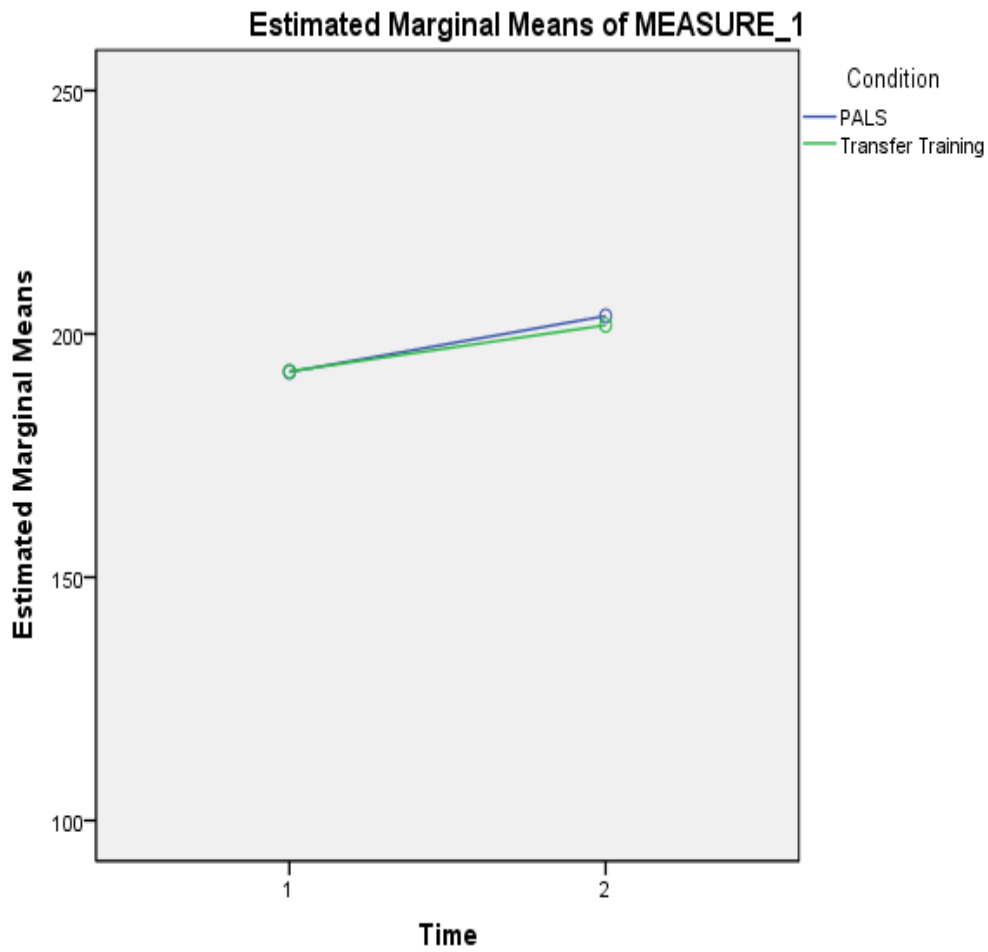| Condition	*n*	*M*	*(SD)*	Skewness	Kurtosis
			Pretest		
PALS	31	109.67	(28.58)	0.28	-0.35
Transfer Training	31	110.20	(27.97)	0.65	-0.49
Total	62	109.93	(28.05)	0.18	-0.47
			Posttest		
PALS	31	122.83	(29.23)	0.24	-0.90
Transfer Training	29	126.68	(27.03)	-0.20	-0.43
Total	60	124.70	(28.01)	0.03	-0.80
			Maintenance		
PALS	31	131.58	(34.14)	0.45	-1.10
Transfer Training	29	130.71	(30.05)	0.29	-0.38
Total	60	131.16	(31.96)	0.39	-0.83

Note. Total includes the total *N*, means, and *SD*s for PALS and PALS plus transfer training conditions across pretest, posttest, and maintenance.

The RM-ANOVA revealed a significant main effect of time, $F(2, 116) = 56.24$, $p < .001$, with a large effect size, $\eta^2 = .492$, on the number of words read correctly in one min. Follow-up *t*-tests revealed participants in both conditions read more correct words in one min at posttest $(M = 124.70, SD = 28.01)$, $t(59) = 7.799$, $p < .001$, than at pretest $(M = 109.93, SD = 28.05)$; and at maintenance $(M = 131.16, SD = 31.96)$, $t(59) = 9.548$, $p < .001$, than at pretest $(M = 109.93, SD = 28.05)$; and at maintenance $(M = 131.16, SD = 31.96)$, $t(59) = 3.223$, $p = .002$, than at posttest $(M = 124.70, SD = 28.01)$. Based on the Holm-Bonferroni adjustment, all three comparisons were significant (see Table 17).

Table 17. *P-values for the Follow-up t-tests on the Main Effect of Time on the One-Min Oral Reading Measure*

Order	*Comparisons for time on the one-min oral reading measure*	*p*	*α*	*Adjusted α*	*Significance*
1	Pretest and posttest	.001	.05	.016	Significant
2	Pretest and maintenance	.001	.05	.025	Significant
3	Posttest and maintenance	.002	.05	.05	Significant

The RM-ANOVA for the main effect of condition was not significant $F(1, 58) = 0.02$, $p = .87$, $\eta^2 = .00$. The statistically significant main effect was not qualified by an interaction of time by condition $F(2, 116) = .70$, $p = .49$, $\eta^2 = .012$. Refer to Table 18 for a summary of the RM-ANOVA results and Figure 3 for a line graph of the results discussed.

Table 18. *Results of RM-ANOVA on One-Min Oral Reading Measure*

Main Idea	*Type III Sums of Squares*	*df*	*Mean Square*	*F*	*Error*	*p*	η^2
Time	14182.22	2	7091.11	56.24	116	.000	0.492
Condition	61.41	1	61.41	0.02	58	0.87	0.00
Time*Condition	176.42	2	88.212	0.70	116	0.49	0.012

Figure 3. *Line Graphs for Number of Words Read Correctly Across Time and Condition*
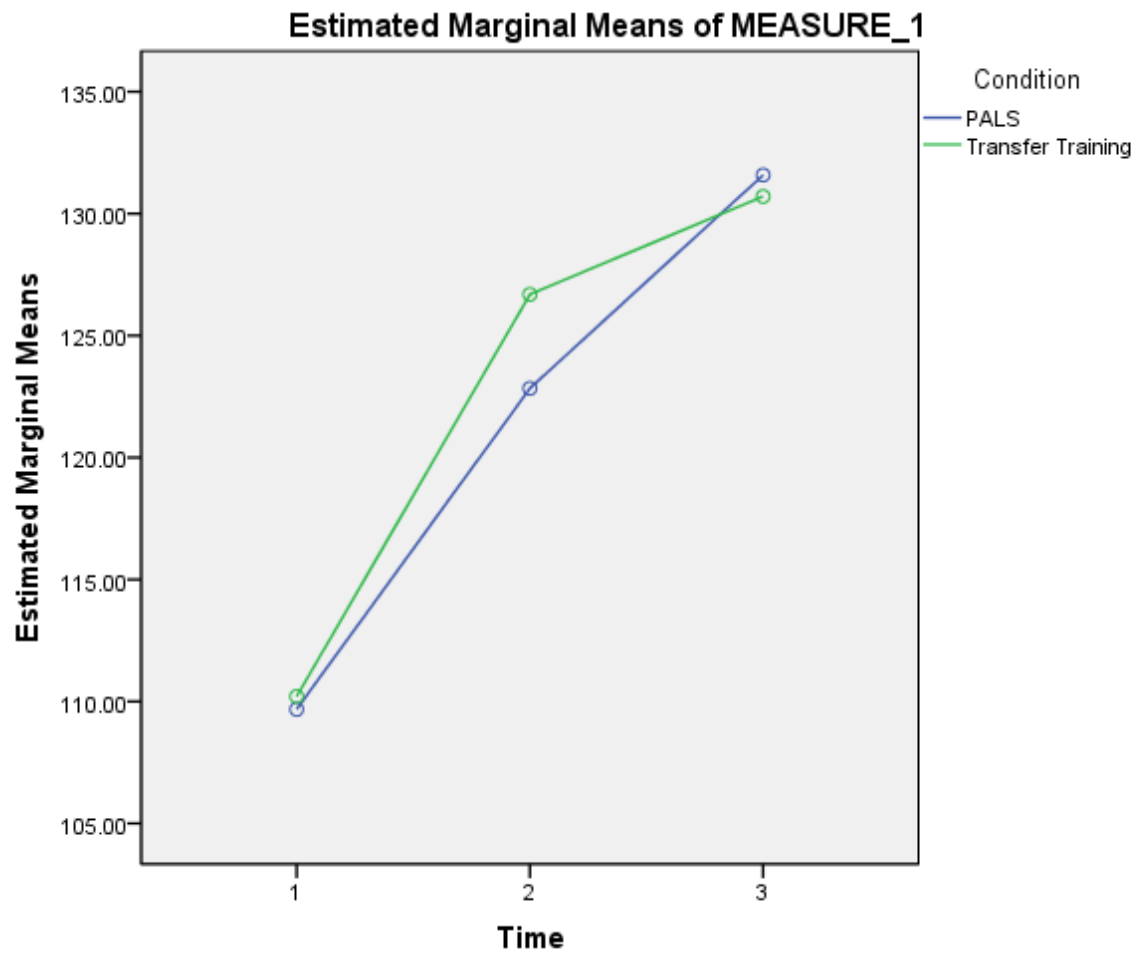
CBM maze. Table 19 reports the means and *SD*'s for the number correct maze choices selected for pretest, posttest, and maintenance across conditions.

Table 19. *Descriptive Statistics (Means and* SD*s) and Skewness and Kurtosis for CBM Maze Measure Across Conditions*

Condition	Pretest				
	n	*M*	*(SD)*	Skewness	Kurtosis
PALS	31	17.00	(5.17)	0.93	1.13
Transfer Training	31	19.68	(6.48)	0.69	2.12
Total	62	18.30	(5.94)	0.85	1.72
	Posttest				
PALS	31	22.17	(6.20)	0.11	-1.14
Transfer Training	29	23.82	(6.79)	-0.12	-0.38
Total	60	22.97	(6.49)	0.01	-0.76
	Maintenance				
PALS	31	28.06	(7.46)	-0.06	-0.94
Transfer Training	29	28.43	(9.53)	-0.71	0.36
Total	60	28.24	(8.45)	-0.47	0.01

Note. Total includes the total *N*, means, and *SD*s for PALS and PALS plus transfer training conditions across pretest, posttest, and maintenance.

The RM-ANOVA revealed a significant main effect of time, $F(2, 90.40) =$ 151.96, $p < .00$, with a large effect size, $\eta^2 = .724$ for the number of correct maze choices selected. Follow-up *t*-tests revealed participants in both conditions, correctly selected more maze choices at maintenance (*M* =28.24, *SD* = 8.45), $t(59) = 14.055$, *p* <.001, than at pretest (*M* =18.30, *SD* = 5.94); and at maintenance (*M* =28.24, *SD* = 8.45), $t(59) = 9.779$, *p* <.001, than at posttest (*M* =22.97, *SD* = 6.49); and posttest (*M* =22.97, *SD* = 6.49), $t(59) = 9.779$, *p* <.001, than at pretest (*M* =18.30, *SD* = 5.94). Based on the Holm-Bonferroni adjustment, all three comparisons were significant (see Table 20).

Table 20. *P-values for the Follow-up t-tests on the Main Effect of Time on the CBM Maze*

Order	Comparisons for time on the CBM Maze	p	α	Adjusted α	Significance
1	Pretest and maintenance	.001	.05	.016	Significant
2	Posttest and maintenance	.001	.05	.025	Significant
3	Pretest and posttest	.001	.05	.05	Significant

The RM-ANOVA for the main effect of condition was not significant, $F(1, 58) =$ .853, $p = .35$, $\eta^2 = .014$, a small effect size. The statistically significant main effect of time was not qualified by an interaction of time by condition $F(2, 90.40) = 2.09$, $p = .14$, $\eta^2 = .035$. Table 21 summarizes the RM-ANOVA results and Figure 4 summarizes the line graph for the number of correct maze choices across time and condition.

Table 21. *Results of RM-ANOVA on the CBM Maze*

Main Idea	Type III Sums of Squares	df	Mean Square	F	Error	p	η^2
Time	2942.231	2[a]	1887.562	151.961	90.40	.000	.724
Condition	110.625	1	110.625	.853	58	.359	.014
Time*Condition	40.581	2[a]	26.034	2.096	90.40	.140	.035

[a]Greenhouse Geisser was used since the assumption of sphericity was violated ($df = 1.55$)

Figure 4. *Line Graphs for Number of Correct Maze Choices Across Time and Condition*

Estimated Marginal Means of MEASURE_1
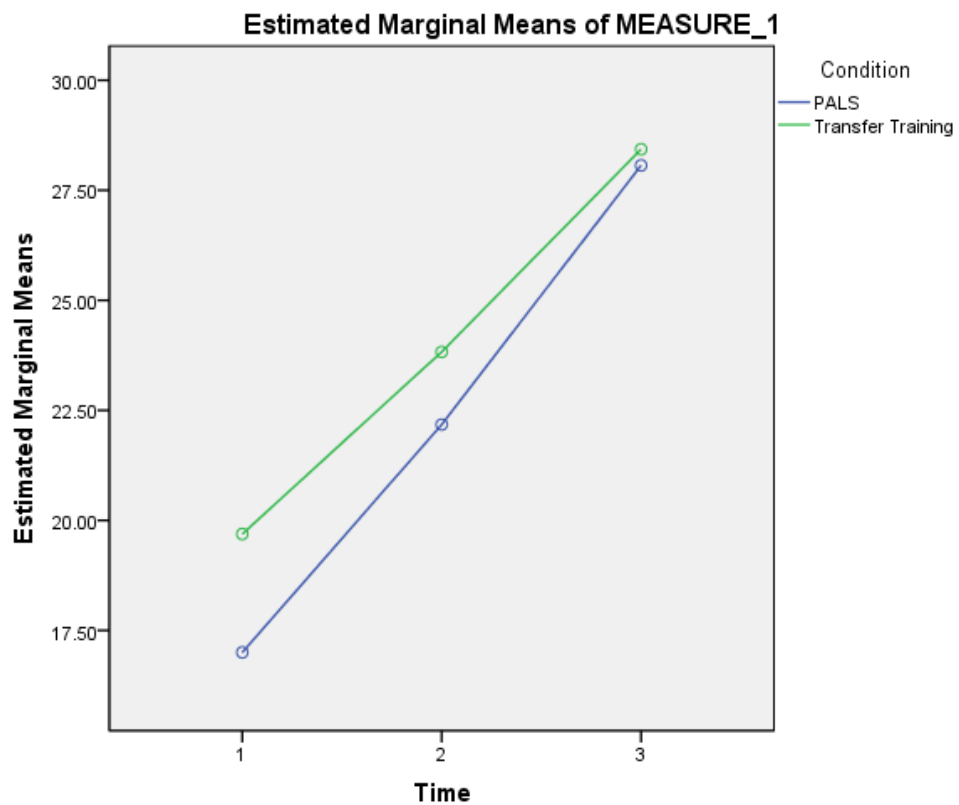
Comprehensive Reading Assessment Battery (CRAB). Table 22 reports the

means and *SD*'s for the number questions answered correctly at pretest and posttest.

Table 22. *Descriptive Statistics (Means and* SD*s) and Skewness and Kurtosis for CRAB Measure Across Conditions*

| | Pretest | | | | |
Condition	*n*	*M*	*(SD)*	Skewness	Kurtosis
PALS	31	4.65	(2.05)	0.51	-0.11
Transfer Training	31	4.00	(2.12)	0.11	-0.98
Total	62	4.32	(2.10)	-0.01	-0.20
	Posttest				
PALS	31	5.93	(2.03)	-0.46	-0.79
Transfer Training	29	5.68	(2.36)	-0.66	0.72
Total	60	5.81	(2.18)	-0.36	0.15

Note. Total includes the total *N*, means, and *SD*s for PALS and PALS plus transfer training conditions across pretest, and posttest.

The RM-ANOVA revealed a significant main effect of time, $F(1,58) = 33.17$, $p <$

.001, a large effect size, $\eta^2 = .36$ for the number of questions correctly answered. Follow-

up *t*-tests revealed participants in both conditions, correctly answered more CRAB

questions at posttest (*M* =5.81, *SD* = 2.18), $t(59) = 5.757$, $p < .001$, than at pretest (*M* =

4.33, *SD* = 2.13). The RM-ANOVA did not reveal a significant main effect of condition,

$F(1,58) = 0.59$, $p = .44$, $\eta^2 = .01$. The statistically significant main effect of time was

not qualified by an interaction of time by condition, $F(1,58) = 0.59$, $p = .44$, $\eta^2 = .01$.

Refer to Table 23 for a summary of the RM-ANOVA results and Figure 5 for the line

graph of the results discussed.

Table 23. *Results of RM-ANOVA on the CRAB Measure*

Main Idea	Type III Sums of Squares	df	Mean Square	F	Error	p	η^2
Time	66.528	1	66.52	33.17	58	.00	.36
Condition	1.195	1	1.195	0.59	58	.44	.01
Time*Condition	1.195	1	1.195	0.59	58	.44	.01

Figure 5. *Line Graphs for CRAB Questions Correctly Answered Across Time and Condition*

Total Number of Correct CRAB Questions Answered
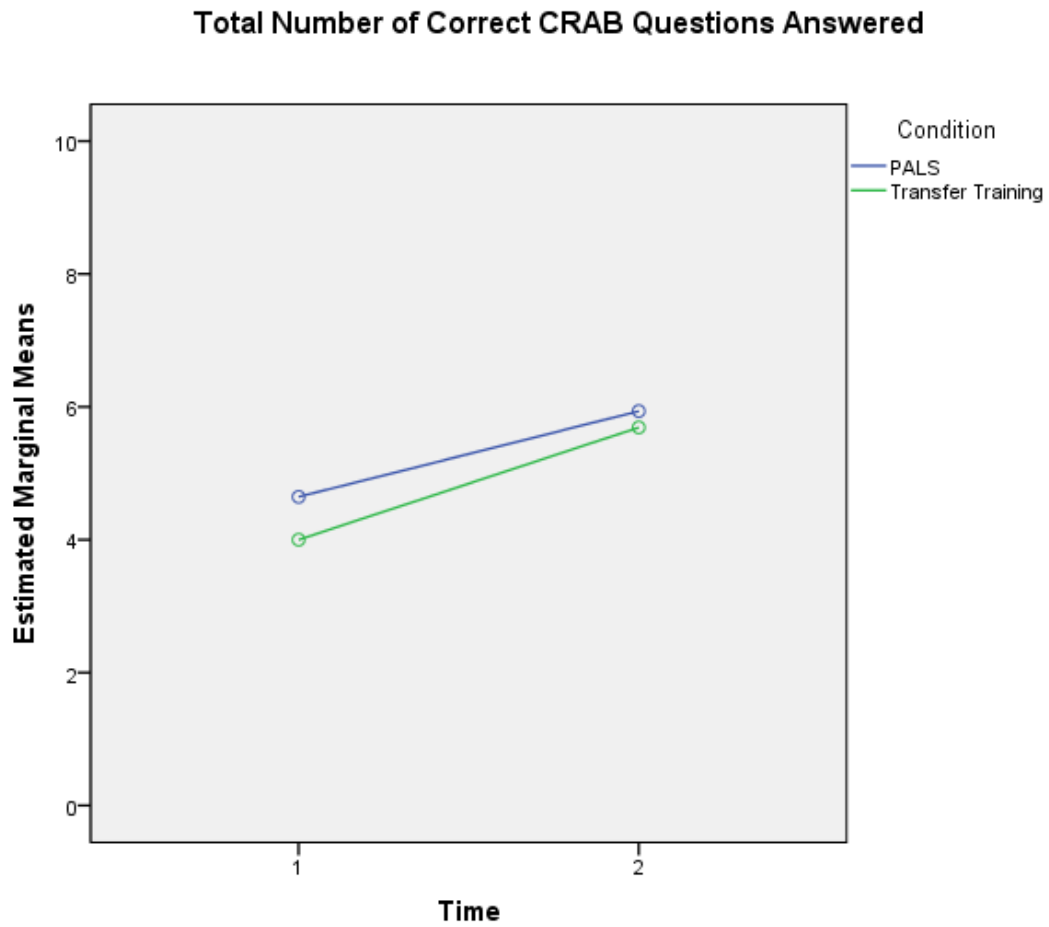
Northwest Evaluation Association Measures of Academic Progress

(NWEA/MAP). Table 24 reports the descriptive statistics on the MAP at pretest and

posttest.

Table 24. *Descriptive Statistics (Means and SD*s*) for the NWEA/MAP Measures Across*
Conditions

Condition	n	M	(SD)	Skewness	Kurtosis
			Pretest		
PALS	31	192.16	(10.91)	-0.57	-0.12
Transfer Training	31	192.39	(11.64)	-0.65	0.50
Total	62	192.27	(11.19)	-0.60	0.12
			Posttest		
PALS	31	203.68	(10.95)	0.16	0.61
Transfer Training	29	201.79	(14.46)	0.95	1.54
Total	60	202.77	(12.69)	0.65	1.60

Note. Total includes the total *N*, means, and *SD*s for PALS and PALS plus transfer
training conditions across pretest, and posttest.

The RM-ANOVA revealed a significant main effect of time, $F(1,58) = 107.86$, p

$< .001$,   with a large effect size , $\eta^2 = .65$ for the RIT score obtained. Follow-up *t*-tests

revealed participants in both conditions, obtained a higher RIT score at posttest (*M*

$= 202.77$, $SD = 12.69$), $t(59) = 10.421$, $p < .001$, than at pretest (*M* $= 192.25$, $SD = 11.38$).

The RM-ANOVA for the main effect of condition was not significant $F(1,58) = 0.082$, p

$= .77$, $\eta^2 = .001$ The statistically significant main effect was not qualified by an

interaction of time by condition, $F(1,58) = 1.04$, $p = .31$, $\eta^2 = .01$. Table 25

summarizes the RM-ANOVA results and Figure 6 summarizes the line graph of the

results discussed.

Table 25. *Results of RM-ANOVA on the NWEA/MAP Measure*

Main Idea	Type III Sums of Squares	df	Mean Square	F	Error	p	η^2
Time	3292.63	1	3292.63	107.86	58	.00	.65
Condition	21.67	1	21.67	.082	58	.776	.001
Time*Condition	32.034	1	32.034	1.04	58	.31	.01

Figure 6. *Line Graphs for MAP Measure Across Time and Condition*

Minnesota Comprehensive Assessment (MCA-II). Table 26 reports the

descriptive statistics on the MCA measure. .

Table 26. *Descriptive Statistics (Means and SDs) for the MCA Measures Across*
Conditions

Condition	*n*	*M*	*(SD)*	Skewness	Kurtosis
PALS	31	390.19	(36.27)	0.90	-0.70
Transfer Training	31	384.76	(32.82)	1.15	0.21
Total	62	387.57	(34.46)	0.99	-0.38

Note. Total includes the total *N*, means, and *SD*s for PALS and PALS plus transfer
training conditions across pretest, and posttest.

An independent samples *t*-test was computed to examine differences between conditions

on the MCA score. There was no significant difference between PALS and Transfer

Training on the MCA score $t(58) = 0.60$, $p = .54$.

Social Validity Questionnaire Results

Social validity questionnaire consisted of three main categories: perceived

strategy effectiveness, strategy use, and strategy satisfaction. Refer to Appendix G for

sample social validity scale used for the experimental and control conditions and to

Tables 27 and 28 for participant's ratings of the PALS plus transfer training and PALS

conditions respectively.

In response to questions regarding strategy satisfaction, 27 participants who

received PALS plus transfer training mentioned that they would recommend this strategy

to other students in their grade, while 2 participants said that they would not recommend

this strategy to other students. When participants were asked if it was important to learn

the paragraph shrinking strategy, 26 of the 29 participants agreed that paragraph

shrinking was an important skill to learn. In the PALS condition, 27 out of 31 participants

mentioned that they would recommend PALS to other students in their grade, and 26 out of 31 PALS participants thought that it was important to learn PALS. Additionally, participants were also asked to give their reason for why it was important learn either PALS or paragraph shrinking. Participant reasons were grouped into categories. Refer to Table 29 for a sample of responses for each category.

Table 27. *Participant ratings of PALS plus transfer training condition*

Question	Rating			
	Strongly Disagree	Disagree	Agree	Strongly Agree
Perceived Strategy Effectiveness				
Paragraph shrinking helps me identify the main idea	1	0	15	9
Using Read, Ask, Answer, Check steps helps me practice the paragraph shrinking strategy on my own	1	5	15	8
Practicing paragraph shrinking with fiction and non-fiction books teaches me to use the strategy with different reading materials	0	3	12	14
Learning words such as gist and summary statement help me remember to use the paragraph shrinking strategy	1	5	14	9
Setting goals and checking if I met my goals helps me remember to use the paragraph shrinking strategy	0	3	15	10
Mean for perceived strategy effectiveness	$M = 0.6$	$M = 3.2$	$M = 14.2$	$M = 10$
Question	Never	Sometimes	Often	Very Often
Strategy Use				
How often did you use the Question card to help you remember the PALS strategy steps?	1	8	15	5
How often did you use the Correction card to help fix mistakes when reading?	4	16	8	1
How often did you use the paragraph shrinking prompt card when practicing PALS on your own?	1	9	11	8
How many times a week did you use the paragraph shrinking strategy outside of PALS?[a]	1	8	11	9
Mean for strategy use	$M = 1.75$	$M = 10.25$	$M = 11.25$	$M = 5.75$
PALS activity rating	1	2	3	4
Strategy Satisfaction[b]				
Partner Reading	13	8	4	4
Retell	6	7	5	11
Paragraph Shrinking	7	10	8	4
Paragraph Shrinking Writing	2	3	12	12

Note.[a] Sometimes = once a week, Often = 2-3 times per week, Very Often = 4 or more times per week. [b] 1= Liked best, 2 = liked second best, 3 = liked third best, 4= least liked

Table 28. *Participant ratings of PALS*

Question	Rating			
	Strongly Disagree	Disagree	Agree	Strongly Agree
Perceived Strategy Effectiveness				
Paragraph shrinking helps me become a better reader	1	2	19	9
Using the question card helps me remember the steps for each PALS reading activity	1	3	18	9
Using the correction card helps me fix mistakes my partner makes when reading during PALS	0	7	13	11
Practicing PALS with a partner helps me remember how to use the PALS reading strategy	1	3	20	7
Mean for perceived strategy effectiveness	$M = 0.75$	$M = 3.75$	$M = 17.5$	$M = 9$

Question	Never	Sometimes	Often	Very Often
Strategy Use				
How often did you use the Question card to help you remember the PALS strategy steps?	1	12	10	8
How often did you use the Correction card to help fix mistakes when reading?	5	18	5	3
How many times a week did you use the paragraph shrinking strategy outside of PALS?[a]	15	11	2	3
Mean for strategy use	$M = 7$	$M = 13.66$	$M = 5.66$	$M = 4.6$

PALS activity rating	1	2	3	4
Strategy Satisfaction[b]				
Partner Reading	18	4	5	2
Retell	3	8	11	9
Paragraph Shrinking	4	7	12	8
Paragraph Shrinking Writing	6	12	2	11
Mean for strategy satisfaction				

Note.[a] Sometimes = once a week, Often = 2-3 times per week, Very Often = 4 or more times per week. [b] 1= Liked best, 2 = liked second best, 3 = liked third best, 4= least liked

Table 29. *Sample responses by participants receiving PALS plus transfer training and PALS.*

Question	Response
	PALS plus transfer training
Why do you think it is important to learn the paragraph shrinking strategy?	"So you can build comprehension and it helps you review what you read, and it also help you do the main idea."
	"Because like that you can do it on your own and it helps you build comprehension."
	"Because you will understand the book more, and the main idea."
	"Because it's easier to understand the paragraph and book. The questions are fun to answer."
	Because the paragraph shrinking strategy helps you learn the story better and you can get the main idea with it."
	"Because it show people an easy way to do it that is not so hard for them."
	"Because it builds comprehension."
	"Because to be a better reader."

Question	Response
	PALS
Why is it important to learn the PALS reading strategy?	"Because it help kids think of reading in a fun and proud way."
	"Because if you don't know how to read words properly then PALS helps you become a better reader."
	"I think it can help you become a better reader. Like when your partner gets a word wrong they will know not to make that mistake."
	"Because you can learn how to read better."
	"Because it helps you become a better reader."
	"Because it helps me read better."
	"To help you become a good reader."
	"So you can learn more about reading."

Chapter V

Discussion

Peer Assisted Learning Strategies (PALS) is an evidence-based approach that has been demonstrated to be generally effective for high-, average-, and low-achieving students, including students with disabilities and English Learners (Fuchs, Fuchs, Mathes, & Simmons, 1997; Saenz, Fuchs, & Fuchs, 2005). There is over 15 years of research on PALS (McMaster, Fuchs, & Fuchs, 2006), but little is known about whether students need explicit instruction to transfer PALS or whether more practice in PALS is sufficient in facilitating transfer of the strategies to different text genres and across settings. Furthermore, still unknown is whether students who receive PALS are able to maintain the strategies taught after termination of intervention.

The purpose of this study was to examine effects of explicitly teaching for transfer of PALS. Specific research questions included: (1) What are the effects of explicitly teaching student to transfer PALS to different types of text as measured by proximal and distal reading comprehension measures, compared to simply providing ongoing practice with PALS? (2) Does PALS plus transfer training help students maintain the strategy taught? In this chapter, I first discuss the results for both research questions for proximal measures. Next, I discuss the results for distal measures. Third, limitations are discussed. Finally, implications for research and practice are addressed.

Proximal Measures

Proximal measures were defined as measures that were closely aligned to the intervention. To answer my research questions, a 3 x 2 repeated measures analysis of

109

variance (RM-ANOVA) was used, with time (pretest, posttest, and maintenance) as the within-subject factor, and treatment (PALS, PALS plus transfer training) as the between-subjects factor.

For the main idea identification measure using narrative text, results indicated a main effect of time with participants in both conditions scoring significantly higher at posttest in comparison to pretest, and at maintenance in comparison to pretest. There was no statistically significant main effect of condition or interaction of time by condition. Thus, students in both conditions performed similarly on the main idea identification measure, and maintained this level of performance a month after termination of treatment.

In previous research, when comparing students with and without LD, there were no significant differences between the two groups on the near transfer measure (Wong & Jones, 1982). Conversely, in other studies that had participants with LD (e.g,. Lovett et al., 1996; Jitendra, Cole, Hoppes, & Wilson, 1998; Jitendra, Hoppes, & Xin, 2000), significant differences between treatment groups as measured by near transfer measures were found. Thus, previous research may suggest that transfer training (Lovett et al., 1996), or explicit strategy instruction coupled with self-monitoring training (Jitendra et al., 1998; 2000), may be beneficial for students with LD and struggling readers. However, this study did not have a sufficient number of students with disabilities, to examine whether explicit transfer training would be beneficial for specific subgroups of students such as students with LD and struggling readers. Future research should address

whether explicit transfer training or more practice is beneficial for students with disabilities.

Another plausible reason for non-significant interaction of time by condition, could be that students in elementary grades tend to read more narrative books in comparison to informational books, and therefore have more practice with narrative story structure (Gersten, Fuchs, Williams, & Baker, 2001; Williams, Hall, & Lauer, 2004). Thus, providing explicit instruction for transfer did not appear to improve main idea identification, compared to simply giving them opportunities to practice PALS with narrative text. Further, typical readers may be spontaneously using PALS or other preferred strategies when identifying the main idea (e.g., Chan, 1991). Future researchers could conduct think-aloud data on strategy use to examine whether typical readers spontaneously use PALS, when identifying the main idea.

For the main idea identification measure using informational text, results indicated a main effect of time with participants in both conditions identifying and answering significantly more main idea statements at maintenance in comparison to posttest, and at maintenance in comparison to pretest. However, there was no significant difference in the number of main idea statements correctly identified and produced between posttest and at pretest. Thus participants in both conditions maintained the skills learned across time. The interaction of time by condition approached significance with participants receiving PALS plus transfer training identifying and producing more main idea statements of informational text in comparison to participants receiving PALS.

There are a couple of plausible reasons for observing higher performance levels at maintenance in comparison to pretest, and maintenance in comparison to posttest; but that posttest performance was not significantly greater than pretest. First, the main idea identification measure had questions about identifying or producing the most important idea, gist, and summary statement. Only students receiving PALS plus transfer training were taught that these words or phrases implied main idea identification. At pretest, students may have resorted to guessing, or may have not attended to the question asked, but answered all questions in a similar fashion. Second, the effects of treatment may have occurred a little later than posttest. Future research on the measure should have several differing items such as recall items, or prediction items included to discern whether students are able to transfer the skills across setting, and across time.

Additionally, the importance of practice of the strategy cannot be overstated (Blair, & Rupley, 1988; Rupley, Blair, & Nichols, 2009). One more reason for observing non-significant results for the interaction of time by condition main idea identification of narrative text and the interaction of time by condition approaching significance for the information text may be due to the need for more time to practice the skills taught. In the PALS plus transfer training condition, 8 of 30 sessions (26.66%) involved teaching of new content; 18 sessions of the 30 sessions (60%) included practice of new content, while 4 of the 30 sessions (13%) were spent on review of PALS components, with one introductory session at the beginning. The sequence of PALS plus transfer training instruction included review sessions ($n = 4$) at the beginning of the study, followed by one new lesson taught every week, followed by approximately three practice sessions. In

comparison, participants receiving PALS practiced the strategy for 30 sessions, and therefore had more time to master the strategy.

Another reason for observing non-significant results for the interaction of time by condition for both narrative and informational text may be may be due to lower fidelity of implementation during paragraph shrinking implementation (60.81%, see Table 7) for one pair observed, which was representative of most students in that classroom. One reason for lower fidelity for could have been due to the role of self-monitoring. One of the final components of the transfer training instruction involved the self-monitoring. During the self-monitoring phase, students worked alone during paragraph shrinking, and were asked to do the activity aloud for accountability and so that the instructor could give students corrective feedback. Hence, even though the students were self-monitoring, the situation was artificially contrived. In typical practice, if students were asked to self-monitor, they would do so silently instead of reading and going through the self-monitoring steps aloud. Research on the role of self-monitoring in reading has shown that self-monitoring is beneficial for students with LD and struggling readers (e.g. Hagaman & Reid, 2008; Jitendra et al., 1998; 2000; Mason, 2004); however the effects of self-monitoring were not parsed out (e.g. Jitendra et al., 2000; Mason, 2004), thus the role of self-monitoring in improving comprehension of students in still unknown. Conversely, other research has shown no additional benefits of self-monitoring (Berkeley, Scruggs, & Mastropieri, 2011; Wong & Jones, 1982). Thus future research should continue to address the role of self-monitoring in transfer of strategies taught.

Distal Measures

Distal measures were defined as measures were not closely aligned to the intervention and assessed general reading competence and reading comprehension. Of the distal measures administered, the one-min oral reading measure and the maze were administered at pretest, posttest, and maintenance. The Comprehensive Reading Assessment Battery (CRAB), and the Northwest Evaluation Association Measures of Academic Progress (NWEA/MAP) were administered at pretest and posttest. The Minnesota Comprehensive Assessment (MCA) was administered once after posttests.

For the one-min oral reading measure, participants in both conditions significantly grew across time (posttest to pretest, maintenance to pretest, and maintenance to posttest) but there was no interaction of time by condition. Participants in both conditions spent a significant portion of instructional time practicing reading aloud and receiving immediate corrective feedback on their reading from their peers (Fuchs et al., 2001; McMaster, Fuchs, & Fuchs, 2006) and hence the findings are consistent with research on PALS (Fuchs, Fuchs, & Mathes, 1997; Fuchs et al., 2010).

A similar pattern of results were found for the maze, CRAB, and NWEA/MAP measures. Participants in both conditions significantly grew across time between pretest and maintenance, between pretest and posttest, and between posttest and maintenance for the maze measure, and between pretest and posttest for the CRAB and NWEA/MAP measures. There were no significant differences between the interactions of time by condition on all three distal measures. Results for the MCA-II were analyzed using an

114

independent samples *t*-test. Results indicated no significant differences between conditions on this measure.

The results of the distal measures such as the CRAB, NWEA/MAP measure, and the MCA-II measure were similar to the results found in the transfer literature that used standardized tests as far transfer measures where no significant differences were found between experimental and control conditions (e.g., Borkowski, Weyhing, & Carr, 1988; Lovett, et al., 1996; Short & Ryan, 1984). Conversely, on experimenter-developed far transfer measures, significant differences were found between experimental and control conditions (e.g. Jitendra, et al., 1998; 2000; Johnson, Graham, & Harris, 1997). The question still remains regarding how to help students to transfer a strategy taught on distal measures such as standardized tests. Future research should examine whether longer duration interventions, more practice, explicit instruction, or a combination of explicit instruction and practice with transfer of skills to standardized tests.

Limitations

There are several limitations to this study. First, there was no control group, where participants received their regular language arts instruction. Such a group would have facilitated comparisons between PALS, and PALS plus transfer training. However, a control group was not used, to ensure that there was sufficient power. Furthermore, in prior research on PALS for elementary students has indicated that students who received PALS outperformed students in control conditions (Fuchs, Fuchs, & Mathes, 1997; Sáenz, Fuchs, & Fuchs, 2005; Fuchs, et al., 2010).

A second limitation surrounds the use of the proximal measures, which consisted of the main idea identification measures using narrative and informational text. The selection format items consisted of four main idea statements written in 10 words or less for each item. There were subtle differences between the one correct main idea statement versus the remaining incorrect items. Thus the manner in which the selection items were constructed increased the difficulty of the selection items, and may have resulted in guessing on the selection items, especially at pretest.

A third limitation was a low Cronbach's alpha for the informational text. At pretest, on the informational measure, $\alpha = -.13$, at posttest, $\alpha = .48$, and at maintenance $\alpha = .26$, indicating that all items for this measure were not measuring the same construct of main idea identification. Items with a low Cronbach's alpha were not deleted as different items had lower Cronbach's alphas at pretest, posttest, and maintenance. Further research on the development of main idea identification measures is therefore warranted.

A third limitation involved a short period approximately four- to- five weeks between posttest and maintenance. Although, in the transfer literature reviewed, testing for maintenance ranged from 3 days after termination of treatment (Short, & Ryan,1984), to up to six-week follow-up (Jitendra, et al., 2000), a longer follow-up period such as a six month follow up after termination of treatment, may have indicated different results with respect to transfer, with participants in PALS plus transfer training possibly outperforming participants in PALS. A plausible justification for this hypothesis is that over time, participants may have more flexibility in their strategy use (Wagner, 2006). Borrowing from math literature, flexibility in strategy use would occur when students

learn, reconfigure, and re-express relationships between knowledge learned and the contextual environment (Noss, Hoyles, & Pozzi, 2002; Wagner, 2006) thereby allowing for transfer to occur.

A fourth limitation involved limited instructional time in the PALS plus transfer training, to practice the strategy taught. There was a quick progression of instruction lessons involving explicit teaching of transfer training leading to self-monitoring, and eventually fading of prompts. The increased instructional time gave students less time to practice the strategy taught.

Implications for Research

Several research implications have emerged from this study. First, further research needs to be conducted on whether practice in PALS or explicitly teaching students to transfer PALS will result in transfer of the strategy as measured by proximal and distal measures after a 6-month-to-one-year follow-up after termination of treatment.

Second, this study examined the effects of explicitly teaching for transfer of PALS, for a diverse group of students including students with disabilities. However, the number of students either receiving special education services or in process for referral were very small ($n = 1$ for PALS; $n = 4$ for PALS plus transfer training). Insufficient sample size of students receiving special education services, did not permit a separate analysis for subgroups of students (students with disabilities, high, average, and low achieving students). Given that in the transfer literature, students with disabilities, benefitted from transfer training (e.g., Chan, 1991; Lovett et al., 1996) or explicit strategy instruction plus self-monitoting; Jitendra, et al., 1998; 2000; Mason, 2004),

117

future research should examine which subgroups of students would benefit from explicit transfer training for a generally effective reading approach like PALS.

Third, research has indicated that as many as 50% of children with disabilities are not responsive to generally effective instruction (Fuchs et al., 2002), hence it is imperative to learn what proportions of students receiving PALS or PALS plus transfer training were responsive to instruction; *for whom* (i.e., which sub-groups of students) transfer training would be most beneficial, and *under what conditions* transfer training will result in responsiveness to instruction.

Fourth, given that participants in the PALS plus transfer training received a shorter duration to practice the strategy (18 out of 30 sessions), future research should be conducted with a longer duration study to examine whether a more intense duration would facilitate transfer of the strategy taught across settings and text. Fifth, a component analysis should be done to examine the role of self-monitoring in transfer training, and for whom and under what conditions self-monitoring would be beneficial.

Finally, transfer measures in the literature have been generally designed as very specific tasks closely aligned to the strategy. Thus, transfer has been defined in very restricted terms of "success-or-failure measures of participants' behavior" (Wagner, 2006, p.2). In future research the definition of transfer should also include flexible use of the learned strategy instead of mere success or failure on performance measures. Additionally, "think-alouds" on strategy use across different contexts should also be assessed to determine whether typical readers spontaneously use strategies learned or use preferred strategies, when identifying the main idea.

Implications for Practice

From this study, practitioners may be advised that for a generally effective strategy like PALS, practicing PALS is appropriate and may be possibly sufficient in teaching students to transfer skills learned in narrative text, especially for students without disabilities.

Conclusions

The purpose of this study was to examine whether explicitly teaching for transfer of PALS or ongoing practice of PALS was necessary in promoting transfer as measured by proximal and distal measures. Furthermore, the study also examined whether participants in PALS and PALS plus transfer training maintained the skills learned after termination of treatment. No prior research had been conducted on whether students receiving PALS can transfer the strategy to different types of text genres and across setting, or whether students maintained the strategy the skills learned after termination of treatment. This study extends research on PALS and research on transfer. First, the study provides preliminary evidence of teaching elementary students to transfer PALS to informational text. Second, participants in both conditions grew across time and were able to maintain the skills learned after termination of treatment. Third, the study underscores the complex nature of transfer and outlines plausible ways to promote transfer. However, it is still unclear for whom and under what conditions will transfer training be most beneficial. The concept of transfer has been studied for nearly a century (Barnett, & Ceci, 2002), however there is still debate on whether transfer occurs (e.g. Detterman, 1993). However, educators are especially interested in the notion of transfer

119

and how to promote transfer. Future research should re-examine how to define and measure transfer, as well whether educators can get students to apply their knowledge in different situations.

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126

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Appendix A
Measures

Sample Question

Dinner was on the table. Where was Julie? She was not in her room. Dad went outside. Julie and her dog Sparky were playing in the yard.

1. **Why did Dad go outside?**
   a. To take a walk
   b. To get the mail
   c. To look for Julie
   d. To get Sparky out.

Androcles and the Lion

This story takes place in Rome. Androcles was a Greek slave to a cruel master. The master's ship stopped for water on the west coast of Africa. Androcles escaped and ran away into the forest. He wandered around the forest looking for shelter. He was tired and hungry.

1. What is the main idea of this paragraph? Circle the best answer.
   a. This is a story of Androcles a Greek slave.
   b. Androcles, a Greek slave escaped into the forest.
   c. The master's ship stopped for water on the west coast.
   d. Androcles was hungry and looked around for shelter.

Androcles crawled into a small cave. He decided to rest and hide in the cave. Suddenly the cave entrance darkened. A large lion was standing there. The lion did not rush. Instead, it limped slowly. The lion's head was low. Its eyes were dull. Its fur look matted. Tired, the lion stretched out beside Androcles. Androcles saw the swollen paw. The chewed end of a huge thorn stuck out. The lion must have been in pain for many days.

2. What is the most important idea of this paragraph?
   a.   An injured lion entered the cave where Androcles was resting.
   b. Androcles decided to rest and hide in the cave.
   c. The lion had a thorn stuck in its swollen paw.
   d. The lion must have been in pain for many days.

Androcles knew the African thorn was big and pointed. As he looked closer at the thorn he discovered that the thorn looked like that of a fish-hook. If the thorn was pulled, the lion's flesh would tear. The pain would be great. Androcles leaned over the lion. He stroked its mane. The lion licked Androcles' hand. It seemed to understand that there would be pain.

3. What is the gist of this paragraph?
    a. Androcles knew removing the thorn would hurt the lion.
    b. The lion understood that the thorn would hurt him.
    c. The lion licked Androcles' hand when he stroked its mane.
    d. Androcles knew the African thorn was big and pointed.

Androcles sat down. He put his feet against the lion's body. He held the thorn tightly with both hands. Then he quickly pulled out the thorn and the lion gave a big roar. Androcles saw a stream of bad blood flow out of the paw. He gently squeezed the leg to drain it. Soon the lion was feeling better.

4. What is the summary statement for this paragraph?
    a. Androcles knew that the thorn would hurt the lion.
    b. Androcles pulled the thorn and squeezed the bad blood out.
    c. Because Androcles removed the thorn, the lion was feeling better.
    d. Androcles quickly pulled out the thorn and the lion roared.

The lion stood up and licked Androcles' hand to thank him for his help. Instead of killing Androcles, the lion started to bring food for him. One day he brought a young deer for Androcles to eat. For some time the lion continued to bring food for Androcles. They both grew fond of each other.

5. **What is the main idea of this paragraph?**
    a. The lion one day brought a deer for Androcles.
    b. Androcles and the grateful lion grew fond of each other.
    c. The lion decided not to kill Androcles.
    d. The lion continued to bring food for Androcles.

 But one day a number of soldiers came marching through the forest and found Androcles. As he could not explain what he was doing, they took him prisoner. Soon his master got to hear that Androcles was found by the soldiers. The master told the soldiers that Androcles was his slave and that he had escaped.

6. **What is the summary statement for this paragraph?**
    a. Androcles was found in the forests by some soldiers.
    b. Androcles was captured by soldiers and was taken prisoner.
    c. The master heard that Androcles was found.
    d. Androcles couldn't explain to the soldiers what he was doing.

Soon Androcles was sentenced to death for running away from his master. He would be thrown to the lions and he would have to fight the lions to stay alive. In those days in Rome, killers and thieves were thrown to the lions in a huge circus with only a spear to protect themselves.

7. What is the main idea of this paragraph?

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The day arrived when Androcles had to fight the lion. Crowds of people including the Emperor had gathered to see the fight. The Emperor was in the royal box and gave the signal for the lion to come out and attack Androcles. But when it came out of its cage and got near Androcles, what do you think it did? Instead of jumping on Androcles the lion licked his hand. It made no attempt to do him any harm.

8. What is the most important idea of this paragraph?

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It was of course the same lion that Androcles had met in the forest. The Emperor was surprised to see the lion behave so strangely. He called Androcles to him and asked him how it happened that this particular lion who was so hungry did not eat him.

9. What is the gist of this paragraph?

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So Androcles told the Emperor all that had happened to him and how the lion was being thankful for pulling out the thorn and saving its life. After hearing the story, the Emperor forgave Androcles and ordered his master to set him free, while the lion was taken back into the forest and let loose to enjoy its freedom once more.

10. What is the summary statement for this paragraph?

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Sample Question

There are about a thousand kinds of bats. They live all around the world. About 45 kinds of bats live in the United States.

1. **How many kinds of bats live in the United States?**
   a. Thousands of bats live in the United States.
   b. Many bats live in the United States.
   c. About 45 kinds of bats live in the United States.
   d. Many bats live around the world.

Polar Bears

The polar bear is the Arctic's largest hunter. There is no other Arctic animal that hunts other animals for food. The Arctic is cold, snowy, and icy. There are no trees in the Arctic. So the polar bear has to hunt for food. In fact, the polar bear is the largest meat-eater in the world.

1. **What is the main idea of this paragraph? Circle the best answer.**
   a. Polar bears are the largest hunters in the cold Arctic.
   b. Polar bears are the largest meat-eaters and hunters on earth.
   c. Polar bears hunt for food in the cold and snowy Arctic.
   d. No other Arctic animal hunts for food.

The mother bear gives birth to one or two cubs in winter. When a cub is born it is no bigger than a guinea pig. Blind and helpless, the cub keeps warm in its mother's fur. It will drink its mother's rich milk to live. The mother must feed the cub and keep it warm from the harsh cold.

2. **What is the most important idea of this paragraph?**
   a. The mother bear gives birth to one or two cubs.
   b. When the cub is born it is helpless and small.
   c. The tiny cub is no bigger than a guinea pig.
   d. The mother bear feeds the helpless cub and keeps it warm.

In the spring the mother bear leads her cub out of the den. The cub is now about the size of a dog. For the first time, the cub sees bright sunlight and feels the cold wind. The cub learns to tumble and slide down icy hills. Playing makes the cub strong and teaches it how to walk and run in the snow.

3. **What is the gist of this paragraph?**
   a. The cub is now about the size of a dog.
   b. The cub learns to tumble and slide down icy hills.
   c. In spring the cub learns to walk and run outside.
   d. In spring the cub goes out for the first time.

The mother soon travels with her cub to the sea ice to hunt for seals. If the cub gets tired, the mother gives it a ride on her back. When the mother catches a seal, the cub will get its first taste of solid food. The cub watches and learns how to hunt for seals from the mother. It is an important lesson the cub will learn.

4. **What is the summary statement for this paragraph?**
   a. The mother travels with her cub to hunt for seals.
   b. The cub rides on the mother's back when it is tired.
   c. Cubs learn to hunt by watching the mother.
   d. The cub gets its first taste of solid food.

Hunting for seals requires a lot of patience. Polar bears wait quietly at breathing holes made by seals for long hours and sometimes even for days. She has a strong sense of smell. She can smell a seal nearby so she settles down to wait. She does not move or take a step. If the seal hears the smallest sound, it will go to another hole.

5. **What is the main idea of this paragraph?**
    a. Polar bears wait patiently for long hours when hunting seals.
    b. Polar bears wait at breathing holes made by seals.
    c. Polar bears have a strong sense of smell.
    d. If the seal hears a sound it will go away.

In order for polar bears to stay fat and warm they must eat a lot of food. So polar bears must eat seal blubber or seal fat. About half of the food polar bears eat is used to keep them warm, which is the same for humans. So the colder the Arctic gets, the more polar bears must eat to keep warm.

6. **What is the summary statement for this paragraph?**
    a. Polar bears must eat seal blubber or seal fat.
    b. The colder the Arctic gets the more the polar bear eats.
    c. Polar bears eat lots of seal blubber to stay warm.
    d. Like humans the polar bear eats food to keep warm.

The polar bear's body is built for the cold Arctic climate. They have a thick layer of fat to help them stay warm. Their skin is black, which helps to soak up as much heat from the sun as possible. What's more, their round and compact body shape helps to keep them warm. Polar bears don't have large ears or a long tail, because they lose warmth quickly. Instead they try to weigh as much as possible because large objects lose heat slowly, so the heaviest polar bear stays warmer longer.

7. What is the main idea of this paragraph?

_____

_____

_____

_____

Polar bears are also skillful swimmers. These huge animals can travel in the water for hours when moving from one chunk of sea ice to another. The polar bear is built for swimming. Its long neck keeps the bear's head above water. Its huge webbed feet serve as paddles in the water. The coat of the polar bear keeps it from getting wet.

8. What is the most important idea in this paragraph?

_____

_____

_____

_____

People have always hunted polar bears. People ate the meat and used the skin for clothing. Hunting was the biggest danger for polar bears for many years. Now there are laws protecting polar bears in the wild. Today people are not allowed to hunt polar bears.

9. **What is the gist of this paragraph?**

_____

_____

_____

_____

_____

Polar bears are still in trouble of dying. The main reason is global warming. Global warming means the ice melts earlier in spring and this gives polar bears less time to walk and hunt on the Arctic ice. Polar bears are strong and smart hunters. But they cannot survive with no place to hunt. Without ice, polar bears will be gone forever.

10. **What is summary statement for this paragraph?**

_____

_____

_____

_____

_____

Appendix B
Test Administration Directions

Examiner Copy: Main Idea Identification of Narrative Text

Administer this measure after the Maze passage. Before starting the test hand out test packets and a small colored cover sheet. Tell students that you are handing out the test packet and a cover sheet. Tell them to wait for your directions.

DIRECTIONS- Say to the students :

"Please write your first and last name on the first line on the first page of your packet *(show them on sample copy).* **And then write today's date** *(remind them of the date)* **on the bottom line** *(monitor students).* **Put your pencils down and listen to my directions.**

"I will read the story out loud. After I finish reading each paragraph, I will read the question and the answer choices for each question. When I read the passage, you can use the cover sheet to follow along on your page *(Demonstrate this to students)*. **After I finish reading the question and the answer choices, I will ask you to circle the letter which goes with the best answer. Ok? Once you have finished answering the question, cover your answer with this cover sheet and look up at me.**

Let's start with a practice question. Remember to use the cover sheet to follow along. *(Read the paragraph and the question and answer choices aloud).*

Dinner was on the table. Where was Julie? She was not in her room. Dad went outside. Julie and her dog Sparky were playing in the yard.

1. **Why did Dad go outside?**
    a. **To take a walk**
    b. **To get the mail**
    c. **To look for Julie**
    d. **To get Sparky out.**

Circle the letter which goes with the best answer. When you have circled your answer, put your pencil down and look up at me. Please do not turn the page. *(Give students 30 seconds to answer).*

What is the correct answer to the sample question? *(Pause for reply).* **Yes, answer C, to look for Julie**

Now turn to the next page. Does everyone have the right place? (Pause to do a visual check).

I will read the title and the first paragraph (point to the paragraph) **and the question and answer choices** *(point to question)*. **You will follow along. After I finish reading the question and the answer choices, I will ask you to circle the letter which goes with the best answer. Ok?**

Read paragraph 1 and the question and answer choices aloud. **Circle the letter which goes with the best answer."** *(Pause for 30 seconds.)*

Continue to read the next paragraph and the answer choices. After you finish reading the answer choices say **"Circle the letter which goes with the best answer."** *(Pause for 30 seconds.) Continue to read the paragraphs and the answer choices till students have completed all 6 questions.*

Narrative Main Idea Identification Assessment (Production section)

Now I will read the next paragraph out loud *(point to paragraph 7)* and you will follow along with your cover sheet. After I finish reading the paragraph I will ask you to write your answer in the space provided *(point to answer space).* You will have a short time to write out your answer. Try to answer the question as best as you can in your own words. After you have finished writing your answer, put your pencil down and look at me.

PARAGRAPH SEVEN:

Read the 7th paragraph. **Now please write your answer to the question 7, what is the main idea of this paragraph? Try to answer the question as best as you can in your own words. When you have finished writing your answer, cover your answer with the cover sheet, put your pencil down and look at me.** *Pause for students to write the answer. (Give students 1 min 30 seconds to write their answers.)*

PARAGRAPH EIGHT:
Read the 8th paragraph. **Now please write your answer to the question 8, what is the most important idea of this paragraph? Remember to answer the question as best as you can in your own words.** *Pause for students to write the answer. (Give students 1 min 30 seconds to write their answers.)*

PARAGRAPH NINE:
Read the 9th paragraph. **Now please write your answer to the question 9, what is the gist of this paragraph? Remember to answer the question as best as you can in your own words.** *Pause for students to write the answer. (Give students 1 min 30 seconds to write their answers.)*

PARAGRAPH TEN:
Read the 10th paragraph. **Now please write your answer to the question 10, what is the summary statement for this paragraph? Remember to answer the question as best as you can in your own words.** *Pause for students to write the answer.*
(Give students 1 min 30 seconds to write their answers.)

Expository Main Idea Identification Assessment (Selection)

Administer this measure after the Maze passage. Before starting the test hand out test packets and a small colored cover sheet. Tell students that you are handing out the test packet and a cover sheet. Tell them to wait for your directions.

DIRECTIONS- Say to the students:

"Please write your first and last name on the first line on the first page of your packet*(show them on sample copy)***. And then write today's date** *(remind them of the date)* **on the bottom line** *(monitor students).***Put your pencils down and listen to my directions.**

 "I will read the story out loud. After I finish reading each paragraph, I will read the question and the answer choices for each question. When I read the passage, you can use the cover sheet to follow along on your page *(Demonstrate this to students)***. After I finish reading the question and the answer choices, I will ask you to circle the letter which goes with the best answer. Ok? Once you have finished answering the question, cover your answer with this cover sheet** *(demonstrate)* **and look up at me.**

Let's start with a practice question. Remember to use the cover sheet to follow along. *(Read the paragraph and the question and answer choices aloud).*

There are about a thousand kinds of bats. They live all around the world. About 45 kinds of bats live in the United States.

1. **How many kinds of bats live in the United States?**
   a. **Thousands of bats live in the United States.**
   b. **Many bats live in the United States.**
   c. **About 45 kinds of bats live in the United States.**
   d. **Many bats live around the world.**

Circle the letter which goes with the best answer. When you have circled your answer, cover your answer, put your pencil down and look up at me. Please do not turn the page. *(Give students 30 seconds to answer).*

What is the correct answer to the sample question? *(Pause for reply).* **Yes, answer C, About 45 kinds of bats live in the United States is correct, so you should circle C.** *(Show how you circled the answer).*

Now turn to the next page. Does everyone have the right place? (Pause to do a visual check).

I will read the title and the first paragraph (point to the paragraph) **and the question and answer choices** *(point to question).* **You will follow along. After I finish reading the question and the answer choices, I will ask you to circle the letter which goes with the best answer. Ok?**

Read paragraph 1 and the question and answer choices aloud. **Circle the letter which goes with the best answer."** *(Pause for 30 seconds)*

Continue to read the next paragraph and the answer choices. After you finish reading the answer choices say **"Circle the letter which goes with the best answer."** *(Pause for 30 seconds.) Continue to read the paragraphs and the answer choices till students have completed all 6 questions.*

Expository Main Idea Identification Assessment (Production Items)

Now I will read the next paragraph out loud *(point to paragraph 7)* **and you will follow along with your cover sheet. After I finish reading the paragraph I will ask you to write your answer in the space provided** *(point to answer space).* **You will have a short time to write out your answer. Try to answer the question as best as you can in your own words. After you have finished writing your answer, put your pencil down and look at me.**

PARAGRAPH SEVEN:

Read the 7ᵗʰ paragraph. **Now please write your answer to the question 7, what is the main idea of this paragraph? Try to answer the question as best as you can in your own words. When you have finished writing your answer, cover your answer with the cover sheet, put your pencil down and look at me.** *Pause for students to write the answer. (Give students 1 min 30 seconds to write their answers.)*

PARAGRAPH EIGHT:
Read the 8ᵗʰ paragraph. **Now please write your answer to the question 8, what is the most important idea of this paragraph? Remember to answer the question as best as you can in your own words.** *Pause for students to write the answer. (Give students 1 min 30 seconds to write their answers.)*

PARAGRAPH NINE:
Read the 9ᵗʰ paragraph. **Now please write your answer to the question 9, what is the gist of this paragraph? Remember to answer the question as best as you can in your own words.** *Pause for students to write the answer. (Give students 1 min 30 seconds to write their answers.)*

PARAGRAPH TEN:
Read the 9ᵗʰ paragraph. **Now please write your answer to the question 9, what is the summary statement for this paragraph? Remember to answer the question as best as you can in your own words.** *Pause for students to write the answer. (Give students 1 min 30 seconds to write their answers.)*

Appendix C
Scoring Rubrics

Androcles and the Lion: Answer Key

Always: Write date and Initial first page of the coded tests.

Main idea General Scoring Guidelines

- For each answer, the student can receive a total score of 2 points
  - 1 point – for correct who or what
  - 1 point – for correct main idea

- Partial credit is also given
  - .5 – for partially correct who or what
  - .5 – for partially correct main idea

- There should be 2 scores for each response.
  - 1 score for the who or wat
  - 1 score for the main idea
  - E.g. $\boxed{1}$ $^{+}$ $\boxed{1}$

- When scoring:
  - Score each answer independently.
  - Score correct answer/part of the answer with a blue line.
  - Score incorrect answer/part of the answer/spoiler with a red line.
  - Incorrect tense does not matter
  - Spelling/Grammatical errors do not matter

- **Spoilers** are considered incorrect.
  - A spoiler could be additional characters (i.e. not the most important characters) mentioned.
  - A spoiler could be additional information mentioned which is not pertaining to the most important who or what in the paragraph.
  - NOTE:
  - If the spoiler is part *of the who or what, the student will NOT receive credit for both components.*
  - E.g. People ask why didn't the lion eat him when the lion was so hungry.
    $\boxed{0}$ + $\boxed{0}$
  - E.g. The mean master asked Androcles why the lion didn't eat him.
    $\boxed{0}$ + $\boxed{0}$

- If the spoiler is part of the main idea AND if it does NOT DISTORT the answer will receive partial credit.
- If the spoiler is ***part of the main idea AND DISTORTS the story, the answer will receive no credit for the main idea component.***
- E.g. Instead of killing him, when <u>the lion</u> (correct who/what) came out it licked <u>it's</u> hand. [1] + [0]
- E.g. The <u>Emperor</u> (correct who/what) called the lion over to explain the lion's behavior. [1] + [0]
- E.g. The <u>Emperor</u> called Androcles over <u>to tell</u> him why the lion wasn't eating Androcles even though it was not hungry. [1] + [0]

Question 7: What is the main idea of this paragraph?

CORRECT WHO OR WHAT • Androcles **PARTIAL CREDIT FOR WHO OR WHAT** • He **CORRECT MAIN IDEA- Full credit** • Androcles would be thrown to the lions for running away. • Androcles would be fed to the lions as punishment. • Androcles was sentenced to death for running away (from his Master). **Correct Main idea- Partial credit** • Androcles will be thrown in with some lions and have to fight them off with a spear. $\boxed{1}$ + $\boxed{.5}$ • Androcles was sentenced to death and had to fight many lions. $\boxed{1}$ + $\boxed{.5}$ • Androcles had to fight lions to stay alive. $\boxed{1}$ + $\boxed{.5}$ • Androcles had to fight a lion. $\boxed{1}$ + $\boxed{.5}$ • The master is going to throw Androcles to the lions. $\boxed{0}$ + $\boxed{.5}$ • He needs to fight the lions. $\boxed{1}$ + $\boxed{.5}$ • Androcles had to fight a lion and a spear to defend himself. $\boxed{1}$ + $\boxed{.5}$ **For Full Credit Must include:** 1. Androcles (who/what) 2. Thrown to the lions/ fight the lions/ sentenced to death AND 3. Running away/escaping his master (i.e. reason for sentencing)/ or imply punishment.	**INCORRECT WHO or What** • Lion(s) • It, They • You • Master **INCORRECT MAIN IDEA** • You have to fight the lions to be alive. $\boxed{0}$ + $\boxed{0}$ • Androcles has to fight the lions <u>and that they captured him.</u> $\boxed{1}$ + $\boxed{0}$ • The lion in a huge circus with only a spear to protect. $\boxed{0}$ + $\boxed{0}$ • They only have a spear to protect them. $\boxed{0}$ + $\boxed{0}$ • Killers and thieves were thrown to the lions in a huge circus with a spear to protect themselves. $\boxed{0}$ + $\boxed{0}$ • People who did bad stuff had to be thrown with the lions at the circus. $\boxed{0}$ + $\boxed{0}$

8. What is the gist of this paragraph?

CORRECT WHO OR WHAT	INCORRECT WHO OR WHAT
• Emperor	• Lion
	• Androcles
Partial Credit for who or what	
• He (if he implies the Emperor)	**INCORRECT MAIN IDEA**
	• The Emperor was surprised (insufficient information). $\boxed{1}$ + $\boxed{0}$
CORRECT MAIN IDEA- Full Credit	• The lion did not eat Androcles but he was hungry. $\boxed{0}$ + $\boxed{0}$
• The Emperor wanted to know why the lion didn't eat Androcles.	• The lion that Androcles had to fight was the same lion he had met. $\boxed{0}$ + $\boxed{0}$
• The Emperor called Androcles over to explain the lion's behavior.	• It was the same lion that Androcles had met. $\boxed{0}$ + $\boxed{0}$
Correct main idea- Partial credit	• The lion did not want to eat him because Androcles had saved the lion in the forest. $\boxed{0}$ + $\boxed{0}$
• The Emperor was surprised that the lion was so hungry but did not eat him. $\boxed{1}$ + $\boxed{.5}$	• That <u>people</u> ask why didn't the lion eat him when the lion was so hungry. $\boxed{0}$ + $\boxed{0}$
• The Emperor was surprised that the lion was so hungry but didn't eat him. $\boxed{1}$ + $\boxed{.5}$	• Emperor forgave Androcles. $\boxed{1}$ + $\boxed{0}$
• The Emperor was surprised to see the lion behave so strangely. $\boxed{1}$ + $\boxed{.5}$	• To him and asked him <u>how </u>it happened. $\boxed{0}$ + $\boxed{0}$
For full credit must include:	• NOTE: The highlighted sentence does not get any credit because:
1. Emperor (who/what)	○ "him" (who or what) is unclear
2. The Emperor calling Androcles/ or asking Androcles/ or wanting to know why the lion did not kill Androcles.	○ "how" spoils the sentence- the Emperor wants to know why, NOT how.
OPTIONAL	
3. Emperor's reaction (i.e. Emperor was surprised)	

9. What is the summary statement for this paragraph?

CORRECT WHO OR WHAT	INCORRECT WHO OR WHAT

CORRECT WHO OR WHAT
- Emperor

Partial Credit for who or what
- He (if he implies the Emperor)
- They/ Androcles & the Lion
- Lion and the boy

CORRECT MAIN IDEA- Full Credit
- The Emperor set Androcles and the Lion free. $\boxed{1}$ + $\boxed{1}$
- The Emperor let Androcles and the Lion go after hearing the story. $\boxed{1}$ + $\boxed{1}$
- Androcles explained everything the Emperor let him and the Lion go. $\boxed{1}$ + $\boxed{1}$
- Androcles and the Lion were set free after he told the whole story. $\boxed{.5}$ + $\boxed{1}$
- Upon hearing the story, the Emperor set both Androcles and the Lion free. $\boxed{1}$ + $\boxed{1}$
- They were set free after Androcles told the whole story. $\boxed{.5}$ + $\boxed{1}$

Correct Main idea- Partial Credit
- The Emperor said that Androcles is free. $\boxed{1}$ + $\boxed{.5}$
- The lion was let loose to enjoy its freedom. $\boxed{1}$ + $\boxed{.5}$
- The lion was let loose. $\boxed{1}$ + $\boxed{.5}$
- Androcles was forgiven and the lion was set free. $\boxed{1}$ + $\boxed{.5}$

For Full Credit must include:
1. Emperor (who/what)
2. The Androcles was set free
3. The lion was set free.

INCORRECT WHO OR WHAT
- Androcles, Lion,
- It , its
- Master

INCORRECT MAIN IDEA

- The <u>Master</u> gave Androcles his freedom. $\boxed{0}$ + $\boxed{0}$
- They set Androcles free and the Emperor <u>begged his Master</u> to set him free. $\boxed{0}$ + $\boxed{0}$
- Androcles told the Emperor why the lion had not eaten him. $\boxed{0}$ + $\boxed{0}$
- Androcles told the Emperor all that had happened. $\boxed{0}$ + $\boxed{0}$
- They say let loose to enjoy its freedom once more $\boxed{0}$ + $\boxed{0}$ (not enough of information)- need at least the who or what clearly mentioned.

154

10. What is the summary statement for this paragraph?

CORRECT WHO OR WHAT	INCORRECT WHO OR WHAT

CORRECT WHO OR WHAT

- Emperor

Partial Credit for who or what

- He (if he implies the Emperor)
- They/ Androcles & the Lion
- Lion and the boy

CORRECT MAIN IDEA- Full Credit

- The Emperor set Androcles and the Lion free.
  $\boxed{1}$ $+$ $\boxed{1}$

- The Emperor let Androcles and the Lion go after
  $\boxed{1}$ $+$ $\boxed{1}$
  hearing the story.

- Androcles explained everything the Emperor let
  $\boxed{1}$ $+$ $\boxed{1}$
  him and the Lion go.

- Androcles and the Lion were set free after he told
  the whole story. $\boxed{.5}$ $+$ $\boxed{1}$

- Upon hearing the story, the Emperor set both
  $\boxed{1}$ $+$ $\boxed{1}$
  Androcles and the Lion free.

- They were set free after Androcles told the whole
  story. $\boxed{.5}$ $+$ $\boxed{1}$

Correct Main idea- Partial Credit

- The Emperor said that Androcles is free.
  $\boxed{1}$ $+$ $\boxed{.5}$

- The lion was let loose to enjoy its freedom.
  $\boxed{1}$ $+$ $\boxed{.5}$

- The lion was let loose. $\boxed{1}$ $+$ $\boxed{.5}$
- Androcles was forgiven and the lion was set free.
  $\boxed{1}$ $+$ $\boxed{.5}$

For Full Credit must include:

1. Emperor (who/what)
2. The Androcles was set free
3. The lion was set free.

INCORRECT WHO OR WHAT

- Androcles, Lion,
- It , its
- Master

INCORRECT MAIN IDEA

- The <u>Master</u> gave Androcles his freedom.
  $\boxed{0}$ $+$ $\boxed{0}$

- They set Androcles free and the Emperor
  begged his <u>Master</u> to set him free. $\boxed{0}$ $+$ $\boxed{0}$

- Androcles told the Emperor why the lion had not
  eaten him. $\boxed{0}$ $+$ $\boxed{0}$

- Androcles told the Emperor all that had
  happened. $\boxed{0}$ $+$ $\boxed{0}$

- They say let loose to enjoy its freedom once
  more $\boxed{0}$ $+$ $\boxed{0}$ (not enough of information)-
  need at least the who or what clearly
  mentioned.

155

Polar Bears: Answer Key

Always: Write date and Initial first page of the coded tests.

Main idea General Scoring Guidelines

- For each answer, the student can receive a total score of 2 points
  - 1 point – for correct who or what
  - 1 point – for correct main idea

- Partial credit is also given
  - .5 – for partially correct who or what
  - .5 – for partially correct main idea

- There should be 2 scores for each response.
  - 1 score for the who or what
  - 1 score for the main idea
  - E.g. $\boxed{1}$ + $\boxed{1}$

- When scoring:
  - Score each answer independently.
  - Score correct answer/part of the answer with a blue line.
  - Score incorrect answer/part of the answer/spoiler with a red line.
  - Incorrect tense does not matter
  - Spelling/Grammatical errors do not matter

- **Spoilers** are considered incorrect.
  - A spoiler could be additional characters (i.e. not the most important characters) mentioned.
  - A spoiler could be additional information mentioned which is not pertaining to the most important who or what in the paragraph.
  - NOTE:
  - If the spoiler is part *of the who or what, the student will NOT receive credit for both components.*
  - If the spoiler is part of the main idea AND if it does NOT DISTORT the answer will receive partial credit.
  - If the spoiler is *part of the main idea AND DISTORTS the story, the answer will receive no credit for the main idea component.*

Question 7: What is the main idea of this paragraph?

CORRECT WHO OR WHAT
- Polar Bear

PARTIAL CREDIT FOR WHO OR WHAT
- Bears, It, He, they (if he/they implies the polar bear(s))

CORRECT MAIN IDEA- Full credit

$\boxed{1}$ + $\boxed{1}$

- The polar bear's body is designed to keep it warm from the cold Arctic climate.
- The polar bear's body is built for the cold Arctic climate.
- The polar bear's body is designed to keep it warm.
- Polar bear's body is built to stay warm.
- Polar bears are built for the cold Arctic they have tons of fat/blubber, black skin, small ears and tail and weigh a lot. The heaviest polar bear stays the warmest.
- Polar bear live in the cold there built for the cold and the fatter they get the warmer they get. $\boxed{1}$ + $\boxed{1}$

Correct Main idea- Partial credit
- The Polar bears shape keeps them warm (*implies that its body is built to keep it warm*). $\boxed{1}$ + $\boxed{.5}$
- Polar bears stay warm easily, they have layers of fat, black skin, round body's and when it is heavy, the heaviest bear stays warmest the longest. *(not perfect, but implies that its body is built to keep it warm)* $\boxed{1}$ + $\boxed{.5}$
- The polar bear's body is used to the cold. $\boxed{1}$ + $\boxed{.5}$

For Full Credit Must include:
4. Polar bear(who/what)
5. Is built for the cold climate /is built to survive the cold
   OR
6. Is built to stay warm

INCORRECT WHO or What
- Their
- Polar

INCORRECT MAIN IDEA
- Polar bears need to do so they can stay warm. $\boxed{1}$ + $\boxed{0}$
- The fatter they eat the more they lose heat. $\boxed{.5}$ + $\boxed{0}$
- Polar bears need to weigh as much as possible. $\boxed{1}$ + $\boxed{0}$
- Polar bears soak up as much heat as they can stay warm. $\boxed{1}$ + $\boxed{0}$
- The thick layer of the polar bear helps to keep it warm. $\boxed{1}$ + $\boxed{0}$
- That the polar bear has a layer of fat to keep them warm. $\boxed{1}$ + $\boxed{0}$

Question 8 : What is the most important idea of this paragraph?

CORRECT WHO OR WHAT
• Polar bears
Partial Credit for who or what
• It, He, She, they, bears (if he/they implies the polar bear(s)
 	
CORRECT MAIN IDEA- Full Credit
• Polar bears are built for swimming and are skillful swimmers. `1` + `1`
• Polar bears are also physically designed to be good swimmers. `1` + `1`
• Polar bears are built for and is skillful in swimming. `1` + `1`
• The polar bear is a good swimmer/skillful swimmer. `1` + `1`
• They can travel in the water for hours because their body is built for swimming.
   `.5` + `1`
• Polar bears can travel a long time in the water because they are very talented swimmers. `1` + `1`
• Polar bears are good swimmers and can travel from ice chunk to ice chunk. `1` + `1`
• Polar bear is a good swimmer. It has a long neck and big webbed feet. `1` + `1`
 	
Correct main idea- Partial credit
• Polar bears swim for long hours.
   `1` + `.5`
 	
• Polar bears can travel in water for lots of hours.
   `1` + `.5`
 	
• Polar bears are built for swimming in the ice.
   `1` + `.5`   (*close enough mean icy water*)
 	
• Polar bears are meant to swim. `1` + `.5`
	INCORRECT WHO OR WHAT
	• Their
	• Polar
	
	INCORRECT MAIN IDEA
	• The coat keeps the polar bears from getting wet. `.5` + `0` *(This receives partial credit because the student still mentioned the polar bear.)*
	• The most important thing of this paragraph is they could swim in the water. `.5` + `0`
	
	• Polar bears swim. `1` + `0`
	
	• The bears are swimmers in the cold sea.
	   `.5` + `0`
	
	• Polar bears are skillful and smart and can't breathe under water like fish, seals, sharks , whales, octopus , and turtles. They don't like getting their head wet. `1` + `0`
	
	• Polar bears have long necks to keep above water. `1` + `0`
	• Trying to swim and they can travel from ice berg to another. `.5` + `0`
	• The coat of the polar keeps it from getting wet so it can breath constantly. `0` + `0`
	• Its long neck keeps polar bears head going down under the water. `.5` + `0`
	
	--- 	
	
	For full credit must include: Polar bear(s) (who/what) & Are built for swimming/male for swimming.
	OPTIONAL- Skillful swimmers.

Question 9 : What is the gist of this paragraph?

CORRECT WHO OR WHAT	INCORRECT WHO OR WHAT
• Polar bears • People • Hunting (depending on the sentence) **Partial Credit for who or what** • It, He, She, they (if he/they implies the polar bear(s)/people) • Bears /You (depending on the sentence) **CORRECT MAIN IDEA- Full Credit** • Polar bears were hunted before, but today laws protect them. `1` + `1` • Polar bears were endangered by hunting but are protected now. `1` + `1` • Hunting was a danger to bears; now, laws protect them. `1` + `1` • Hunting was the biggest danger for polar bears. There are laws of no hunting polar bears. `1` + `1` • People have hunted polar bears now there are laws protecting polar bears. `1` + `1` • <u>People</u> have hunted polar bears for their meat and skins. Now there is a laws protecting the bears so they don't become extinct. `1` + `1` • People have hunted polar bears now there are laws protecting polar bears. `1` + `1` • <u>People</u> have always hunted polar bears that almost made polar bears endangered but now there are laws protecting polar bears in their habitats. `1` + `1` **Correct main idea- Partial credit** • People are not allowed to hunt polar bears. `1` + `.5` • There are laws protecting polar bears in the wild. `.5` + `.5` • <u>People</u> hunt polar bears, now there are laws protecting polar bears in the wild. `1` + `.5` • Most polar bears back then were killed by hunters. `1` + `.5` • The people can't hunt polar bears are now save for the law. `1` + `.5`	• Polar • Hunter(s) **INCORRECT MAIN IDEA** • It is dangerous to polar bears to be hunted. `.5` + `0` • <u>Most</u> people hunted polar bears. `0` + `0` • People hunt polar bears and they use the skin as clothing. `1` + `0` <hr>**For full credit must include:** • Polar bears (who/what) • Were hunted before/in the past Today laws protect polar bears/polar bears are protected/people are not allowed to hunt polar bears.

Question 10: What is the summary statement for this paragraph?

CORRECT WHO OR WHAT	**INCORRECT WHO OR WHAT**

CORRECT WHO OR WHAT

- Polar bears

Partial Credit for who or what

- It, He, She, they, bears (if he/they implies the polar bear(s))
- Global warming

CORRECT MAIN IDEA- Full Credit

- Polar bears are in danger of dying because of global warming. `1` + `1`

- Polar bears are now threatened by global `1` + `1` warming.

- Polar bears are still in danger. Global warming melts the ice they live on and more animals are drived into the water.

- Polar bears have less to hunt on land and can't swim forever. Without food they `1` + `1` can't live.

- Polar bears are dying of global warming. The ice is melting and they can't live `1` + `1` without ice.

- Polar bears are still dying because of the `1` + `1` global warming.

- <u>Global warming</u> kills lots of polar bears. `.5` + `1`

- <u>Global warming</u> will not allow for polar bears to hunt and then there will be no `.5` + `1` more polar bears.

Correct Main idea- Partial Credit

- If there is <u>now</u> ice polar bears could be gone forever. `1` + `.5`
- Without ice all the polar bears will die. `1` + `.5`
- Polar bears will die with no ice to live. `1` + `.5`

INCORRECT WHO OR WHAT

- Ice

INCORRECT MAIN IDEA

- Polar bears need ice to live and hunt. `1` + `0`

- This means polar bears get less time to walk and hunt on the Arctic ice. `1` + `0`

- With know ice there will never be polar bears (Should have been no longer instead of never). `1` + `0`

- Polar bears are still trouble. `1` + `0`

For Full Credit must include:

- Polar bear(s)
- Endangered/threatened/ in danger of dying/disappearing, or kill *(depending on the sentence)*
- Because of global warming.

CRAB COMPREHENSION QUESTIONS: Answer Key

Correct Answers receive a score of 1. Incorrect Answers receive a score of 0. A question is counted as incorrect if the child gives a correct answer but then spoils the answer with an incorrect addition. Spoilers are indicated by <u>underlined text</u>.

- **Extraneous information that does not spoil the response is acceptable.**
- **ALL items must be scored independently.**
- **Misspelling = incorrect if changes form or function of word (The well-carved mouse was made of "wooden")**
   - **= correct if it does not ("feel foolished")**
- **Plurals/singulars are interchangeable when it doesn't make a material difference (answer refers to a collective). It is wrong if student's answer implies plurality when answer is necessarily singular, or vice versa.**
- **If child changes answer, the LAST answer is the final answer.**
- **If there is an "or" answer, and one part is incorrect, the answer is wrong regardless of whether it was first or second.**

<u>Passage E: How to Fool a Cat</u>

1. What did the king like to collect?

CORRECT	INCORRECT
- Carvings of animals. - Wood carvings. - Carvings. - Carved animals from wood. - Wooden animals. - Wooden figures. - Carved animals. - Wooden dolls/sculptures/statues. - Statues/sculptures/dolls of animals - Animal carving(s)/ animal sculptures - Must have 2-3 of the following: carvings, wood, animals	- Cravings. - Carves (of animals) - Mice. - Animals. - Carve animals. - Carving animals. - Dolls/sculptures/statues (not enough information) - Carving of mouse/carved mouse - Carved wood (noun needs to be a figure/sculpture/doll) - Statue of a cat

2. What animal carving did the rich king not have?

CORRECT	INCORRECT
- A carving of a mouse. - A mouse. - A wooden mouse. - Mice. - A mouses	- Rat. - A carving mouse - Cat.

161

3. What was the king's test to choose the better of the two mouse carvings?

CORRECT	INCORRECT
• Set both of them down beside each other and see which one the cat jumps on first. • The cat would jump on it/attack it. • To see which one the cat liked better. • The cat would decide. • If the cat would jump on it. • To see which one the cat would pounce on. MUST INCLUDE: cat AND a decision being made (with the cat as the noun and jump/pounce/decide/like better) or the cat actually choosing.	• He would give a bag of gold • If the cat landed on it. • To bring the cat in. • Cat. • The one that looked life like. • To see which one the cat would jump on and attack or <u>get scared of.</u> • To fool the cat. • The cat would jump <u>over</u> it. • He would bring out a cat and see which one was (carved) better (cat needs to make the decision) • To see one the cat thought was better (not enough information) • To see if the cat liked the carving

4. Why did the king think the cat was a good test for choosing the best mouse?

CORRECT	INCORRECT
• Because cats like to eat mice. • Because cats hate mice/don't like mouses. • Because cats like to chase mice. • Because cats play with mice. • Because cats like to eat mice. MUST INCLUDE: cats LIKE, EAT, HATE, JUMP ON or CHASE mice AND this is a general behavior of cats	• Because one would look like a real mouse (if it's real looking, you don't need a cat to tell you that it looks real) • It looks real to the cat. • The cat would choose the one that is best. • Cats chase <u>rats</u>. • Because the cat jumps on <u>the</u> mouse • So the cat can jump on it. • Because he would be able to pick one that he likes more.

5. What did the king say he would give to the winning carver?

CORRECT	INCORRECT
• A bag of gold. • One bag of gold. • Gold. • Sack of gold. • Some gold • The gold	• Golden. • Golden bag. • Bag of golden. • <u>A pile of</u> gold. • <u>Thing</u> of gold • <u>A</u> gold • Gold bags • A pot of gold. • Some <u>pieces of</u> gold • Gold <u>coins</u>

6. What was the well-carved mouse made of?

CORRECT	INCORRECT
• Wood	• Dried fish • Wooden

7. Which mouse carving did the king predict that his cat would pounce on?

CORRECT	INCORRECT
• The one made of wood. • The well carved mouse. • The life like one. • The one that looks real. • The better carved one. • The first carver's. • Wooden. • The wood. • The very good skilled one. • The first one • That one that was carved good • First carver, wood mouse MUST BE: relatively clear reference to the 1st carver's wood mouse (and not the one carved of fish)	• A mouse. • The one made of fish. • The carved one. • The good one. • The best one. • The greatest one. • The nice one. • The real one. • The well-designed one. • The well done • The first carver (not possessive and no descriptors) • The one with better carving <u>on it</u>.

8. What did the king do when he found out he had been tricked?

CORRECT	INCORRECT
• He laughed and gave both of them a bag of gold. • He said he'd have to give both of them gold. • Laughed loud. • He decided to give the other carver a bag of gold also. (implies both carvers received one bag of gold) • He gave both of the carvers a gold bag (gold bag is not enough of a spoiler since this includes 2 correct pieces of information) MUST INCLUDE: Laughing OR giving (one bag of) gold to both/each of the carvers (Quantity does not need to be included, but if it is, it must be mentioned correctly.)	• He gave the gold to the poorly skilled carver. • He told everybody. • He gave <u>them two bags</u> of gold. (unclear) • He asked how he was tricked • He gave both of the carvers a <u>golden bag</u>.

9. Why wasn't the king upset when he found out he had been tricked?

CORRECT	INCORRECT
• Because he still got to keep the good one and his cat got the one that looked like a fish. (Does not meet specific criteria, but decided a good answer.) • Because he thought it was a great idea. • Because he thought it was clever. • Because he thought it was kinda funny. • Because everyone had been tricked too. MUST INCLUDE: one or combination of clever/smart/funny/others tricked; OR the king got to keep the better mouse (must reference that it is better or wooden)	• Because he didn't think he was going to be fooled. • Cause he said nothing could trick him. • Because he found out it was just fake. • Because his cat was happy. • Because he liked it. • Because his cat was tricked too. • Because everyone in the room was laughing. • Because it was kind of a weird joke.

10. Who got the king's gold?

CORRECT	INCORRECT
• Both of them. • The carvers. • Both people/men. • Both workers.	• Any mention of just one carver receiving gold. • Both. • The carvings. • The one who made the bad mouse.

Appendix D
Instruction Scripts

Day 1- Getting Ready for PALS, Assigning Pairs, and Introduction Game

(Pick students up and bring them to assigned spot (find out from teachers about this). Once students are seated I will introduce myself.

Good morning everyone. My name is Ms. Viveca Pinto. **We will be working together for the next 15 weeks on a new part of the PALS reading program. You were chosen to work with me, because your parents/guardian and you gave me permission to work with you on your reading. Your parents/guardians signed a permission form in early October and when you returned it to me, you received a gel pen for returning the form.**

From now onwards during PALS, we will be working together on some reading activities that you learned in PALS with your class teacher. The activities that we do will be similar to the activities you learned with your teacher.

We will work together on reading 3 times a week on XX, XX, XX at (mention time).

What days will we be doing PALS?

Xx xx and xx good.

What time will we start PALS?

XX.

Good.

Before PALS, I will come to your class to pick you and bring you here.

For PALS you will be working on reading activities with a partner. I will let you know who your partners are for PALS (Put Pairs and Teams Assignment Chart on overhead).

In each pair, one of you will move to your partner. You will be the "Mover" If your name has a star beside it on this chart you are a mover. Raise your hand if your name has a star beside it?

Students (movers) raise their hands.

As a "Mover" you will get your assigned PALS folder, a pencil (show pencil basket) **and move to your partne**r.

What does the mover have to do?

Get the PALS folder and move to their partner.

Good.

If your name does not have a star beside it on this chart you are a "Stayer". Raise your hand if you are a "Stayer"?

Students (Stayers) raise their hands.

What will you do if you are a "Stayer"?

Stay in your seat and wait for your partner to bring the folder and move to you.

Good.

Once you reach here, I will announce "It is time for PALS" and will start the timer. At that point, Movers will go to pick up the folder and pencil and Stayers will stay in their PALS spot and wait for their partners.

What will you do when I announce "It is time for PALS"?

Movers will go pick up their folders and pencils and Stayers will wait for their partners.

Good.

Now before we practice moving to our partners there are some important rules you need to know. (Use PALS Moving Rules Transparency).

Point to Rule # 1

Rule # 1 is "Take your PALS materials with you." You will learn about your PALS folder in a few minutes. For now, just remember that when you move, you must take everything that you need for PALS. What do you take with you?

Our PALS materials.

Point to Rule #2. Rule 2 is "Leave your chair when you move". What will you leave?

Our desks/chairs.

Point to Rule #3. Rule 3 is "Rule 3 is "Move quickly and quietly." What's the third rule?

168

Move quickly and quietly.

Point to Rule # 4. Rule 4 is "Quietly move to chair beside your partner." This means that you will sit beside your partner so that both of you are sitting side-by-side. You need to move the chairs side-by-side so that both of you can see the materials.

Demonstrate how to do this by moving two chairs side by side.

How will you sit?

Side-by-side.

Very good. Now let's see if you can tell me one of the PALS Moving Rules. Who can tell me one of them?

1. Take my PALS materials with me.
2. Leave my chair when I move.
3. Move quickly and quietly.
4. Quietly move the chair beside my partner.

We will practice moving soon. Raise your hands if you are Mover? (Refer to Teams And Pairs Assignment Chart).

Movers raise their hands.

What does the Mover do when I say,"It is time for PALS?"

Get the folder and move quietly to your PALS spot.

Good.

Raise your hand if you are the Stayer?

Stayers raise their hands.

What will you do is you are a Stayer?

Stay in your seat and wait for your partner to bring the folder and move to you.

Good.

Before you practice moving, let's look at who is going to be your partner and your folder letter. (Teacher refers to Pairs and Team Assignment chart.) **Raise your hand when I call out your name.**

Teacher calls out name and tells each pair their folder number.

What is your folder number?

Each pair answers.

Good. Now when I say, "It is time for PALS, Movers, get ready to pick up your folder, take one pencil and move to your partner.

Remember the PALS rules, and Movers, remember to move quickly and quietly!

It's time for PALS! Teacher sets timer. (Movers pick folders and move to their partners (Stayers).

Good. Every day when you come for PALS, you get ready for PALS like this.

Everyone look at the front of your PALS folder. In the top right-hand corner, there is a sticker with a number on it. Point to this sticker.

 Pause for students to point.

This is your folder number and it corresponds to the number by your name and your partner's name on the Pairs and Teams Assignment Chart. Point to the Pairs and Teams Assignment Chart. **Movers you are responsible for remembering this number and getting the correct folder when I say "It's time for PALS."**

Movers tell your partner what your folder number is.

Stayers now open the folder.

Stayers open the folder.

Pause for Stayers to open the folder.

In the right-hand pocket you have a point sheet. Teacher shows students the point sheet. **Stayers, take out the point sheet and put it between you and your partner.**

Pause for Stayers to take out their point sheet.

Good. On the left-hand pocket, you have a question card, a correction card and you will also have a book. Stayers take out the question card, correction card, and book and put them between you and your partner. Teacher demonstrates.

Pause for Stayers to take out materials.

Good. Stayers will then take out the point sheet, question card, correction card, and book and put the materials between you and your partner. You will do this quickly

and quietly. I will give bonus points to partners who are doing a good job following directions.

Now Stayers give yourselves 2 points for doing a good job following directions.

What are the materials you will need each day?

PALS folders and pencils.

Who will bring the folders?

Movers

Who will bring pencils?

Movers

Good. Give yourselves 1 extra point for following directions.

Now I will tell you who is going to be the first reader and the second reader.

If you are a Mover, you are also the first reader.

Who is the first reader?

The Mover.

Raise your hand if you are the First Reader?

Students raise their hands.

If you are a Stayer you are the Second Reader?

Who is the Second reader?

Stayer.

Raise your hand if you are the Second Reader.

Students raise their hands.

Good.

Since this is our first day together, we will play an introduction game to get to know each other better.

In this bag there are some stickers. Each of you can pick out one sticker from the bag. There are different colored stickers in the bag. Each color represents a question you will answer about yourself.

Put the questions and their corresponding color on the overhead.

Red- What is your favorite color?
Green- what is your favorite class or subject in school?
Blue- what is your favorite thing to do outside of school?/What do you like to do?
Yellow- What is your favorite book?
Orange- Wildcard/.Tell us anything about yourself!

Now first readers turn to your partner and tell your partner a little more about yourself based on the color of your sticker. Teacher demonstrates how to answer the questions. For example I will say, " My favorite color is blue."Pause for first readers to tell their partners about themselves. (Give students 2 minutes for this activity).

Now Second Readers turn to your partner and tell your partner a little more about yourself based on the color of your sticker.

Pause for Second Readers to tell their partners about themselves. (Give students 2 minutes for this activity).

Good.

Now I will call on each pair to tell the class a little more about themselves. You will start by telling the class your name and then a little more about you r based on the question you answered. Teacher on calls on different students.

This activity should take 10 minutes.

Good. Now second readers give yourselves 5 points for doing a good job today.

Now Second Readers put everything back in the folder.

Pause for Second Readers to follow along.

First Readers get ready to put your folders back in the box, and line up at the door. We've now come to the end of our first day of PALS! Great job everyone.

First Readers put the folders back and line up at the door.

Second Readers now, line up at the door.

Day 2- Review PALS Moving Rules and Partner Reading Review

Good Morning! It's time for PALS.

Teacher puts Teams and Assignment Chart on board.

Student get their folders and get ready for PALS. (If students are confused, then review the procedures with them using the script below (*).

What will you do when I say "It's time for PALS?

Get PALS folders and a pencil

Who will get the folder?

First Readers

Who will get a pencil?

First Readers.

Who will take out the materials from the folder?

Second Readers.

It's time for PALS. Teacher sets timer.

Teacher calls on pairs who have moved quietly to their spots and who have taken out their PALS materials and gives them 5 bonus points. (If the entire class does this quickly, the entire class gets 5 bonus points).

If the classroom looks chaotic, practice this step again.

Let us review the PALS Rules.

There are 4 rules in PALS. (Use Transparency 2.1)

Rule #1 is talk only to your partner and only about PALS.

During PALS, you'll read stories and answer questions and the only thing you will talk about with your partner is what you read. Let's say the first rule together.

Talk to your partner and only about PALS.

Good. Now let's look at the second rule. Rule # 2 is keep your voice low.

Remember, everyone in class will read with a partner during PALS. When everyone in the room is reading, the noise level can get very loud. That's why it's important that you keep your voices low. Let's all recite Rule #2 together in a low voice.

Keep your voices low.

Good job! Rule # 3 is cooperate with your partner. Cooperating means that you help your partner in any way you can. You listen to your partner and you do not argue with him/her. Cooperating with your partner will help you become a better reader.

Let's say Rule # 3 together?

Cooperate with your partner.

Finally, Rule # 4, is try your best. This rule is the most important rule! If you try your best, PALS will make us stronger readers. Let's say Rule # 4 together.

Try your best.

Who can tell me the 4 PALS Rule? Remove transparency.

1. Talk only to your partner and only about PALS
2. Keep your voice low
3. Cooperate with your partner
4. Try your best

Good job! These rules are also listed on the back of your PALS bookmark so that you can follow and refer to them often.

Good now that we know the PALS rules let's review more about PALS.

Who can tell me what PALS stands for?

Peer-Assisted Learning Strategies (if students do not recall, teacher puts transparency 1.1 on overhead.)

PALS stands for Peer-Assisted Learning Strategies. In PALS, you will be working with a partner to become better readers and improve what you read.

Good Now let's find out what PALS means?

Point to the word Peer. **The word Peer means someone who is about the same age as you.**

Assisted means helping your partner with reading, just like teachers help their students. In Peer-Assisted Learning Strategies, you will work with a peer. This person will be your partner. You will help each other become better readers.

Point to the word Strategies**. When we think of different ways to learn, we are using STRATEGIES. When you want to do something and you decide how to do it, you're using a strategy. For example, when you do not know a word, you can sound it out. Sounding out words, is a strategy you can use to read unknown words.**

So a strategy is a plan to get something done.

When you want to do something and you decide how to do it, what are you using?

Strategy

We do PALS, because PALS will help us become better readers by building comprehension. Comprehension is understanding what you read.

Why do we do PALS?

Because PALS will help us become better readers by building comprehension.

Good.

Now, name some reading strategies that you learned in PALS, with your classroom teacher?

Partner reading, retell, paragraph shrinking and paragraph shrinking writing. (If students, do not recall teacher can give them a hint, by asking them what is the first activity of PALS? OR to look at their question card.)

Good. Today we are going to practice and review the first activity of PALS, which is partner reading.

During partner reading, who reads first?

First reader.

Who is the coach?

Second reader.

How many minutes does the first reader read for?

5 minutes.

When you are the reader, you will read quickly, quietly and with expression.

How should the reader read?

Quickly, quietly and with expression.

When you are the coach, your job is to read along silently and help the Reader with hard words and mistakes.

What does the coach have to do?

Read along silently and help the reader with hard words and mistakes.

Good. PALS each of you will make mistakes from time to time. It's important to correct those mistakes because you'll learn words you didn't know before and this makes you a better reader. How will catching mistakes help the Readers?

They'll learn words they didn't know before.

When you're the coach, your job is to help your partner find and correct mistakes. That's why it's so important to follow along and read silently when your partner is reading. Don't feel bad about telling your partner that s/he has made a mistake. By helping with mistakes, you're being a good coach. What is your job when you're a coach during partner reading?

Helping my partner find and correct mistakes.

Now take out your red correction card. What will you say when the reader makes a mistake?

 "Check it".

Good. You will always, point to the word and say check it.

What can the reader say?

I need help with that word or correct the word.

Good. Yes, the reader can either say I need help with that word or can correct the word.

Now look at the left hand corner box. If the reader says I need help with that word, what will the coach say?

That word is --- what word?

Good read the sentence again.

Now let's practice. I will be the first reader and you will be my coach. (Make mistakes and have students correct you.)
 Now it's your turn to practice. Turn to the story "Kate and Sprinkles". First readers get ready to read, coaches get ready to listen and fix mistakes.

Student practice.

Day 3- Paragraph Shrinking Review and Helping with Mistakes

Today we are going to review paragraph shrinking, one of the PALS activities that you learned in class.

Before we start can you tell me what PALS stands for?

Good, Peer Assisted Learning Strategies.

Why do we do PALS?
We do PALS because it helps us become better readers by building comprehension. (If students do not know why, teacher can say the above statement).

What are the PALS activities you have learned?

Partner reading, retell, paragraph shrinking, and paragraph shrinking writing.

Good. Today, we are going to practice and review paragraph shrinking a little further. I will give extra points to students who are answering questions, following directions, and trying their best.

"Who can tell me the three questions the coach asks the reader during paragraph shrinking?"

Student answer:

- Name the most important who or what?
- Tell the most important thing about the who or what?
- Say the main idea in 10 words or less.
  (If students do not know the answer the teacher can ask them to refer to the question card.)

Now turn to your partner and discuss why do we do Paragraph shrinking. (After 30 seconds teacher calls on students to give their response.)
Teacher writes response on board
- To help me identify the main idea
- To help me understand what I just read.
- To become a better reader and improve my comprehension.

What can the main who or what be?
- A person, place, animal or thing- or the characters in the story.

Now let's practice naming the most important who or what. I will be the reader and you will be my coach. Teacher puts a paragraph on the overhead and reads the first paragraph. After reading the first paragraph teacher asks students: **What is the first question you will ask me?**

- Name the most important who or what.

I think the most important who or what is Patrick.

Thumbs up if you agree, thumbs down in you disagree.

Teacher calls on a student: **Why do you agree or disagree?**

Yes, Patrick is the most important who or what because, the entire paragraph is talking about Patrick.

If students disagree, have students come up with their own main idea statement and why they think that it is a good main idea statement. Call on 2-3 students, if students have varying but similar main idea statement, discuss, that you can accept reasonable main idea statements, as long as the statements are talking about the most important thing that the who or what.

After the reader identifies the most important who or what, what is the next question the coach asks?
- Tell the most important thing about the who or what.

Good. Now discuss with your partner what you think is the most important thing about the who or what. Raise your hand when you are ready with your answer. (Give students 30 seconds to discuss).
Call on a student to give their answer.
Thumbs up if you agree with _____ answer.

Do you agree or disagree with _____. Why?
- Student responds.

Yes, the most important thing about the who or what is that Patrick never did his homework because he thought it was boring and he wished someone else could do it. The other sentences are supporting details. (Teacher underlines the supporting details). **For example, playing baseball, basketball and video games. This sentence is a supporting detail. His teachers told him to do his homework. If he didn't he wasn't**

going to learn a thing. This sentence is also a supporting detail. They all support—or help explain--the main idea: that Patrick did not like doing his homework.

What is the next question the coach asks the reader?
- Say the main idea in 10 words or less

I will now say the main idea and everyone should count the number of words I say.

Patrick hated homework and wished somebody else could do it.

Thumbs up if you agree, thumbs down in you disagree.

Teacher calls on a student: **Why do you agree or disagree?**

Nice job being my coach. Give yourselves 3 extra points for following directions. Now let's practice all the steps with the rest of the story. Now it is your turn to read the next paragraph. When you are done give me a thumbs up so I know you are have done reading.
- Students read next paragraph.

Coaches ask the reader the first question. Coaches ask readers: Name the who or what?
- Readers answer.

Good, I will tell you my answer, thumbs up if you agree with my answer, thumbs down if you disagree.
My answer is: Patrick, the cat, the elf, and a little doll.

Thumbs up if you agree and thumbs down if you don't. Students respond.

Good, my answer is incorrect because I have mentioned all the whos and whats, instead of the MOST IMPORTANT who or what.

The correct answer is: Patrick and the elf
If you were correct, give yourself 1 point.

Now coaches ask the reader the second question.
- Coaches ask readers: Tell the most important thing about the who or what.

Teacher calls on some readers to give their answer. The rest of the class can agree or disagree with the answer. (Suggested answer: Good, the elf begged Patrick to save him from the cat, and in return he promised Patrick a wish.)

Now coaches ask the reader the third question.
Coaches ask reader: say the main idea in 10 words or less. Reader answers. Teacher calls on 2 pairs to give their main ideas. (Suggested answer: The elf promised Patrick a wish if he saved him.)

Good, now give yourselves 3 extra points for following directions, and being good coaches and readers.

GIVING HELP DURING PARAGRAPH SHRINKING
Now we will practice how to give help when your partner makes mistakes during paragraph shrinking.

Mistakes your partner can make during paragraph shrinking include: (teacher puts transparency 8.1 on overhead)
- **Not naming the most important who or what or most important thing about the who or what.**
- **Using more than 10 words to make your main idea statement.**

Let's take a look at the correction card to see how you can help the reader.
(Students take our correction card).

Everyone point to the title of the paragraph shrinking help section of the correction card.

Teacher monitors students.

Great! Let's review how to help your partner.

If the reader gives a wrong answer, the coach says: Check it.

If the reader gives a wrong answer twice, the coach says: Let me give you a hint.

If the reader still does not know the answer the coach tells the reader the answer.

I will be the reader and you will all be my coach. Teacher reads the 3rd paragraph

After reading the paragraph the teacher says: **Ask me the first question.**

181

- Name the most important who or what.

Patrick, the elf, his homework.

Is my answer correct?
- No.

Good coaching, my answer was incorrect, so how will you give me help? What will you say?
- Check it.

The most important who or what is, Patrick and the elf. Thumbs up if you agree; thumbs down if you disagree.

What if I made a mistake and said that the most important who or what was just Patrick?
- The coach will say "Let me give you a hint."

Good ! A good coach will provide a hint that helps the Reader come up with a better answer. For example, if I had said, that the most important who or what was Patrick, the coach could say, "Let me give you a hint. Patrick is not the only most important who or what".

If I am still unable to provide the correct answer the coach will say, "The answer is _____." What will the coach say?
- The answer is _____."

Good. What is the next question you will ask me?
- Name the most important thing about the who or what?

Patrick told the elf he would have to do his homework for the rest of the semester and the unhappy elf agreed.

Thumbs up if you agree with my answer, thumbs down if you disagree.
- Students respond.

Yes, my answer is correct, because it describes what the paragraph is mainly about. If I had made a mistake, what would you say?
- Check it.

Good, if I still answered incorrectly by saying the elf would do the homework. You could say, let me give you a hint, that's correct but you're not giving enough detail.

Now, as a reader, I am going to pause and think about the hint and try to make a better main idea statement and then say my answer.

If I still give an incorrect answer, how will you help me?
- I will give you the answer.

Good. Now what is the last paragraph shrinking question you will ask me?
- Say the main idea is 10 words or less.

The unhappy elf had to do Patrick's homework and he agreed.

How will you help me?
- Shrink it.

Good. Now I will think about my answer and say the main idea in 10 words or less. The elf had to do Patrick's homework and he agreed.

Now let's try one more paragraph together. Remember to use your correction card to help me if I need it. (Teacher reads paragraph.)
- After reading students say: Name the most important who or what.

I think the most important who or what is Patrick, the dictionary, and the elf.
- Check it.

Patrick, the elf, the dictionary, and math

Let me give you a hint. (One good example of a good hint would be, "You need to say the most important who or what, not all the whos or whats."

Patrick and the elf.
Tell the most important think about the who or what?

The elf did Patrick's homework.
Check it!

The elf did not know many words and could not do math fractions.

Let me give you a hint. (One good example of a good hint would be, "What you said are details not the main idea.")

The elf could not do the homework on his own, he needed Patrick's help.

183

Say the main idea in 10 words or less.

The elf could not do Patrick's homework on his own, he needed help.

Shrink it.

The elf needed Patrick's help to do his homework.

Good, mark your three points and give yourselves 2 extra points for being good coaches.

Now second readers read the next paragraph, first readers get ready to coach and ask the paragraph shrinking questions. Coaches, remember to mark 3 points for answering the 3 questions. Teacher monitors.

Everyone did a good job! Give yourselves 3 extra points. Before we go, let's review.

Who reads first during paragraph shrinking?
- The first reader.

Tell me the 3 questions the coach asks during paragraph shrinking?
- Name the most important who or what?
- Tell the most important thing about the who or what?
- Say the main idea in 10 words or less.

Good. When your reader says the wrong who or what; or says the most important thing about the who or what incorrectly, how will the coach help the reader?
- The coach will say check it.

Good. If the reader still says the wrong who or what ; or says the most important thing about the who or what incorrectly twice, how will the coach help the reader?
- The coach will say, let me give you a hint.

If the reader says the main idea in more than 10 words, what will the coach say?
- Shrink it.

Who reads and shrinks paragraphs into main idea statements after five minutes?
- Second reader.

Good. Next time we will review shrinking short paragraphs and paragraphs where the main idea is not directly mentioned.

Day 4- Shrinking Short Paragraphs

Today we are going to learn more about Paragraph shrinking, but first let's review. Remember, you can earn points for answering questions.

During Paragraph shrinking, how long does each Reader read?
- 5 minutes

How often does the Reader stop and make a main idea statement?
- After each paragraph.

Tell me the 3 questions the coach asks during paragraph shrinking?
- Name the most important who or what?
- Tell the most important thing about the who or what?
- Say the main idea in 10 words or less.

Good. When your reader says the wrong who or what; or says the most important thing about the who or what incorrectly, how will the coach help the reader?
- The coach will say check it.

Good. If the reader still says the wrong who or what, or says the most important thing about the who or what incorrectly, how will the coach help the reader?
- The coach will say, let me give you a hint.

If the reader says the main idea in more than 10 words, what will the coach say?
- Shrink it.

Good job! Give yourselves 3 extra points for answering correctly. Now, we will practice doing paragraph shrinking with short paragraphs. Sometimes a paragraph will be very short. When paragraphs are short, your will read more than 1 paragraph so that you'll have enough information to make a main idea statement. This means that you'll have to combine 2 or more paragraphs to make a good main idea statement.

This is likely to happen when a paragraph has dialogue. Dialogue means that characters in the story are talking. You'll know this because the spoken words will have quotation marks around them.

So what will you do when paragraphs are short?
- Read more than 1 paragraph before making a main idea statement.

When are short paragraphs likely to happen?

- Short paragraphs are likely to happen when characters in the story are talking.

Good! Now let me show you what I mean. Teacher puts Candle Crafts for School passage on overhead.

Now with your partner I would like you to identify some short paragraphs.

Good. Now identify paragraphs that have dialogue. (Teacher calls on some students.)

Good. Let's talk about what you will do during paragraph shrinking when you read short paragraphs. If I am the reader, I will combine 2-3 paragraphs before I do paragraph shrinking. You can also use the width of your bookmark to help determine how much you should read before you go through the steps of paragraph shrinking.

Let's look at this story. The first paragraph is short, and the second paragraph has dialogue (teacher marks quotation marks) **and is short too. The third paragraph also has dialogue and is short so I will combine the 3 paragraphs and will read all 3 before answering the paragraph shrinking questions.**

I will draw a line to make the stopping point. Teacher draws line.

I can also use my bookmark to help me. Teacher demonstrates.

Now look at the rest of the passage and draw a line to show what would be a good stopping point for paragraph shrinking.

Students follow.

Again, all three paragraphs are really short, so you can combine 3 paragraphs and answer the paragraph shrinking questions.

Now first readers, get ready to read and shrink the paragraphs into good main idea statements.

Teacher monitors.

Now turn to the story "Candle Crafts for School". Discuss with your partner a good stopping point and draw a line underneath it.

Teacher monitors students.

Good job. Now second readers, get ready to read and shrink paragraphs into main idea statements, coaches monitor and give points. (Teacher monitors. Teacher then asks students to do PALS with the assigned books in their folders.)

Day 5: Main ideas That are Not Directly Stated

Good. Now there are some paragraphs where the main idea is not stated directly. You have to read the paragraph and figure out what the main idea is based on the details. Here is an example.
Teacher puts passage on overhead. Teacher reads first paragraph about Tom.

Name the most important who or what?

- (Students respond) *Tom*

Good. Now most of the sentences in this passage tell you what the main thing Tom did. What do you think is the main thing Tom did? (Call on specific students to give their answer and their reason)

- *His homework.*

 Good, so even though the paragraph does not directly mention that Tom is doing his homework, we know that it is correct, because the paragraph says, that Tom did Math, studied spelling words, and wrote a report. (Underline what Tom did so students can visually see it)**. So math, spellings and a report are all part of Tom's homework.**

So what is the most important thing about the who or what?
- (Student responds) *Tom did his homework.*

So now, lets' say the main idea in 10 words or less? (Entire group answers together)
- *Tom did his homework.*

Now let's try another paragraph. Teacher reads paragraph.

Name the most important who or what?

- *Bill*

Good. Now tell the most important thing about the who or what?

Students answer. Bill is sad.

Good, we know that Bill is sad because he got an F on his test, he lost his favorite toy, he lost a game and his friend moved. All these events must make him sad, so even though this is not stated the main idea is that Bill is sad or Bill is having a bad day.

Now say the main idea in 10 words or less.

Bill is sad.

Now let's try another passage: I will be the reader and you will be my coach.
Teacher reads the following passage.

Mars is one of nine planets that circle the sun. It is Earth's neighbor. Mars is only about half the size of Earth. It is much colder on Mars that it is on Earth. Still Mars is the planet most like Earth. Its days last about twenty-four hours. It has an atmosphere- a layer of gases around it. And most important of all Mars has water. The north pole and south pole of Mars are covered with icecaps.

Students ask: Name the most important who or what?
Mars and Earth

Students ask: Tell the most important thing about the who or what?

Mars is similar to earth it has icecaps, an atmosphere and a day lasts about 24 hours and is dissimilar as it is colder and smaller than earth.
Thumbs up if you agree and thumbs down if you disagree.

Students ask: Say the main idea in 10 words or less.

Mars is similar to earth. Thumbs up if you agree , thumbs down if you disagree.

Monitor students. Ask students why they agree or disagree.

Now I will tell you another main idea statement. Thumbs up if you agree or disagree. Mars is dissimilar to earth.

Monitor students and ask students why they agree or disagree.

Now here is another main idea statement. Thumbs up if you agree, thumbs down if you disagree.

Mars has some similarities and some dissimilarities to earth. Thumbs up if you agree and thumbs down if you disagree.

Monitor students and ask students why they agree or disagree. Yes, the last statement is the most correct, because the paragraph mostly discusses similarities such as icecaps, an atmosphere and a day that lasts 24 hours, and dissimilarities such as a colder climate and that its size is smaller than earth.
Now it is your turn to read the passage

Good. Give yourselves 5 extra points for doing a good job.

DAY 6- Using Paragraph Shrinking Strategy with Different Reading Materials

Last time we met, we reviewed identifying main ideas that are not directly stated. Today we are going to learn that we can use the paragraph shrinking strategy with different reading materials. The purpose of this activity to make you aware that you can use the Paragraph shrinking strategy with a wide variety of reading materials.

Before we start paragraph shrinking, can you tell me why it is important to practice paragraph shrinking?

- To help me identify the main idea
- To help me understand what I just read.
- To become better readers and improve our comprehension.

When we do PALS we do Partner reading, retell and paragraph shrinking, but we are focusing on Paragraph shrinking as it is an important skill.

What are the three questions that we ask during paragraph shrinking?

- Name the most important who or what?
- Tell the most important thing about the who or what?
- Say the main idea in 10 words or less.

Good! You know all the steps of paragraph shrinking.

When you are doing PALS, do we always read the same book?

No.

That is correct, when we do PS we do not always use the same book. Sometimes we use chapter books, and sometime we use different kinds of books. Now can you identify some reading materials you have used the paragraph shrinking strategy on?

Teacher and students briefly discuss the materials they have used the paragraph shrinking strategy on and teacher writes their responses on the board.

Good, the strategy can be used with reading materials such as your reading anthology, chapter books, picture books, social studies books, science books, comprehension passages, magazines, and the newspaper. (Teacher shows students some examples of books).

Name some chapter books you have read, with which you can use the paragraph shrinking strategy? Write out 2 examples on your worksheet. Once you are done tell your partner your 2 examples.

Students name chapter books and discuss examples with their partner.

Good, now name some picture books you can use the paragraph shrinking strategy with. Write out 2 examples on your worksheet. (Teacher will have some examples on display for students as a reminder).**Once you are done tell your partner your 2 examples.**

Students name picture books and discuss examples with their partner.

Good now name some social studies books or social studies topics you can use the paragraph shrinking strategy with. Write out 2 examples on your worksheet. Once you are done tell your partner your 2 examples.

Students name social studies books/ topics and discuss examples with their partner.

Good now name some science books or science topics you can use the paragraph shrinking strategy with. Write out 2 examples on your worksheet. Once you are done tell your partner your 2 examples.

Students name science books/ topics and discuss examples with their partner.

Good, you can use the paragraph shrinking strategy on even magazines and newspapers that you read. Some examples of magazines and newspapers are the National Geographic for Kids, and Times for kids, and Sports Illustrated for Kids.

Now write an example of a newspaper and a magazine you can use the paragraph shrinking strategy on. Once you are done tell your partner your example.

Students name newspapers and discuss examples with their partner.

Good, so now we have learned that we can use the paragraph shrinking strategy with a variety of different reading materials.

 Now you each partner will get 2 minutes to choose some reading material they will do the paragraph shrinking strategy on.

Teacher sets timer for 2 minutes, students choose reading materials**.**

 Teacher monitors students doing paragraph shrinking with different reading materials.

Before we stop let's review. Give me examples of two types of reading materials you can use the PALS strategy on.

- School text
- Magazines

Give me an example of a chapter book you can use the strategy with .

- Frindle (other stories).

Day 7- Using the PALS Strategy in Different Settings and Goal Setting

Last time we practiced paragraph shrinking with different reading materials. Today we are going to learn WHEN and WHERE you can use paragraph shrinking, but first let's review.

Can you tell me why it is important to practice paragraph shrinking?

- To help me identify the main idea
- To help me understand what I just read.
- To become better readers and improve our comprehension.

Identify two types of reading materials you can use the PALS strategy on.

- School text
- Magazines

Tell me what is a strategy?

A strategy is a plan of action to get something done.

Tell me some strategies you have used during reading.

Students discuss strategies they have used such as sounding out words, rereading a sentence etc.

(If students do not know of a strategy that they use teacher will provide examples). Teacher <u>writes out names of strategies that students discuss on the board.</u> *Some examples are: Sounding out unknown words, rereading a sentence or paragraph when it is unclear, retelling what you just read, making predictions etc.*

A strategy can be helpful because it is a plan of action or a tool you can use to help you comprehend/understand what you are reading. For example, if your strategy is to reread an unclear sentence, it will help you understand what you are reading better.

Using a strategy such as paragraph shrinking can help you understand the story better and remember the important story characters and events too. Summarizing a paragraph will help you identify the main ideas of each paragraph.

Now we're going to talk about WHEN and WHERE you can use the paragraph shrinking strategy.

Can you use only use Paragraph Shrinking during PALS?

No, you can use Paragraph Shrinking at other times too.

Good. That is correct. You can use the paragraph shrinking strategy not just during PALS, but also during other parts of the day when you are reading.

Give me examples of WHEN and WHERE you can use the paragraph shrinking strategy? Let's first discuss WHEN you can use the paragraph shrinking strategy. Turn to your partner and discuss when you can use paragraph shrinking. Once you have finished discussing write your answer under this column (teacher points to left hand column "WHEN CAN YOU USE PARAGRAPH SHRINKING?")

WHEN AND WHERE YOU CAN USE PARAGRAPH SHRINKING

WHEN can you use Paragraph Shrinking?	**WHERE** can you use Paragraph Shrinking?

Students discuss when they can use the strategy and teacher writes their ideas on the board. (if students do not know when they can use the strategy, the teacher will provide examples).

Yes, when you are answering comprehension questions during reading, when you are reading a book on your own, when you are reading about a topic in science or social studies, when you are reading the newspaper. You can identify the main idea using paragraph shrinking ANY TIME you need help understanding what you are reading.

WHEN AND WHERE YOU CAN USE PARAGRAPH SHRINKING KEY	
WHEN can you use Paragraph Shrinking?	**WHERE can you use Paragraph Shrinking?**
1. Reading a passage	**At school (during reading class)**
2. Answering comprehension questions	**Social studies class**
3. Reading a Science topic	**In Science class**
4. Reading a social studies topic	**During independent reading time or silent reading time**
5. Reading a book on my own	**At home when reading a book**
6. Reading the newspaper/magazine	**At home when doing my homework**
7. Reading my school anthology (e.g. Houghton Mifflin)	

Give yourselves 3 extra points for doing a good job identifying when you can use paragraph shrinking strategy.

Let's identify WHERE you can use the PALS strategy. Turn to your partner and discuss when you can use paragraph shrinking. Once you have finished discussing write your answer under this column (teacher points to right hand column "WHERE CAN YOU USE PARAGRAPH SHRINKING?")

Students and teacher identify where the strategy can be used.

Yes, you can use paragraph shrinking ANYTIME YOU NEED TO UNDERSTAND WHAT YOU ARE READING. You can use the strategy in school during reading, during silent reading time or independent reading time, in science or social studies class, at home when reading just for fun or at home when doing your homework. You can identify the main idea using paragraph shrinking ANY TIME you need help understanding what you are reading.

Good give yourselves 3 extra points for doing a good job identifying where you can use paragraph shrinking strategy.

Now that we know that we can use the PARAGRAPH SHRINKING strategy when we need to understand what we are reading better, let us now set a goal about WHEN and WHERE we will use the paragraph shrinking strategy.

From now on, at the beginning of every PALS session, we will check if we met our previous goals and set new goals for the next week.

196

Good, now I **will model how to write a goal. I will first write out the date. Next under I will write out when I will the strategy. I will use the paragraph shrinking strategy when I am reading a book. I will write this under WHEN. (Teacher writes this on the worksheet below)**

GOAL SETTING: USING PARAGRAPH SHRINKING DURING DIFFERENT SETTINGS

Reminder:

WHEN can you use Paragraph Shrinking?	WHERE can you use Paragraph Shrinking?
1. Reading a passage	**At school (during reading class)**
2. Answering comprehension questions	**Social studies class**
3. Reading a Science topic	**In Science class**
4. Reading a social studies topic	**During independent reading time or silent reading time**
5. Reading a book on my own	**At home when reading a book**
6. Reading the newspaper/magazine	**At home when doing my homework**
7. Reading my school anthology (e.g. Houghton Mifflin)	

DATE: _____
GOAL: I will use paragraph shrinking-
WHEN:_____
WHERE:_____

Next, I will write WHERE I will use the strategy. Teacher writes (_I will use the strategy in class during silent reading time)._

Now I will show you how I will meet my goal. Let's pretend this is silent reading during class. I will read the first paragraph of the story "Dudley the Dolphin". (Teacher reads the paragraph). **Now I will ask myself the main idea questions. Name the most important who or what.** (Teacher responds). **Next I will answer the next question, "tell the most important thing about the who or what** (Teacher answers the question). **Next I will say the main idea in 10 words or less** (teacher responds).

Thumbs up if you agree with my answer thumbs down if you disagree.

Students respond.

Now I will write my main idea in 10 words or less. Once I am done, I can color a star on my star chart under _____ (day).

If I do more than 1 paragraph, I can color in more stars on my star chart, after I finish writing my main idea.

Any questions?

Teacher answers and clarifies directions.

Now open your folders. The right hand pocket of your folder has a star chart for you to color and your question card. On your left hand pocket you have 2 packets. The blue packet is your goal setting sheet and the white packet has paragraph shrinking writing worksheets.

Now pull out your goal setting sheet. Now, you write out one goal that states WHEN and WHERE you will use the paragraph shrinking strategy outside of PALS. Once you are done share your goal with your partner.

Students share their goal with their partner. Teacher monitors.

 The next time we meet _____, I will check to see if you met your goal. If you met your goal by using the strategy outside of PALS you can receive 5 extra points.

How many points can you receive for meeting your goal?

5 extra points.

Every session, remember to bring your folder, goal sheet filled out, and your paragraph shrinking writing strategy sheet next session and you will receive 5 points for meeting your goal.

Now, let's practice. Let's try using the PALS strategy on something you would read in school. (Teacher gives students a passage to read the passage "Dudley the Dolphin"). Identifying the main idea will help you understand what you are reading.

Here is a passage, which is similar to what you read in class. Let's us practice how you will use the PALS strategy outside of PALS.

You will try the strategy on your own and write out your main idea. Once you are done you can color in a star.

Student practices using the PALS prompt card. (Student practices PALS strategy, and teacher monitors students).

If time permits, once they finish Dudley the Dolphin, they can continue doing PALS with their partner.

Nice job practicing paragraph shrinking. Before we leave lets us review.

- **Identify WHEN you can use the paragraph shrinking strategy.**
- **Identify WHERE you can use the paragraph shrinking strategy.**
- **What is the goal you set? How many points can you get for achieving your goal?**

Day 8- Using PALS Strategy When You Come Across Words Which Imply Main Idea Identification

For the past week, we have been setting goals to use the paragraph shrinking strategy outside of class. Take out your blue goal setting sheet from your folders and tell your partner when and where you used the paragraph shrinking strategy.

Students discuss their goals with their partner.

If you have used the strategy give yourself 5 extra points on your point sheet (each pair still share the same point sheet). **We will count all your stars at the end of next week.**

Now set a goal for next week. (Give students a minute to do so- teacher monitors students).

Now we know that we can use the paragraph shrinking strategy with different reading materials, and during different settings such as in class and at home.

Today we are going to learn specific words that tell us to use the paragraph shrinking strategy. But before we start let's review.

Why do we do paragraph shrinking?

- To help me identify the main idea
- To help me understand what I just read.
- To become better readers and improve our comprehension.

Give me examples of different types of reading materials you can use the PALS strategy on.

- School text
- Magazines
- Science/social studies books

Good. Give yourselves 2 extra points for answering.

Today we are going to learn specific words that tell us to use the paragraph shrinking strategy.

When we ask our partners the paragraph shrinking questions what are the three questions that we ask the reader?

- Name the most important who or what?
- Tell the most important thing about the who or what?

- Say the main idea in 10 words or less.

Good. When you are asked to say the main idea you are using the paragraph shrinking strategy. The word main idea reminds us to use the paragraph shrinking strategy. *(Teacher writes on board/poster board the following, "Words that tell us to use the paragraph shrinking strategy"- Under this title write the words 'main idea'.)*

Now let's learn some more words that tell us to use the paragraph shrinking strategy. *(Teacher writes on board under "Words that tell us to use the paragraph shrinking strategy")- Most important idea in the paragraph*

When your teacher asks you, "What is the most important idea in this paragraph? What strategy can use?

- Paragraph shrinking.

Good. Now let's practice some examples. I will read a paragraph from the story "Release to Freedom". After a paragraph I will ask you a question and what strategy you can use to answer the question. (*Teacher reads paragraph and students follow along.)*

What strategy will you use to answer the question, "what is the most important idea you learned in this paragraph?"

- The paragraph shrinking strategy.

Excellent. Now I will be the reader and answer the question using this new question card *(Teacher puts question card on overhead).*

To answer the question "what is the most important idea of this paragraph I can use the paragraph shrinking strategy. First I will name the most important who or what. My answer is Jordan. Thumbs up if you agree, thumbs down if you disagree.

- Students respond, if they disagree teacher and students discuss the answer.

Next I will answer the most important thing about the who or what. – My answer is "Jordan loved animals and always helped animals that were injured."

Thumbs up if you agree, thumbs down if you disagree.

- *Students respond, if they disagree teacher and students discuss the answer.*

Next, I will say the main idea in 10 words or less. My answer is "Jordan loved to help animals that were injured." *(Students count the number of words as the teacher says the main idea).*

My answer to the question, what is the most important idea in this paragraph is "Jordan loved to help animals that were injured".

Thumbs up if you agree with my answer thumbs down if you disagree.

- *If students disagree ask them to come up with an answer and discuss whether it is appropriate or not.*

Now if I ask to tell me the first thing that happened in the paragraph. What strategy can I use? Discuss this with your partner for 15 seconds.

- *Students discuss.*

Teacher calls on students to answer the question. (Students may say they can use the retell strategy).

Can you use the paragraph shrinking strategy to answer this question?

- *No.*

Why not?

- *Suggested response:* Because the paragraph shrinking strategy can be used to tell us the most important thing, or the main idea. The question is about what is the first thing that happened in the story.

Who can tell me the answer to the question what is the first thing that happened in the story?

- Jordan heard a strange sound when he was walking by the lake.

Can you tell me other words that remind us to use the paragraph shrinking strategy? Hint, look at the paragraph shrinking questions to help you identify other words.

Have students brainstorm. **Suggested answer: most important thing.** *Teacher writes students answers (e.g. most important idea) on the board under title "Words that tell us to use the paragraph shrinking strategy".*

From now on during paragraph shrinking, the reader will use this green prompt card to answer the question. *(Teacher gives each pair a green prompt card)*

Let us look at the prompt card together. The first step on the prompt card says, "To answer the question,_____ I can use the paragraph shrinking strategy."

When you are the reader, you will restate or repeat the question the coach asked in place of the blank.

What will say in place of the blank?

- The question.

Excellent. So let us say that the coach asked me the question, what is the main idea of this paragraph. To answer the question I will start with step 1 (Teacher points to step 1)**. Let us read step 1 as a group.**

Teacher and students read together **"To answer the question, what is the main idea of the paragraph, I can use the paragraph shrinking strategy."**

After doing step 1, the reader does step 2. (Teacher points to step 2 on prompt card).

Let's read step 2 together.

Teacher and students read step 2.

Good. After doing step 2, the reader then does step 3. *(Teacher points to step 3).*

Let us read step 3 together. Teacher and students read step 3.

- *"Next I will tell the most important thing about the who or what."*

After doing step 3, the reader will then do step 4. What step will the reader do next?
- Step 4.

Let us read step 4 together. Teacher and students read step 4.

- *"Next I will say the main idea in 10 words or less."*

Good. After step 4 the reader will do step 5. Let us read step 5 together.
- My answer to the question _____ is: **In place of the blank, the reader will restate the question the coach asked.**

What will the reader say in place of the blank?

- The question.

Good. Now remember your answer for step 5 is the same as your answer in step 4. All you are doing in step 5 is telling the coach your answer to the question that was asked.

Now let us practice doing all the steps. I will be the reader and you will be my coach. I will first read second paragraph. (Teacher reads paragraph 2, and students follow along).

Now that I have read the paragraph I will answer the question by answering all five steps on the prompt card. (Teacher points to the prompt card).

To answer the question what is the main idea of the paragraph I can use the paragraph shrinking strategy.

First I will name the most important who or what.

- **My answer is, "Jordan and the duck."**

Thumbs up if you agree, Thumbs down if you disagree. *If students disagree ask them to come up with the most important who or what and give a reason for their choice.*

Next I will tell you the most important thing about the who or what.

- **Jordan found a duck who was injured and tangled in some fishing line.**

Thumbs up if you agree, Thumbs down if you disagree. *If students disagree ask them to come up with the most important thing about the who or what and give a reason for their answer.*

Next, I will say the main idea in 10 words or less. Remember to count the number of words I say.

- **Jordon found an injured duck tangled in some fishing line.**

My answer to the question, what is the main idea of this paragraph is, "Jordan found an injured duck tangled in some fishing line."

This is how the reader answers the question.

There are other words that remind us to use the paragraph shrinking strategy. *Teacher puts "Bulletin board sheet on overhead". Uncover words already discussed.*

Another word that reminds us to use the paragraph shrinking strategy is the word Gist. *(Teacher uncovers the word).* **The word gist means the main idea or the main point.**

What does gist mean?

- The main idea or the main point.

Good. So if I ask you the question what is the gist of the paragraph, what strategy can you use to answer the question?

- Paragraph shrinking strategy.

Good. What about if I ask you the question, where did Jordan find the duck? Can I use the paragraph shrinking strategy to answer that question?

- No

Why not?
- (Suggested answer): Because there question is where did Jordan find the duck, not what is the main idea of the paragraph.

Excellent, give yourselves 2 extra points for answering.
Now I will read the next paragraph and will answer the question what is the gist of this paragraph?

Teacher reads paragraph and students follow along. **You will help me answer the question using the green prompt card.**

(After reading the paragraph the teacher says) **"What is the first step to answering the question?**

- To answer the question, what is the gist of the paragraph, I can use the paragraph shrinking strategy.

Good. What is the second step?

- First I will name the most important who or what.

Good. What is the who or what? (Teacher calls on a student to answer).

- Jordan and the duck.

Good. Read the next step together.

- Next I will tell the most important thing about the who or what.

Now second readers tell the first reader your answer. When you have finished telling your partner the answer, raise your hand.

One example of an answer to the question can be, "Jordan wrapped the injured duck in his sweatshirt to protect it.

Good. I will do the fourth step now. Next I will say the main idea in 10 words or less.

- **Jordan wrapped the duck in his sweatshirt to protect it.**

So my answer to the question, what is the gist of this paragraph is, "Jordan wrapped the duck in his sweatshirt to protect it.

Other words that mean the same as main idea is a summary statement. (Uncover word on bulletin board materials).

A summary statement is a sentence that tells you the main idea.

What is a summary statement?

- A sentence that tells you the main idea.

If your teacher asks you to what is a summary statement or to write a summary statement, you can use the PALS strategy.

I will read the paragraph and answer the question "What is a summary statement for this paragraph?" (Teacher reads the paragraph and students follow along).

After reading paragraph 4, the teacher say, "To answer the question, give me a summary statement for this paragraph, I can use the paragraph shrinking strategy".

First I will name the most important who or what.- Jordan and the duck.

Next, I will tell the most important thing about the who or what- First readers tell the second reader your answer. When you have answered the question raise your hand.

One answer is, Jordan cut the fishing line that was wrapped around the bleeding duck.

Thumbs up if you agree, thumbs down if you disagree. If students disagree, ask students to come up with an answer.

Next, I will say the main idea in 10 words or less. Jordan cut the line that wrapped around the bleeding duck.

So my answer to the question, give a summary statement is, Jordan cut the line that wrapped around the bleeding duck.

Excellent, we have now learned different words that remind us to use the paragraph strategy and steps to answer questions on paragraph shrinking.

From now on, during paragraph shrinking, the coach will not ask the reader all the paragraph shrinking questions. Instead the coach will ask the reader one question from this stack of questions on this ring.

What will the coach ask?

- One question from this ring.

Good, you will then flip the card over and ask the next question for the next paragraph. To answer the question the reader will use the green prompt card. What will the reader do to answer the question?

- Use the green prompt card.

Now you will practice in pairs. The second reader is the coach and the first reader is the reader.

Second readers raise your hands. You are the coach. *(Second readers raise their hands).*

First readers raise your hands. You are the reader.

Just for today, first readers will read one paragraph, and then you will switch jobs. First readers you will read paragraph 5. (Teacher points to it).

After you finish reading paragraph 5 coaches will ask the reader question 1.

What will the coaches ask the reader?

Question 1.

Now first readers draw a line after paragraph 5. Teacher demonstrates.

After you finish reading paragraph 5, the second reader will be the reader and the first reader will be the coach.

Who is the coach after paragraph 5?

 The second reader.

The coach will ask the reader to answer question 1. What will the coach ask the reader to answer?

Question 1.

Good. Now first readers begin reading and coaches remember to help your partners.

Teacher monitors students.

REVIEW:

Excellent. We have learned about words that remind us to use the paragraph shrinking strategy.

Give me an example of some words that remind you to use the paragraph shrinking strategy.

Gist, main idea, most important idea, summary statement.

Good.

You have done a good job with PALS today. Give yourselves 5 extra points. Put your materials in your folders and line up.

During the past few months we have been using PALS to help you become a better reader. You have also been practicing paragraph shrinking, one of the PALS strategies to help you figure out the main idea.

Let's review. Why do we do paragraph shrinking?

- To help me identify the main idea
- To help me understand what I just read.
- To become better readers and improve our comprehension.

Can we do paragraph shrinking only during PALS?

- No

Give me examples of where you can use the paragraph shrinking strategy?

- At home
- At school during independent reading time

Give me examples of different types of reading materials you can use paragraph shrinking strategy on?

- School text
- Magazines
- Science/social studies books

Good. So we know we can use the paragraph shrinking strategy with different books such as fiction and non-fiction books, and we can use the strategy when we a reading a book at home, or in school.

Give me examples of words that remind us to use the paragraph shrinking strategy?
- Main idea
- Most important thing/ most important idea
- Gist
- Summary statement

Now that you are becoming better at using the paragraph shrinking strategy and can do all the steps of paragraph shrinking on your own, <u>today you are going to learn to check yourself when doing paragraph shrinking.</u> Teacher writes on the board. "I will learn how to check if I am doing all the steps correctly on my own, when I use the paragraph shrinking strategy."

Let's read the purpose of today's lesson together.
- I will learn how to check if I am doing all the steps correctly on my own, when I am use the paragraph shrinking strategy.

All this time when you did paragraph shrinking the coach would check if you were doing all the steps of paragraph shrinking correctly and would help you when you made a mistake using the correction card.

Give me an example of how the coach checked and helped during paragraph shrinking?
- The coach said "Check it" or "Shrink it."

Good. Today you will learn to check if you are doing everything correctly during paragraph shrinking on your own.

From now on, when you are doing paragraph shrinking you will work on your own. You will read from your own book. You will read a paragraph and then ask yourself one of the paragraph shrinking questions from the ring.

When you are doing paragraph shrinking, who will ask the questions?
- Me or myself

After you finish asking yourself the question, you will use the green paragraph shrinking card to answer the question. What card will you use to answer the questions?
- Green card.

Let's practice this together.
- *Teacher and students read the first paragraph out aloud.*

Now go ahead and ask yourself question 1 on the paragraph shrinking question ring and answer the question using the green card. Let's do this as a group.

Teacher and students use the green sheet together and to step 1.
- To answer the question, what is the most important idea I can use the paragraph shrinking strategy.
- First I will name the most important who or what.

I think the most important who or what is King Lion and the animals. Thumbs up if you agree, thumbs down if you disagree with my answer.

- Students respond – teacher and students discuss the answer.

King Lion and the animals are the most important who or what because both the first paragraph and the second paragraph are talking about the King Lion and the animals.

I will read the next step: Check: Do I have the correct who or what? Y or No

If I do not have the correct who or what I can go back reread the paragraph and try to figure out the correct who or what.

Now I will do step 3. Let's read it together.

- Next I will say the most important thing about the who or what?

King Lion lived in the best cave on one side of the forest and did not share the forest with the other animals and they were not happy about it. Thumbs up if you agree, thumbs down if you disagree.

- Students respond- teacher and students discuss the answer.

Check: Is my main idea really about the most important idea in this paragraph? Y or No?

Yes. **I know this is the main idea because in the second paragraph the author says that the Lion lived on one side while the other animals lived on the other side of the forest and they were not happy that the Lion did not share the forest.**

Let's do the next step together. Next I will say the main idea in 10 words or less.

King Lion did not share the forest with the animals. Thumbs up if you agree, thumbs down if you disagree.

- Students respond- teacher and students discuss the answer.

Check: Is my main idea in 10 words or less? Y or No?

Let's do the next step together. My answer to the question what is the most important idea of this paragraph is "**King Lion did not share the forest with the animals."**

Nice job. Give yourselves 5 extra points for participating and answering the question.

Day 10 – Self- Monitoring Fading

During the past few months we have been using PALS to help you become a better reader. You have also been practicing paragraph shrinking, one of the PALS strategies to help you figure out the main idea.
Let's review. Why do we do paragraph shrinking?
- To help me identify the main idea
- To help me understand what I just read.
- To become better readers and improve our comprehension.

Can we do paragraph shrinking only during PALS?
- No

Give me examples of where you can use the paragraph shrinking strategy?
- At home
- At school during independent reading time

Give me examples of different types of reading materials you can use paragraph shrinking strategy on?
- School text
- Magazines
- Science/social studies books

Good. So we know we can use the paragraph shrinking strategy with different books such as fiction and non-fiction books, and we can use the strategy when we a reading a book at home, or in school.

Give me examples of words that remind us to use the paragraph shrinking strategy?
- Main idea
- Most important thing/ most important idea
- Gist
- Summary statement

Can you use the paragraph shrinking strategy on your own?
- Yes

As you got better at using the paragraph shrinking strategy to figure out the main idea of the paragraph, you started to use the paragraph shrinking strategy on your own. You would read a paragraph, ask yourself a paragraph shrinking question, and then check your answer.

212

So to figure out the main idea, you always read, asked, answered and checked if your answer was correct.

Now that you know all the steps to figure out the main idea, you are going to use a shortened prompt card. The steps are the same as you did previously during paragraph shrinking, just shortened.

Model how to use the prompt card

Students practice using faded prompt card with a book of their choice.

Appendix E

Student Materials

Day 6-USING PARAGRAPH SHRINKING WITH DIFFERENT READING MATERIALS

Reading Material I can use the Paragraph Shrinking strategy with:
_____
EXAMPLE:_____
EXAMPLE:_____

Reading Material I can use the Paragraph Shrinking strategy with:
_____
EXAMPLE:_____
EXAMPLE:_____

Reading Material I can use the Paragraph Shrinking strategy with:
_____
EXAMPLE:_____
EXAMPLE:_____
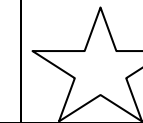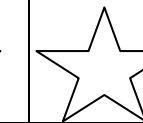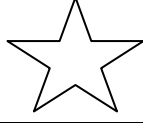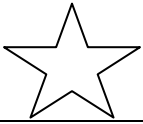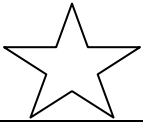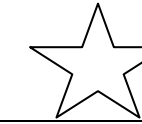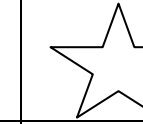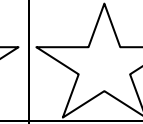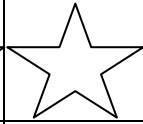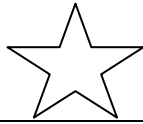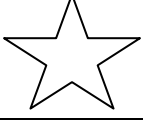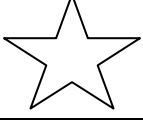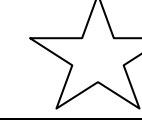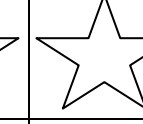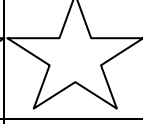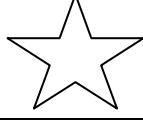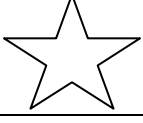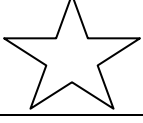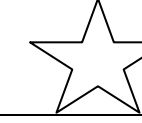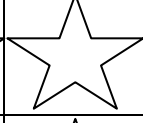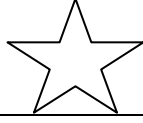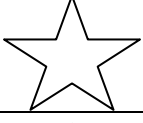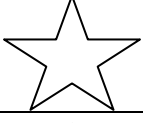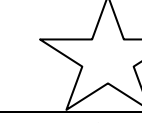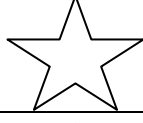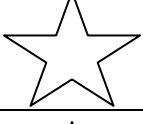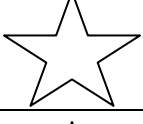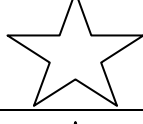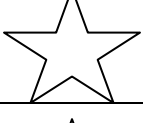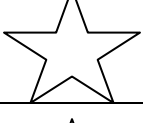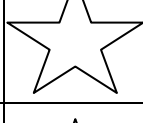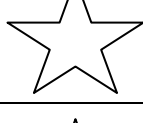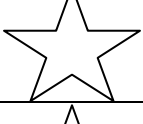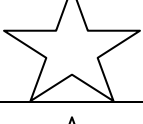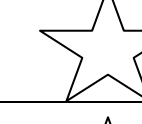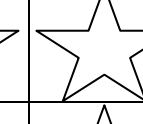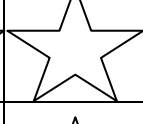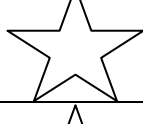
Reading Material I can use the Paragraph Shrinking strategy with:
_____
EXAMPLE:_____
EXAMPLE:_____

Day 7- Star Chart

Week : _____

Name: _____

Color in the stars to show how many paragraph shrinking statements you wrote.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

Day 8 - GOAL SETTING: USING PARAGRAPH SHRINKING DURING DIFFERENT SETTINGS

Reminder:

When can you use Paragraph Shrinking?	Where can you use Paragraph Shrinking?
1. Reading a passage	At school (during reading class) or at home (doing homework)
2. Answering comprehension questions	At school (during reading class) or at home (doing homework)
3. Reading a Science topic	In Science class or at home (doing homework)
4. Reading a social studies topic	In social studies class or at home (doing homework)
5. Reading a book on my own (silent reading time)	During independent reading time or at home

DATE: _____
GOAL: I will use paragraph shrinking-
WHEN:_____
WHERE:_____

PARAGRAPH SHRINKING

Reader answers using the following steps:

1. "To answer the question, _____ I can use

   the paragraph shrinking strategy."

2. First, I will name the most important who or what.

3. Next, I will tell the most important thing about the who

   or what.

4. Next, I will say the main idea in 10 words or less.

   Say answer in 10 words

5. My answer to the question _____ is
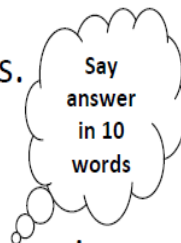
PARAGRAPH SHRINKING

What is the main idea of this paragraph?

PARAGRAPH SHRINKING

What is the most important idea of this paragraph?

PARAGRAPH SHRINKING

What is the gist of this paragraph?

PARAGRAPH SHRINKING

What is the summary statement for this paragraph?

PARAGRAPH SHRINKING

Answer using the following steps:

1. "To answer the question, _____ I can use the paragraph

shrinking strategy."

2. First, I will name the most important who or what.

Check- Do I have the correct who or what? Y or N
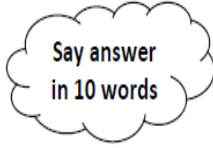
3. Next, I will tell the most important thing about the who or what.

Check- Is my main idea about the most important thing in the
paragraph ? Y or N

4. Next, I will say the main idea in 10 words or less.

Check- Is my main idea in 10 words or less? Y or N

5. My answer to the question _____ is

Say answer
in 10 words
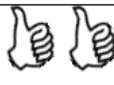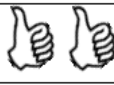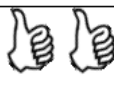
Paragraph Shrinking Self-Monitoring Checklist

☐ **R**ead paragraph

☐ **A**sk- Paragraph shrinking question

☐ **A**nswer -Name the most important who or what

☐ **C**heck

☐ **A**nswer -Most important thing about who or what

☐ **C**heck

☐ **A**nswer -Main idea – 10 words or less

☐ **C**heck

☐ My answer is_____

Appendix F
Social Validity

Student Name: _____

Thank you for participating in the study. I will ask you some questions about your experience learning to use the PALS Reading strategy. Please answer each question as best as you can. **For each question, circle your answer**

---

1. Practicing the PALS Reading strategy helps me become a better reader.

I strongly disagree	I disagree	I agree	I strongly agree

---

2. Using the *Question Card* helps me remember the steps for each PALS Reading activity.

I strongly disagree	I disagree	I agree	I strongly agree

---

3. Using the *Correction Card* helps me fix mistakes my partner makes when reading during PALS.

I strongly disagree	I disagree	I agree	I strongly agree

---

4. Practicing PALS with a partner helps me remember how to use the PALS Reading strategy.

I strongly disagree	I disagree	I agree	I strongly agree

1. How often did you use the *Question Card* to help you remember the PALS strategy steps?

Never	Sometimes	Often	Very Often

2. How often did you use the *Correction Card* to help fix mistakes when reading during PALS?

Never	Sometimes	Often	Very Often

3. How many times a week did you use the PALS Reading Strategy *on your own outside of PALS?*

Never	Sometimes (once a week)	Often (2-3 times per week)	Very Often (4 or more times per week)

1. Would you recommend this strategy to other students in your grade?	YES	NO
2. Do you think it is important to learn the PALS Reading strategy?	YES	NO

3. If you circled **YES** for question 2, why do you think it is important to learn the PALS Reading strategy? (Please write your answer below)

_____

_____

_____

_____

4. Rate each PALS reading activity from most liked to least liked?
   Put a **1** next to the activity you **liked best**
   2 next to the activity you **liked second best**
   3 next to the activity you **liked third best**
   4 next to the activity you **liked least**

   a. Partner Reading _____

   b. Retell _____

   c. Paragraph Shrinking _____

   d. Paragraph Shrinking Writing _____

Student Name: _____

Thank you for participating in the study. I will ask you some questions about your experience learning to use the PALS Reading strategy. Please answer each question as best as you can. *For each question, circle your answer*

1. Using the Paragraph Shrinking strategy helps me to identify the main idea of a paragraph.

I strongly disagree	I disagree	I agree	I strongly agree

2. Using the *Read, Ask, Answer, Check* steps helps me practice the paragraph shrinking strategy on my own.

I strongly disagree	I disagree	I agree	I strongly agree

3. Practicing paragraph shrinking with *fiction and non-fiction books* teaches me to use strategy with different reading materials.

I strongly disagree	I disagree	I agree	I strongly agree

4. Learning words such as gist and summary statement help me remember to use the paragraph shrinking strategy.

I strongly disagree	I disagree	I agree	I strongly agree

5. Setting goals & checking if I meet my goals helps me remember to use the paragraph shrinking strategy outside of PALS.

I strongly disagree	I disagree	I agree	I strongly agree

226

1. How often did you use the *Question Card* to help you remember the PALS strategy steps?

Never	Sometimes	Often	Very Often

2. How often did you use the *Correction Card* to help fix mistakes when reading during PALS?

Never	Sometimes	Often	Very Often

3. How often did you use the paragraph shrinking prompt card to help you remember the paragraph shrinking steps when practicing the strategy on your *own*?

Never	Sometimes	Often	Very Often

4. How many times a week did you use the paragraph shrinking strategy *outside of PALS?*

Never	Sometimes (once a week)	Often (2-3 times per week)	Very Often (4 or more times per week)

1. Would you recommend this strategy to other students in your grade?	YES	NO
2. Do you think it is important to learn the paragraph shrinking strategy?	YES	NO

3. If you circled **YES** for question 2, why do you think it is important to learn the paragraph shrinking strategy? (Please write your answer below)

_____

_____

_____

_____

4. Rate each PALS reading activity from most liked to least liked?
   Put a **1** next to the activity you **liked best**
   2 next to the activity you **liked second best**
   3 next to the activity you **liked third best**
   4 next to the activity you **liked least**

   a. Partner Reading _____

   b. Retell _____

   c. Paragraph Shrinking _____

   d. Paragraph Shrinking Writing _____

Appendix G
Preliminary Analysis Tables and Figures

Table 30. *Reliability Analysis for Pretest Main Idea Identification of Narrative Text (N =* 62*)*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correction
	Cronbach's alpha = .548		
Question 1	5.52	5.434	.135
Question 2	5.63	5.926	-.065
Question 3	5.55	5.940	-.078
Question 4	5.56	5.66	.041
Question 5	5.48	5.155	.258
Question 6	5.52	5.074	.299
Question 7 – Who	5.38	5.006	.403
Question 7 – What	5.61	5.290	.366
Question 8 – Who	5.27	5.604	.092
Question 8 – What	5.38	5.186	.382
Question 9 – Who	5.61	5.24	.242
Question 9 – what	5.67	5.065	.361
Question 10 – Who	5.59	5.029	.342
Question 10 – what	5.60	5.304	.289

Table 31. *Reliability Analysis for Posttest Main Idea Identification of Narrative Text (N = 60)*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correction
	Cronbach's alpha = .599		
Question 1	6.41	5.614	.164
Question 2	6.48	6.097	-.033
Question 3	6.43	5.397	.262
Question 4	6.49	5.674	.148
Question 5	6.41	5.699	.128
Question 6	6.41	5.428	.247
Question 7 – Who	6.17	5.302	.397
Question 7 – What	6.44	5.518	.467
Question 8 – Who	6.03	5.787	.207
Question 8 – What	6.35	5.833	.134
Question 9 – Who	6.45	5.175	.373
Question 9 – what	6.57	5.436	.353
Question 10 – Who	6.44	5.263	.390
Question 10 – what	6.31	5.670	.280

Table 32. *Reliability Analysis for Maintenance Main Idea Identification of Narrative Text (N = 60)*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correction
Cronbach's alpha = .430			
Question 1	6.65	3.994	.151
Question 2	6.68	4.017	.141
Question 3	6.68	4.406	-.050
Question 4	6.75	4.004	.154
Question 5	6.62	4.257	.021
Question 6	6.75	4.225	.042
Question 7 – Who	6.38	4.173	.130
Question 7 – What	6.64	4.128	.278
Question 8 – Who	6.35	3.884	.348
Question 8 – What	6.57	3.962	.309
Question 9 – Who	6.75	4.089	.110
Question 9 – what	6.94	4.196	.178
Question 10 – Who	6.57	4.148	.123
Question 10 – what	6.62	3.893	.332

Table 33. *Reliability Analysis for Pretest Main Idea Identification of Informational Text (N = 62)*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correction
Cronbach's alpha = -.138			
Question 1	7.10	1.837	-.087
Question 2	6.93	1.630	.065
Question 3	7.25	1.736	.036
Question 4	6.96	2.093	-.236
Question 5	6.98	1.667	.032
Question 6	7.20	2.037	-.217
Question 7 – Who	6.69	1.666	.203
Question 7 – What	7.41	1.922	-.046
Question 8 – Who	6.69	1.659	.227
Question 8 – What	6.88	1.866	-.089
Question 9 – Who	6.59	1.750	.250
Question 9 – what	7.03	1.892	-.017
Question 10 – Who	6.64	2.026	-.177
Question 10 – what	7.05	1.989	-.138

Table 34. *Reliability Analysis for Posttest Main Idea Identification of Informational Text (N = 60)*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correction
Cronbach's alpha = .482			
Question 1	7.08	3.374	.137
Question 2	6.83	3.421	.052
Question 3	7.12	3.588	.013
Question 4	6.88	3.43	.046
Question 5	6.80	3.205	.173
Question 6	7.08	3.696	-.065
Question 7 – Who	6.52	3.237	.297
Question 7 – What	7.26	3.555	.192
Question 8 – Who	6.46	3.350	.338
Question 8 – What	6.60	2.964	.443
Question 9 – Who	6.43	3.397	.347
Question 9 – what	6.82	3.347	.276
Question 10 – Who	6.47	3.397	.285
Question 10 – what	6.78	3.368	.221

Table 35. *Reliability Analysis for Maintenance Main Idea Identification of Informational Text (N = 60)*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correction
Cronbach's alpha = .265			
Question 1	7.73	2.292	.043
Question 2	7.57	1.987	.238
Question 3	7.98	2.652	-.165
Question 4	7.57	2.292	.022
Question 5	7.57	2.055	.188
Question 6	7.73	2.394	-.027
Question 7 – Who	7.17	2.556	-.036
Question 7 – What	7.93	2.512	-.046
Question 8 – Who	7.16	2.309	.303
Question 8 – What	7.32	2.212	.168
Question 9 – Who	7.13	2.516	.064
Question 9 – what	7.49	2.343	.217
Question 10 – Who	7.17	2.429	.106
Question 10 – what	7.35	2.358	.118

Table 36. *Reliability Analysis for Pretest CRAB Questions (N = 62)*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correction
Cronbach's alpha = .653			
Question 1	3.76	3.301	.478
Question 2	3.44	3.791	.424
Question 3	4.06	3.668	.329
Question 4	3.98	3.524	.372
Question 5	3.58	3.592	.378
Question 6	3.71	3.980	.101
Question 7	3.82	3.624	.282
Question 8	4.13	3.622	.421
Question 9	4.26	4.096	.261
Question 10	4.16	3.974	.208

Table 37. *Reliability Analysis for Posttest CRAB Questions (N = 60)*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correction
Cronbach's alpha = .680			
Question 1	5.03	3.965	.378
Question 2	4.87	4.389	.353
Question 3	5.45	3.743	.416
Question 4	5.37	4.134	.184
Question 5	4.87	4.389	.353
Question 6	5.23	4.046	.234
Question 7	5.08	3.739	.478
Question 8	5.42	3.086	.369
Question 9	5.63	4.033	.368
Question 10	5.40	3.702	.425

Table 38. *Correlations between Proximal and Distal Measures*

	Pre Oral	Post Oral	Main Oral	Pre Maze	Post Maze	Main Maze	Pre CRAB	Post CRAB	Pre Narr	Post Narr	Main Narr	Pre Info	Post Info	Main Info	Pre MAP	Post MAP	MCA
Pre Oral	1																
Post Oral	.863**	1															
Main Oral	.843**	.874**	1														
Pre Maze	.696**	.694**	.719**	1													
Post Maze	.720**	.784**	.810**	.852**	1												
Main Maze	.685**	.733**	.756**	.764**	.877**	1											
Pre CRAB	.404**	.386**	.466**	.386**	.364**	.386**	1										
Post CRAB	.570**	.584**	.589**	.606**	.647**	.622**	.573**	1									
Pre Narr	.282*	.230	.294**	.338**	.341**	.394**	.379**	.432**	1								
Post Narr	.265*	.243	.250	.295*	.200	.321*	.239	.354**	.235	1							
Main narr	.469**	.413**	.523**	.392**	.412**	.467**	.355**	.501**	.311*	.588**	1						
Pre Info	.299*	.270*	.365**	.365**	.400**	.382**	.157	.292*	.296*	.083	.177	1					
Post Info	.261*	.237	.245	.280*	.291*	.364**	.260*	.372**	.472**	.405**	.379**	.268*	1				
Main Info	.168	.192	.289*	.391**	.382**	.260*	.196	.250	.287*	.169	.310*	.187	.340**	1			
Pre MAP	.521**	.524**	.508**	.543**	.530**	.547**	.356**	.628**	.481**	.373**	.496**	.320*	.452**	.399**	1		
Pre MAP	.503**	.503**	.583**	.615**	.600**	5.98**	.427**	.653**	.512**	.481**	.526**	.458**	.499**	.556**	.795**	1	
MCA	-.03	-.042	-.016	-.157	-.199	-.034	.177	.003	-.067	-.266	-.108	-.226	-.108	-.241	-.020	-.350	1

Note. **Correlation is significant at the $p < .001$ level. * Correlation is significant at the $p < .05$ level. Pre Oral = Pretest one-min oral reading; Post Oral = Posttest one-min oral reading; Main Oral = Maintenance one-min oral reading; Pre Maze= pretest CBM maze; Post Maze = posttest CBM maze; Main Maze + Maintenance CBM maze; Pre CRAB = pretest Comprehensive Reading Assessment Battery; Post CRAB= posttest Comprehensive Reading Assessment Battery; Pre Narr = Pretest Main idea identification of narrative text, Post Narr = Posttest main idea identification of narrative text; Main Narr = Maintenance main idea identification of narrative text; Pre Info = pretest main idea identification of informational text; Post Info = Posttest main idea identification of informational text; Main Info = Maintenance main idea identification of informational text; Pre MAP = pretest Measures of Academic Progress; Post MAP = Posttest Measures of Academic Progress; MCA= Minnesota Comprehensive Assessment.

Normal Q-Q Plot of Residual for prandro_total
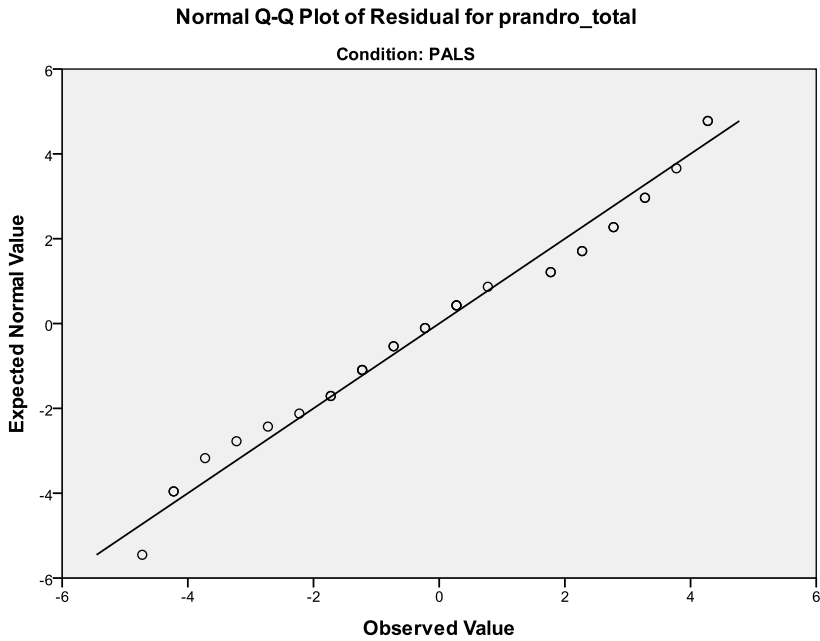
Figure 8. *Normal Q-Q plot of the pretest narrative main idea identification measure for the PALS condition.*

Normal Q-Q Plot of Residual for prandro_total
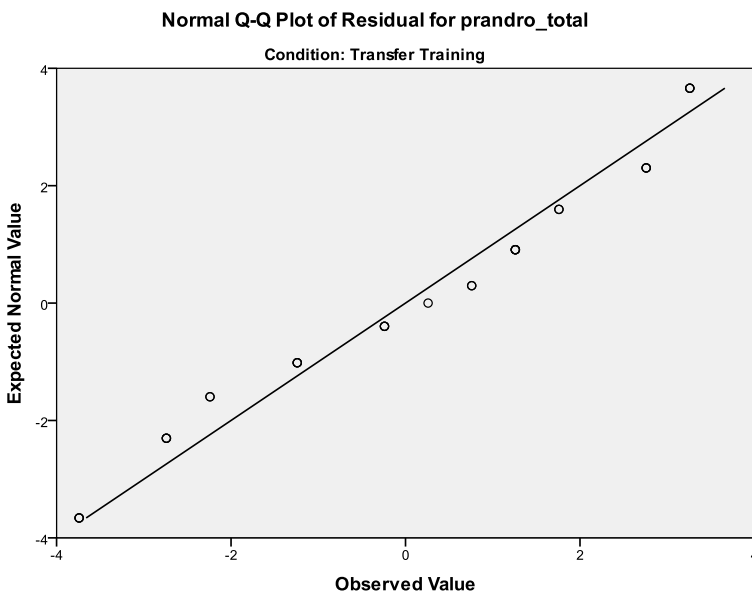
Figure 9. *Normal Q-Q plot of the pretest narrative main idea identification measure for the PALS plus transfer training condition.*
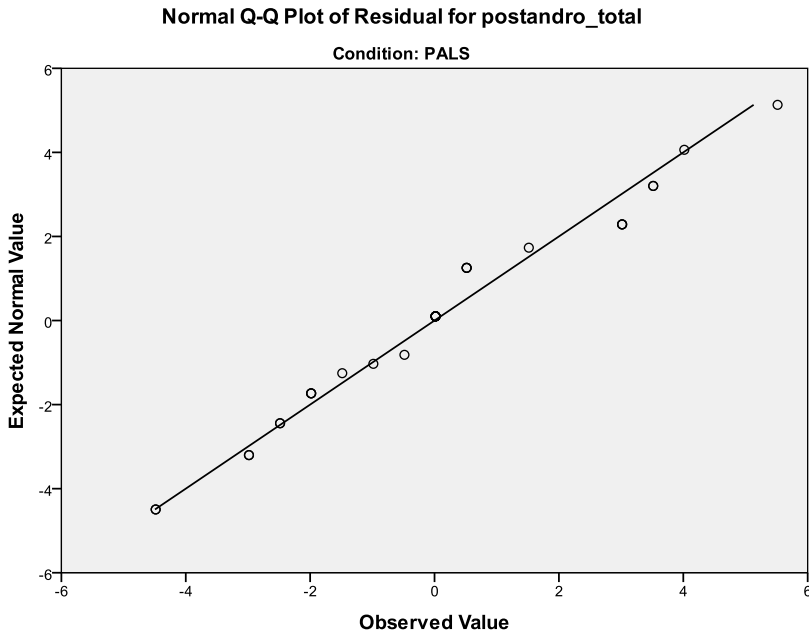
Figure 10. *Normal Q-Q plot of the posttest narrative main idea identification measure for the PALS condition.*
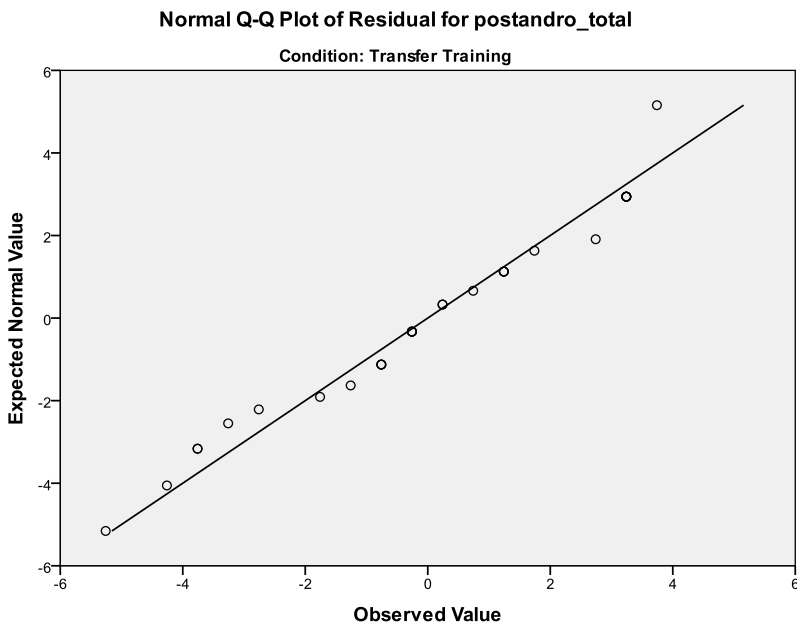
Figure 11. *Normal Q-Q plot of the posttest narrative main idea identification measure for the PALS plus transfer training condition.*
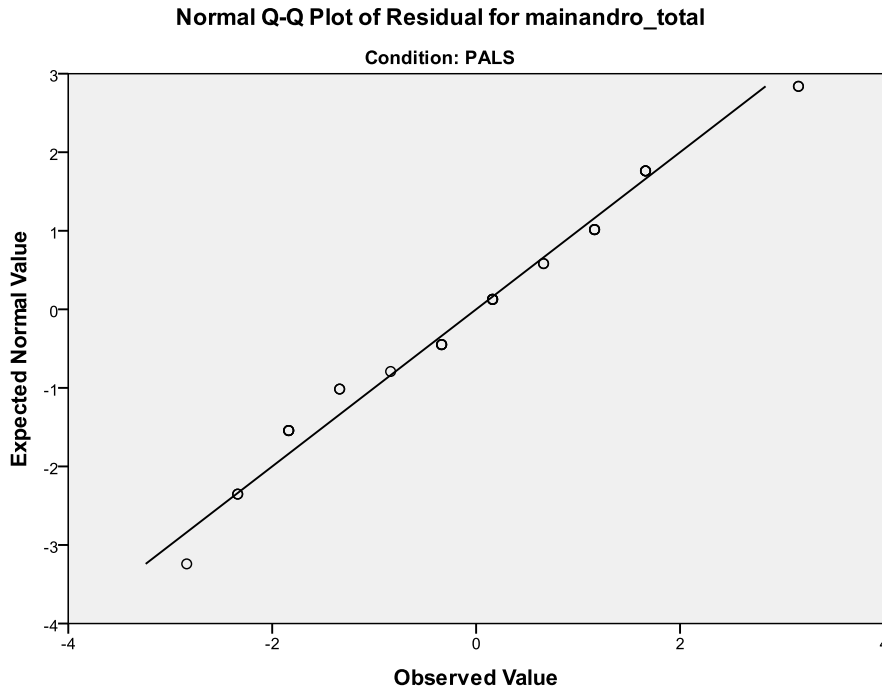
Figure 12. *Normal Q-Q plot of the maintenance narrative main idea identification measure for the PALS condition.*
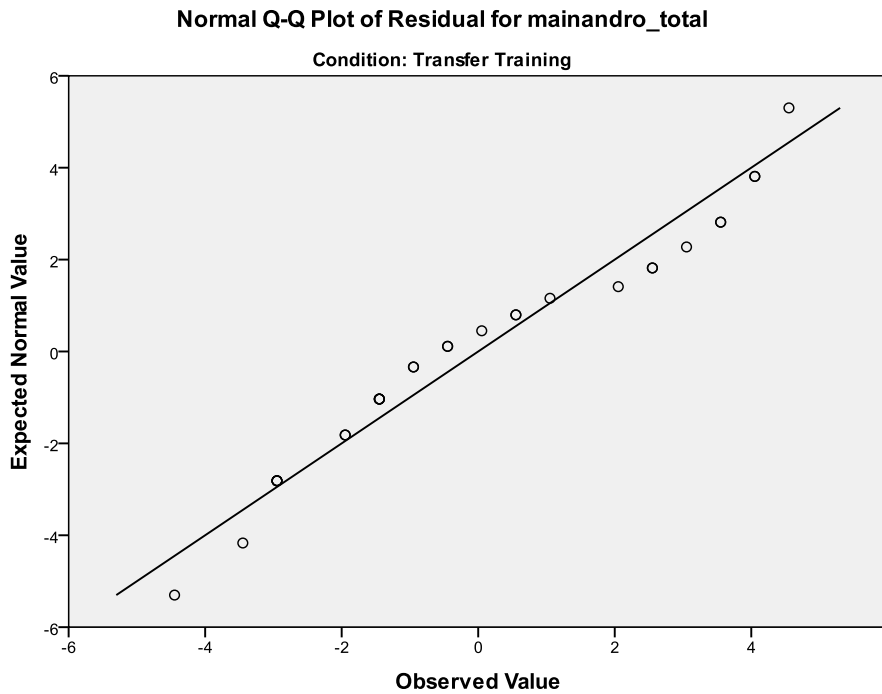
Figure 13. *Normal Q-Q plot of the maintenance narrative main idea identification measure for the PALS plus transfer training condition.*

241
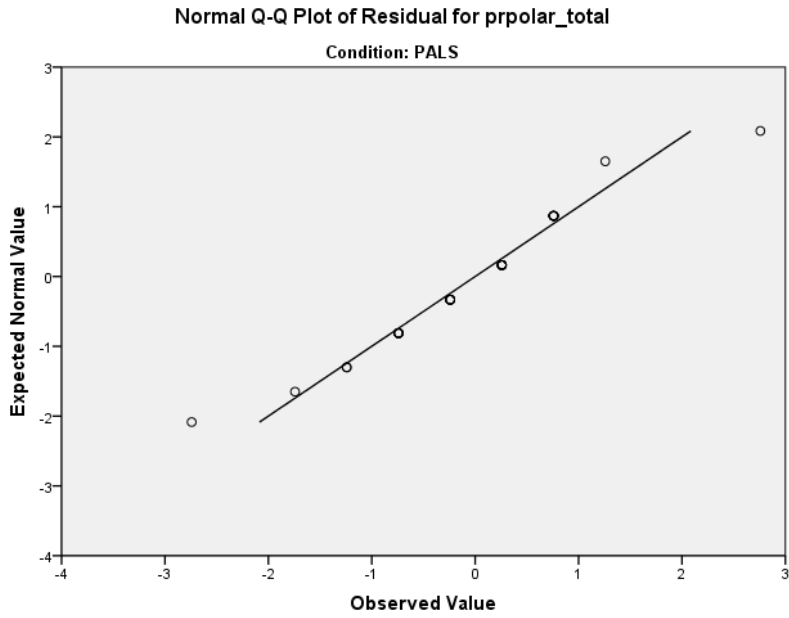
Figure 14. *Normal Q-Q plot of the pretest informational main idea identification measure for the PALS condition.*
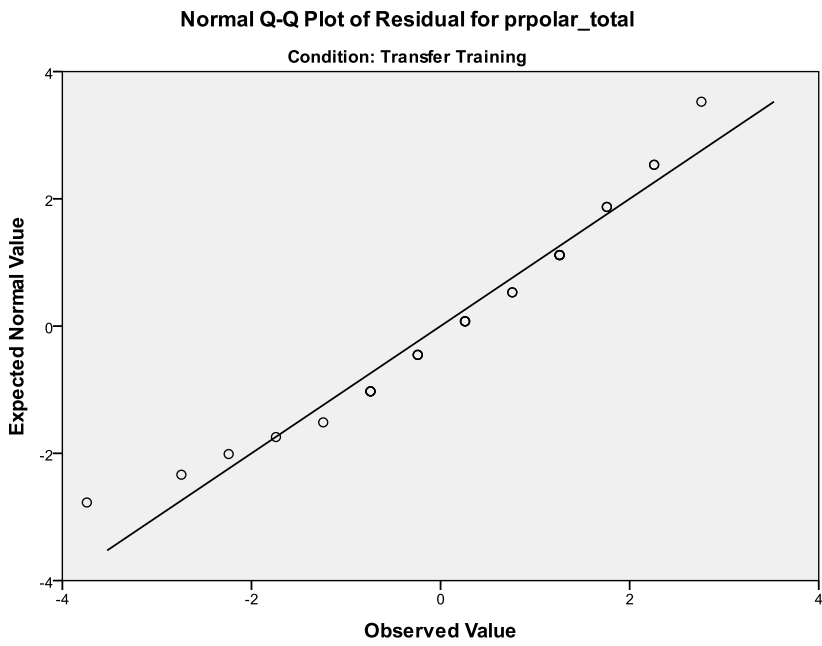
Figure 15. *Normal Q-Q plot of the pretest informational main idea identification measure for the PALS plus transfer training condition.*

242
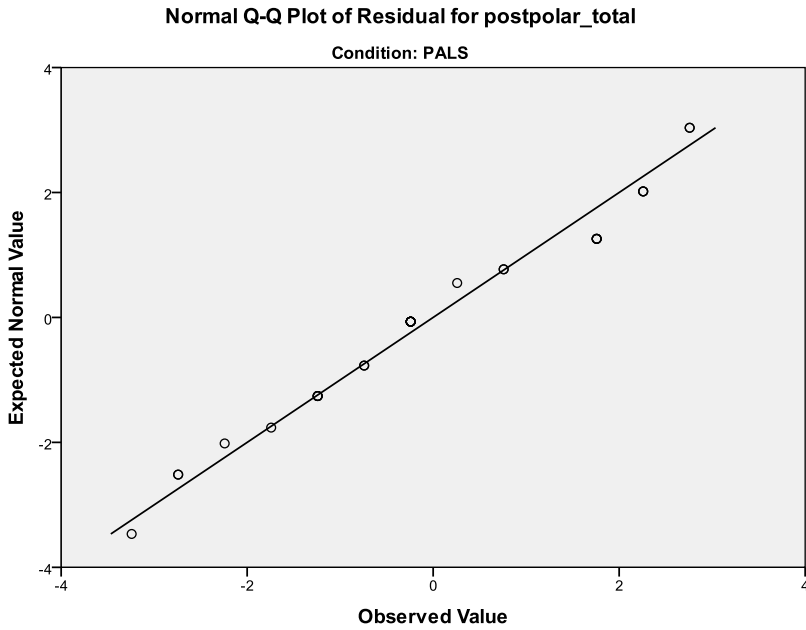
Figure 16. *Normal Q-Q plot of the posttest informational main idea identification measure for the PALS condition.*
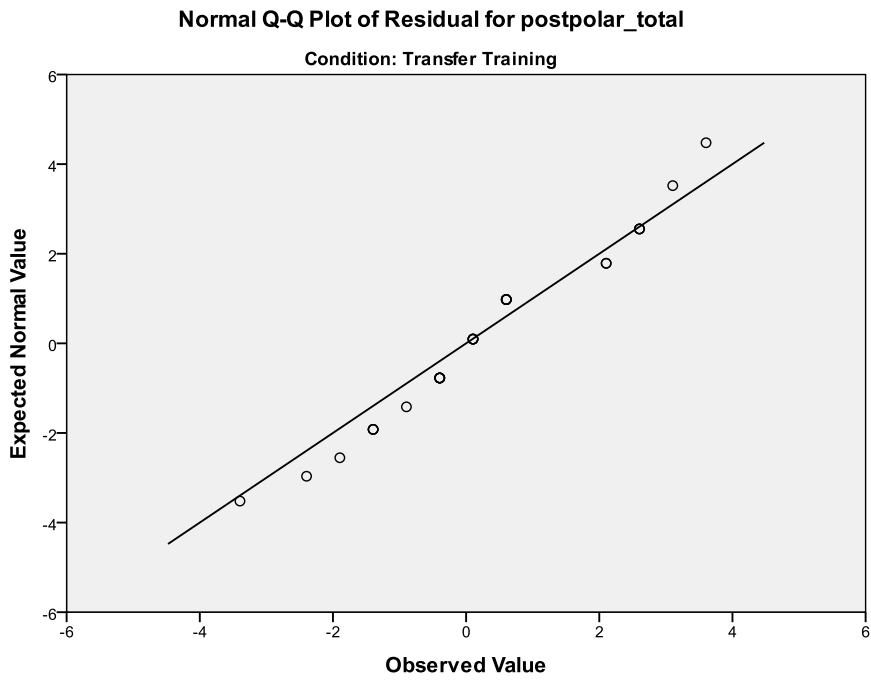
Figure 17. *Normal Q-Q plot of the posttest informational main idea identification measure for the PALS plus transfer training condition.*
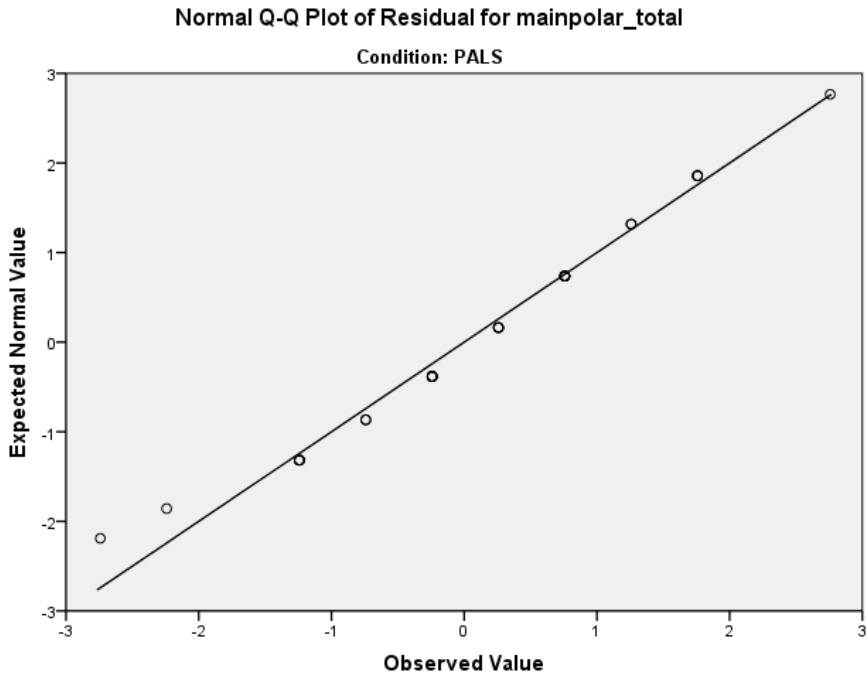
Figure 18. *Normal Q-Q plot of the maintenance informational main idea identification measure for the PALS condition.*
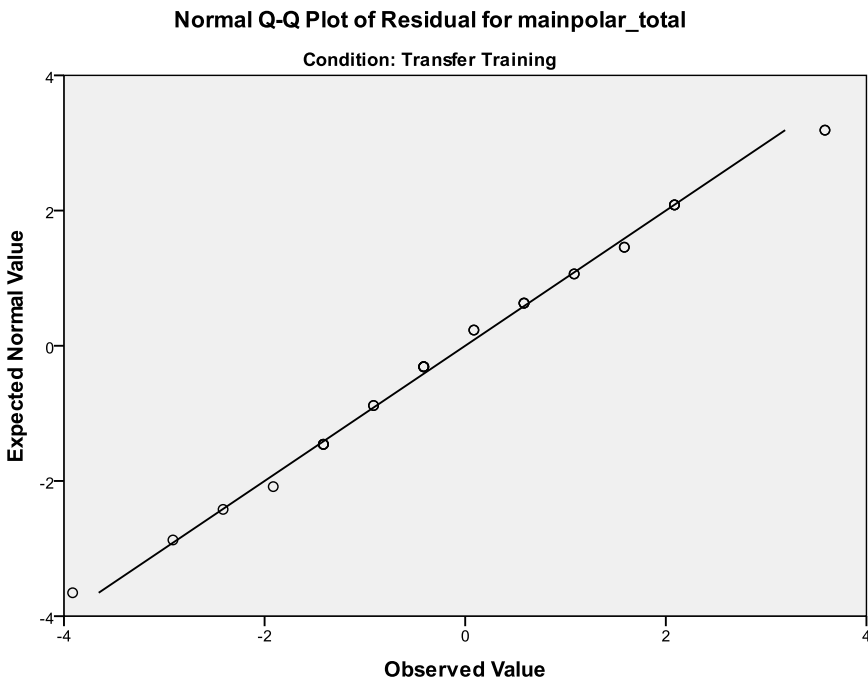
Figure 19. *Normal Q-Q plot of the maintenance informational main idea identification measure for the PALS plus transfer training condition.*

244
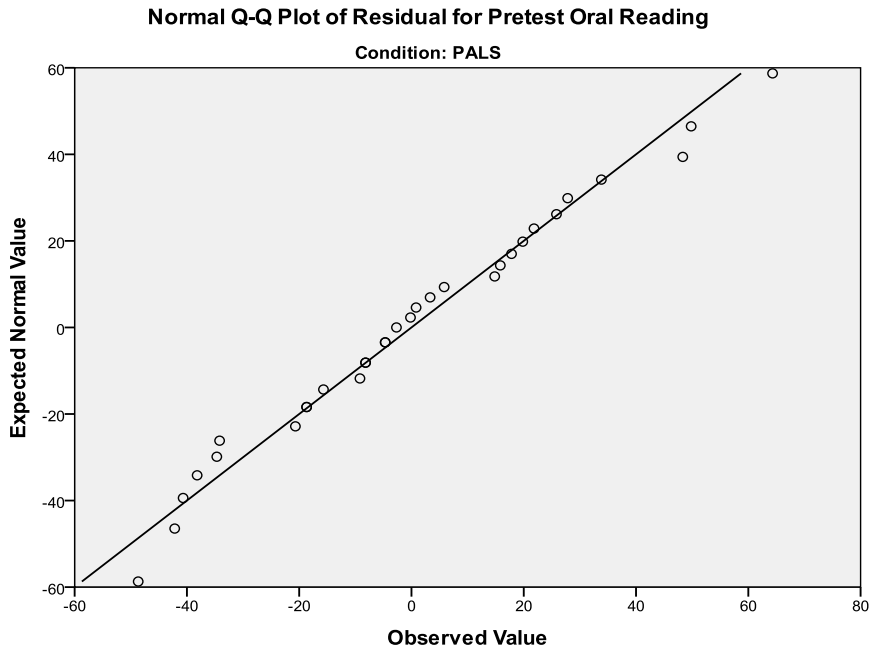
Figure 20. *Normal Q-Q plot of the pretest oral reading measure for the PALS condition.*
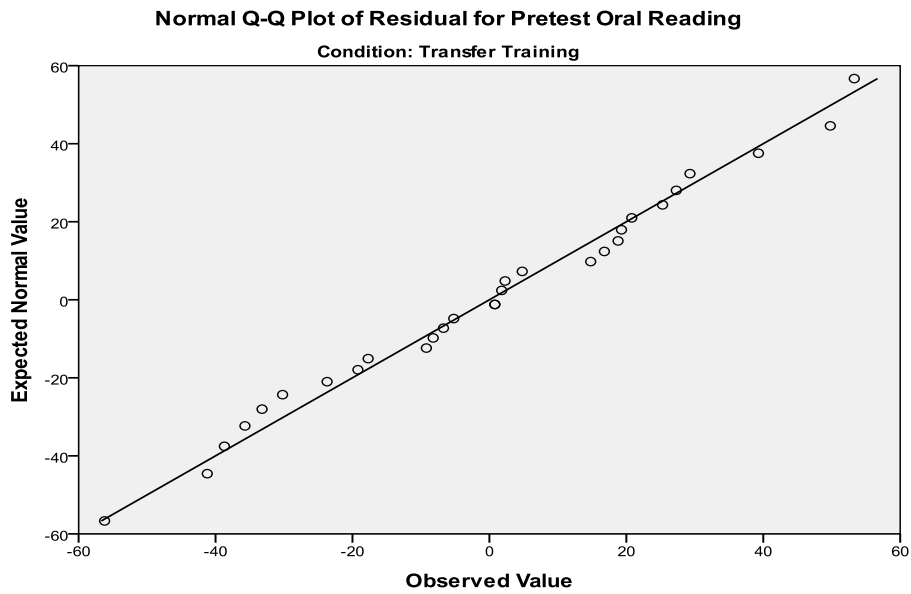
Figure 21. *Normal Q-Q plot of the pretest oral reading measure for the PALS plus transfer training condition.*
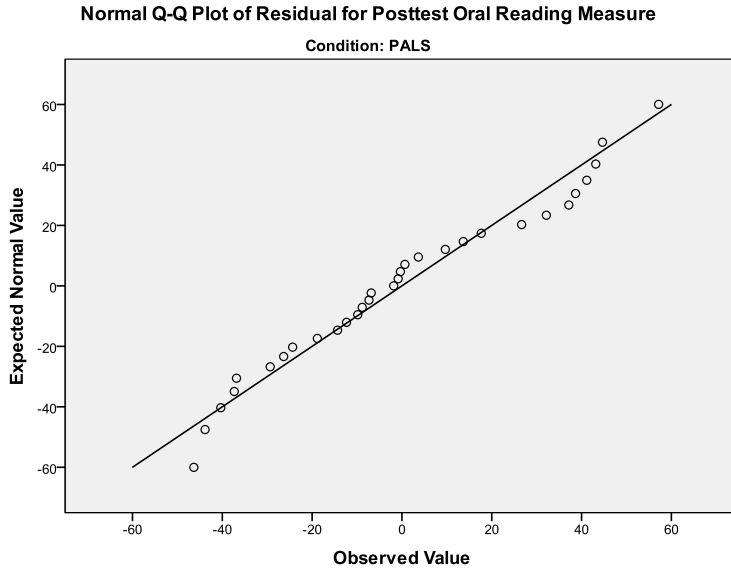
Figure 22. *Normal Q-Q plot of the posttest oral reading measure for the PALS condition.*
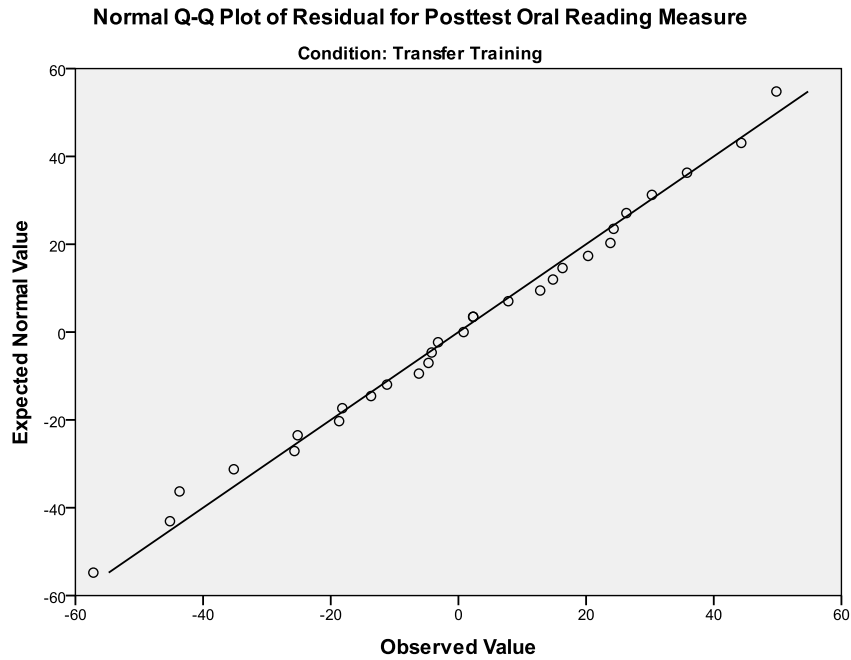
Figure 23. *Normal Q-Q plot of the posttest oral reading measure for the PALS plus transfer training condition.*

Normal Q-Q Plot of Residual for Maintenance Oral Reading Measure
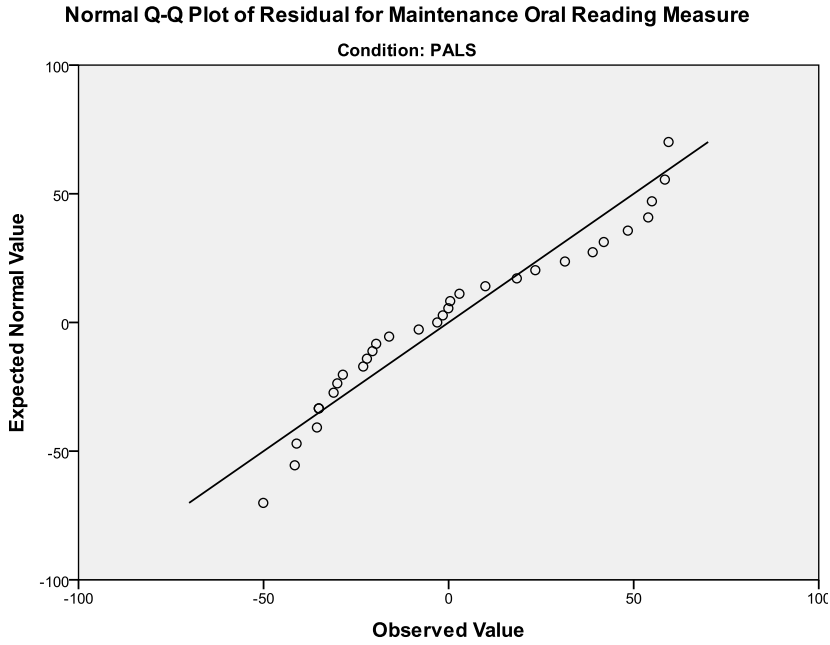
Condition: PALS

Figure 24. *Normal Q-Q plot of the maintenance oral reading measure for the PALS condition.*

Normal Q-Q Plot of Residual for Maintenance Oral Reading Measure

Condition: Transfer Training
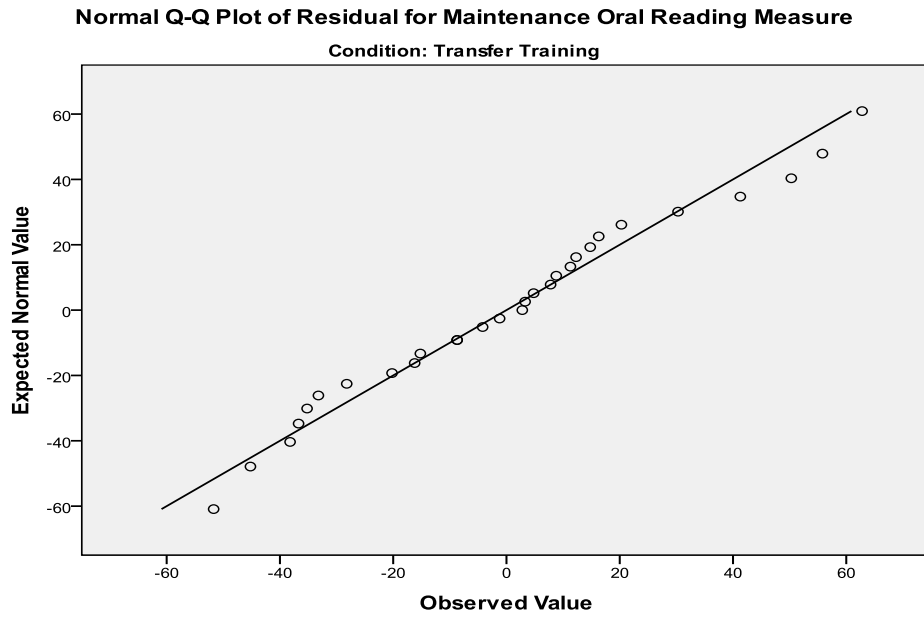
Figure 25. *Normal Q-Q plot of the maintenance oral reading measure for the PALS plus transfer training condition.*
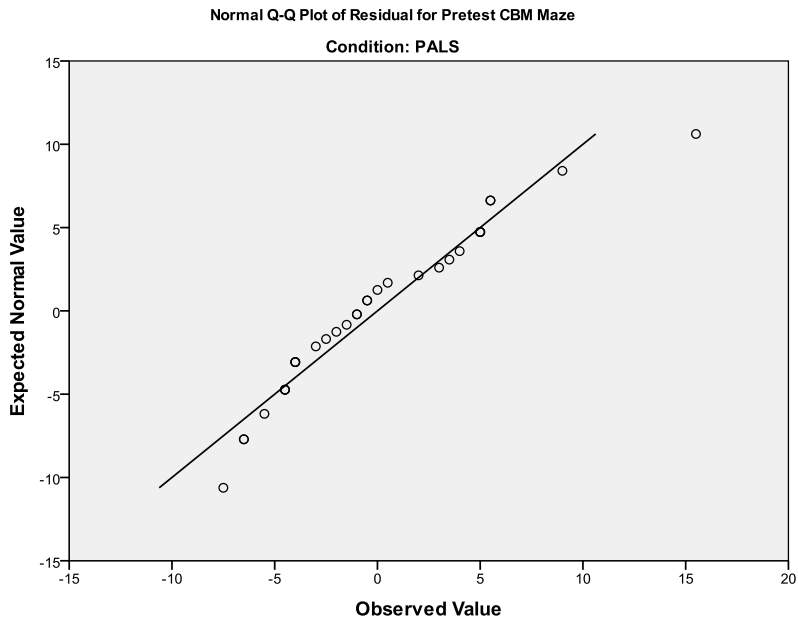
Figure 26. *Normal Q-Q plot of the pretest CBM maze measure for the PALS condition.*
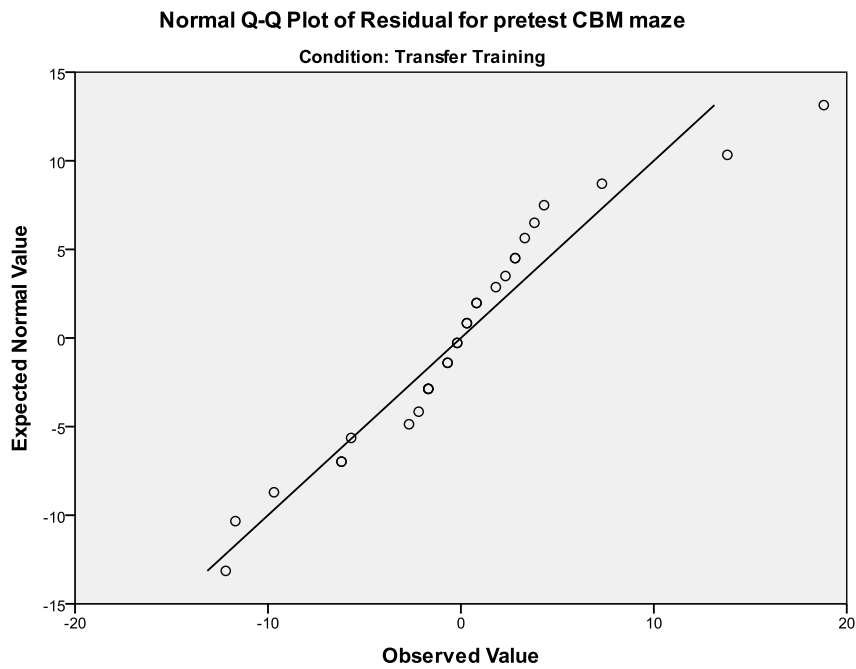
Figure 27. *Normal Q-Q plot of the pretest CBM maze measure for the PALS plus transfer training condition.*
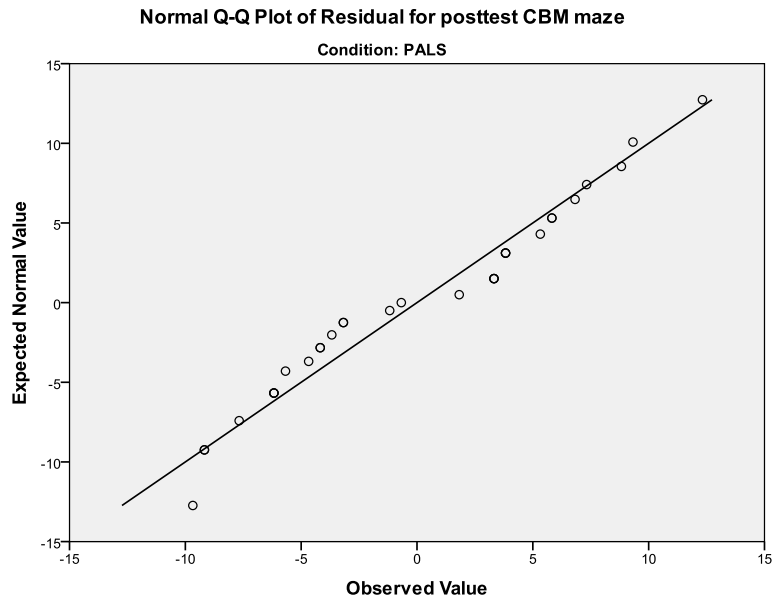
Figure 28. *Normal Q-Q plot of the posttest CBM maze measure for the PALS condition.*
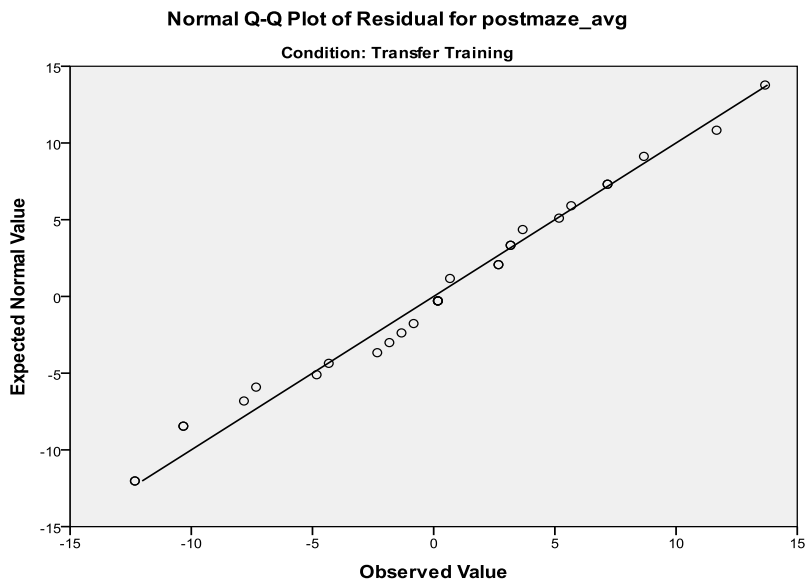
Figure 29. *Normal Q-Q plot of the posttest CBM maze measure for the PALS plus transfer training condition.*

249
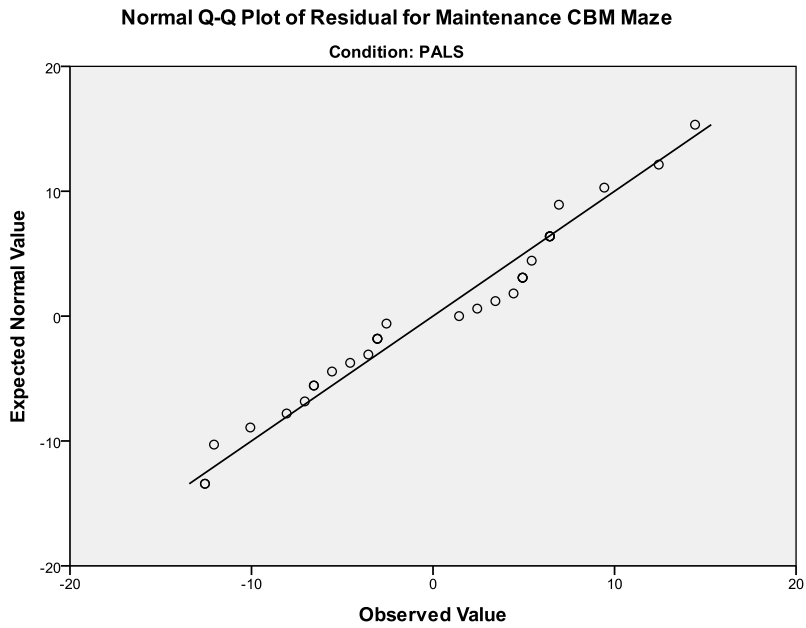
Figure 30. *Normal Q-Q plot of the maintenance CBM maze measure for the PALS condition.*
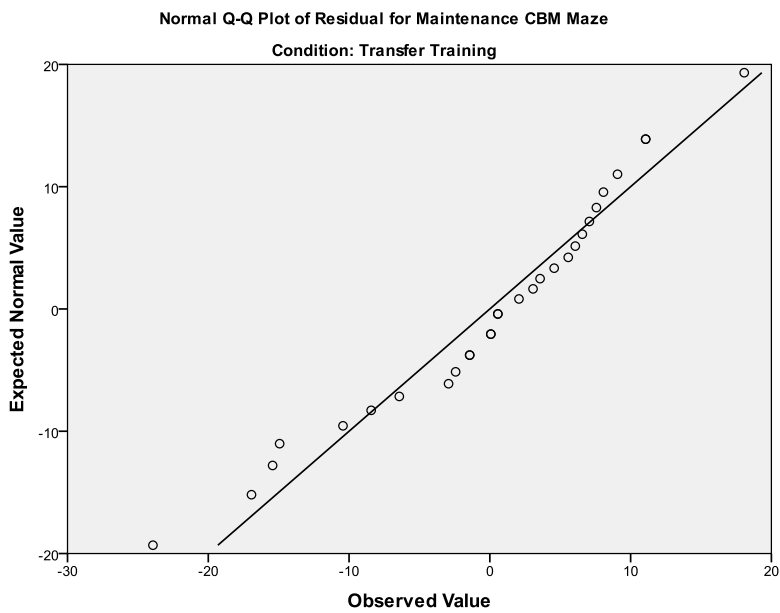
Figure 31. *Normal Q-Q plot of the maintenance CBM maze measure for the PALS plus transfer training condition.*
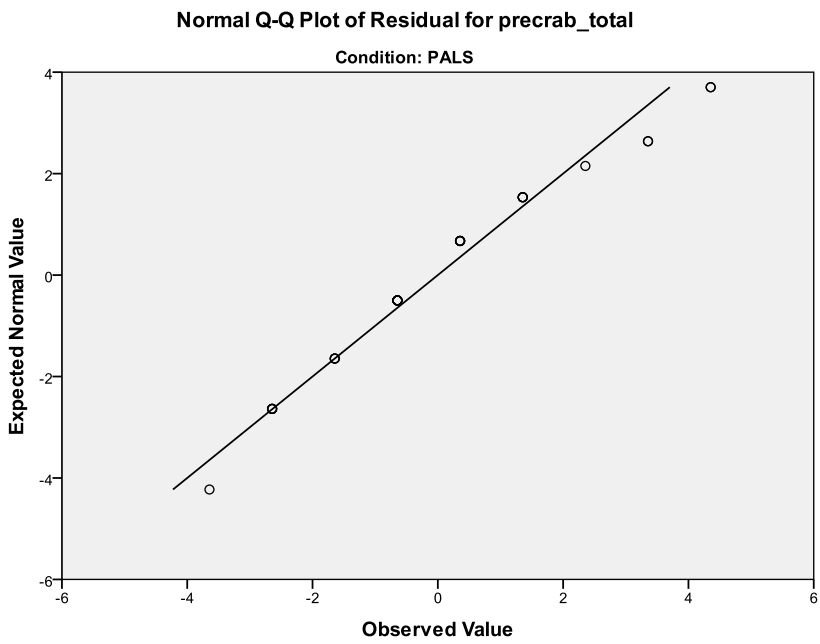
Figure 32. *Normal Q-Q plot of the pretest CRAB measure for the PALS condition.*
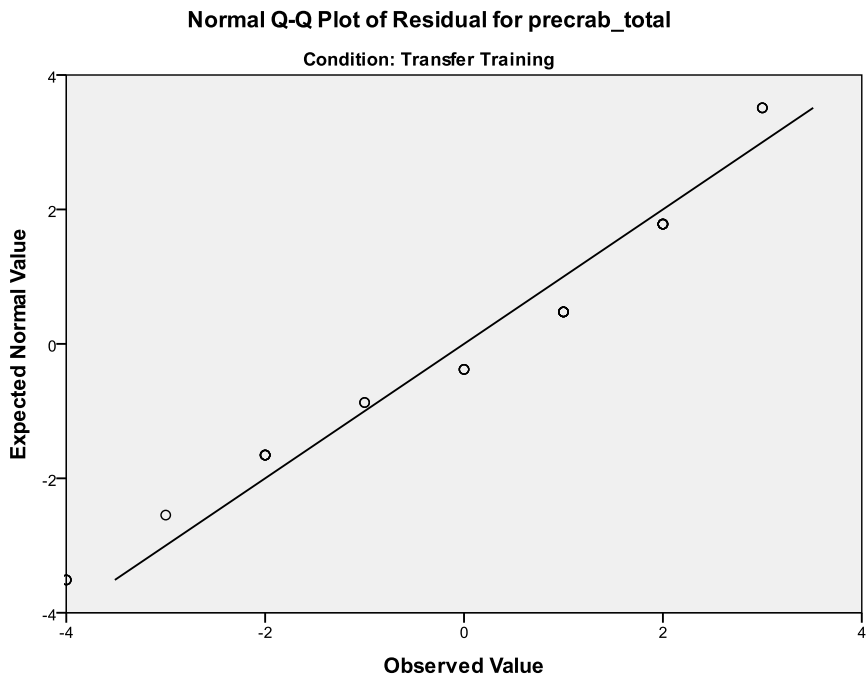
Figure 33. *Normal Q-Q plot of the pretest CRAB measure for the PALS plus transfer training condition.*

Normal Q-Q Plot of Residual for postcrab_total
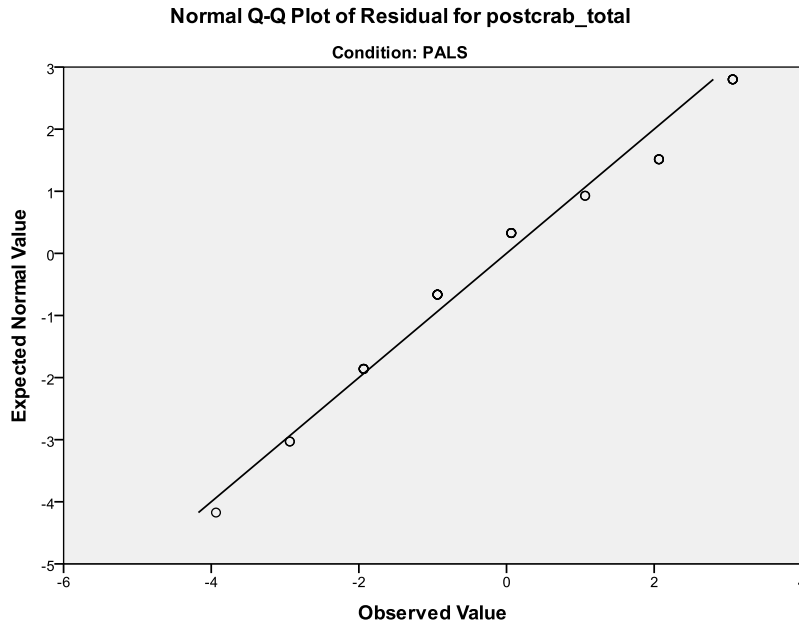
Condition: PALS

Figure 34. *Normal Q-Q plot of the posttest CRAB measure for the PALS condition.*

Normal Q-Q Plot of Residual for postcrab_total
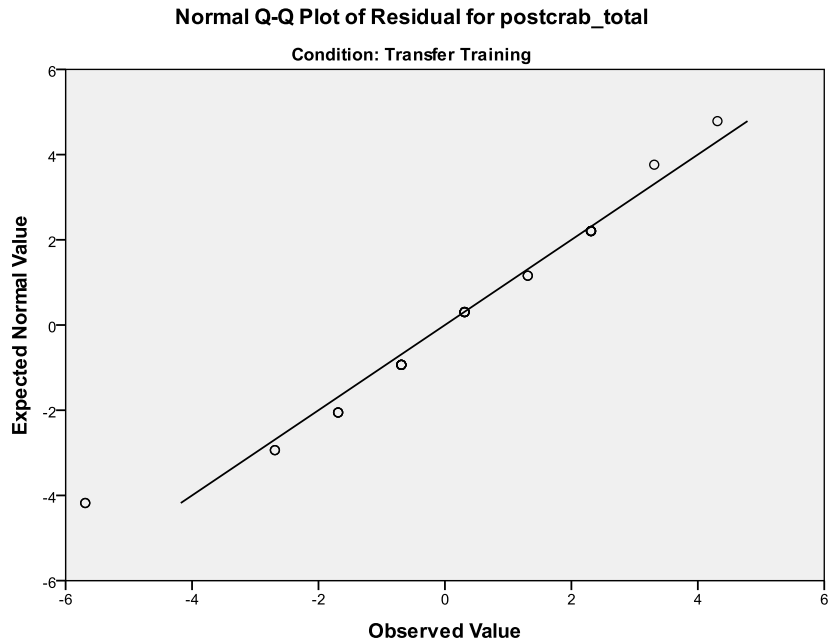
Figure 35. *Normal Q-Q plot of the posttest CRAB measure for the PALS plus transfer training condition.*

Normal Q-Q Plot of Residual for MAP_FALL
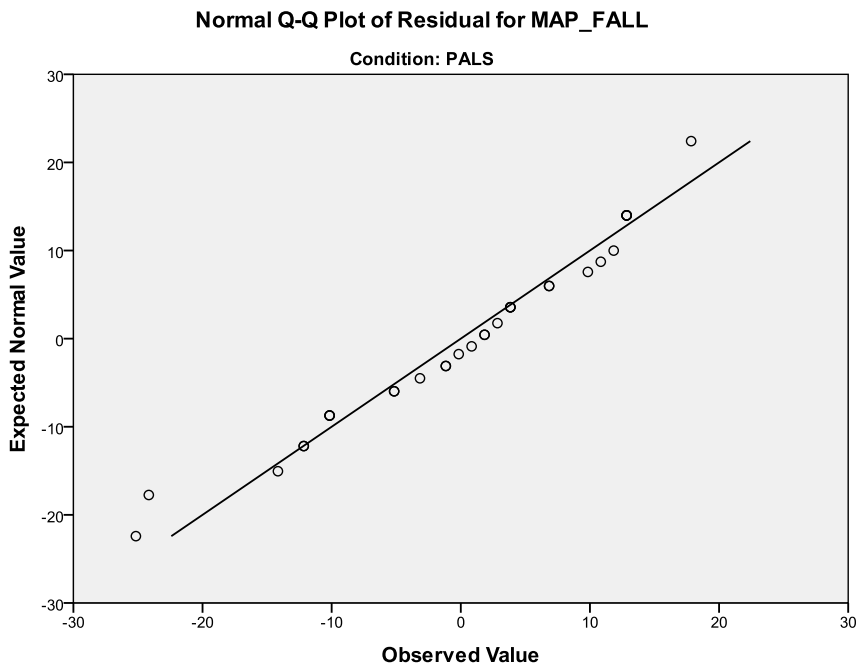
Figure 36. *Normal Q-Q plot on the Pretest Northwest Evaluation Association Measures of Academic Progress (NWEA-MAP) for the PALS condition.*
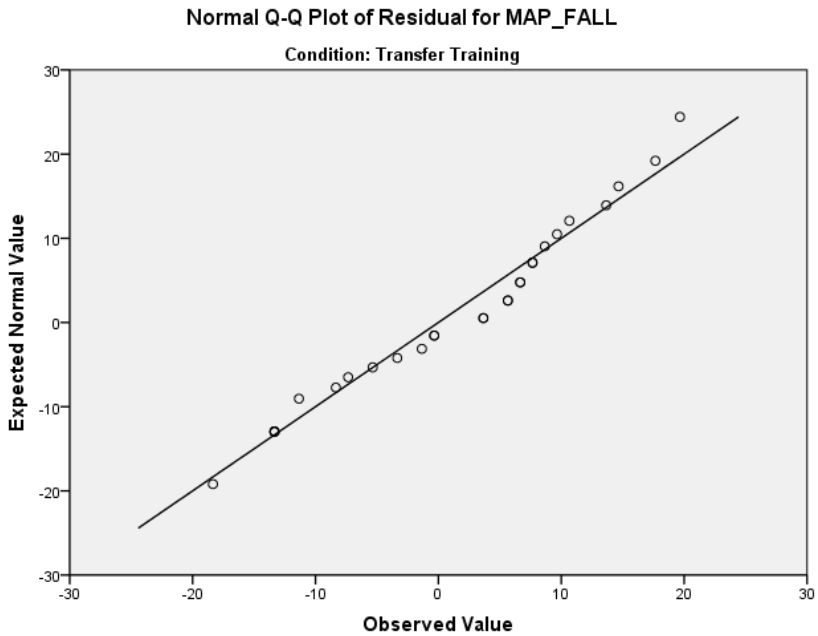
Figure 37. *Normal Q-Q plot on the Pretest Northwest Evaluation Association Measures of Academic Progress (NWEA-MAP) for the PALS plus transfer training condition.*
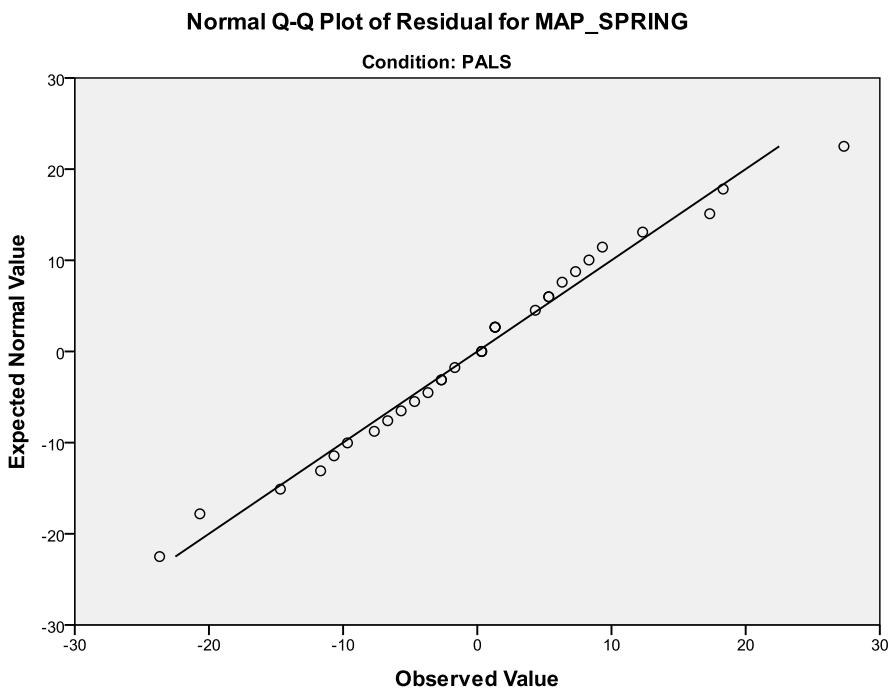
Figure 38. *Normal Q-Q plot on the Posttest Northwest Evaluation Association Measures of Academic Progress (NWEA-MAP) for the PALS condition.*

Normal Q-Q Plot of Residual for MAP_SPRING

Condition: Transfer Training
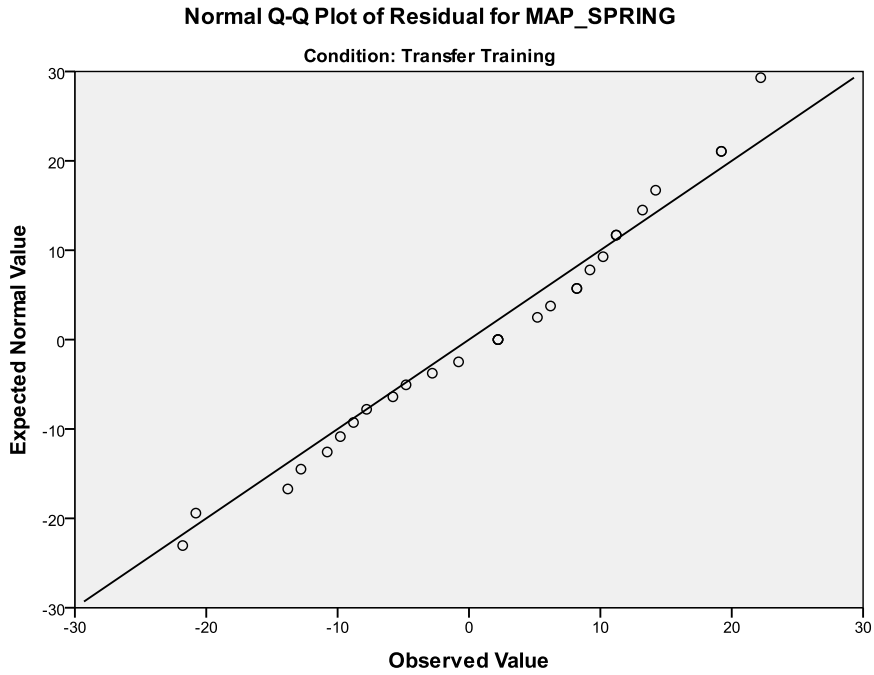
Figure 39. *Normal Q-Q plot on the Posttest Northwest Evaluation Association Measures of Academic Progress (NWEA-MAP) for the PALS plus transfer training condition.*

Normal Q-Q Plot of Residual for MCA

Condition: PALS

Figure 40. *Normal Q-Q plot on the Minnesota Comprehensive Assessment (MCA-II) measure for the PALS condition.*

255
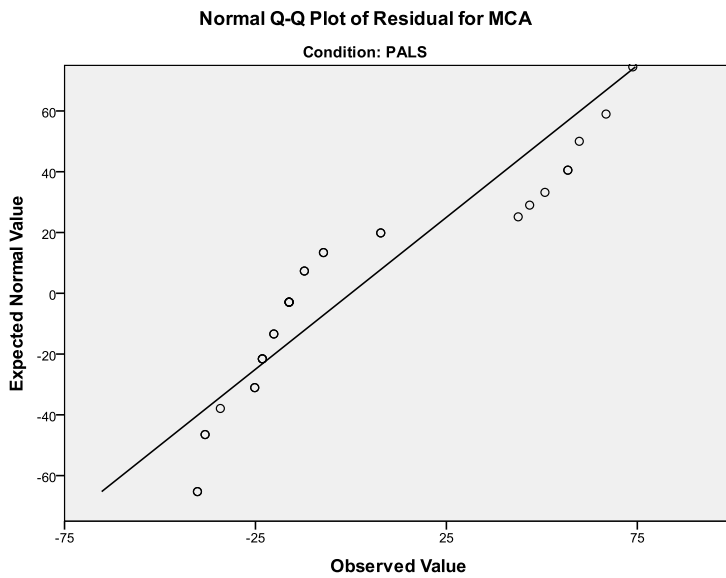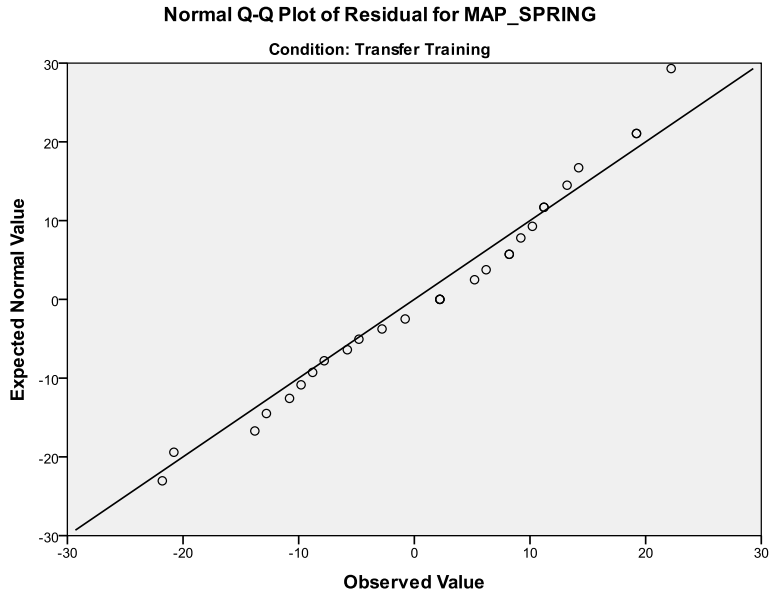
Figure 40. *Normal Q-Q plot on the Minnesota Comprehensive Assessment (MCA-II) measure for the PALS plus transfer training condition.*
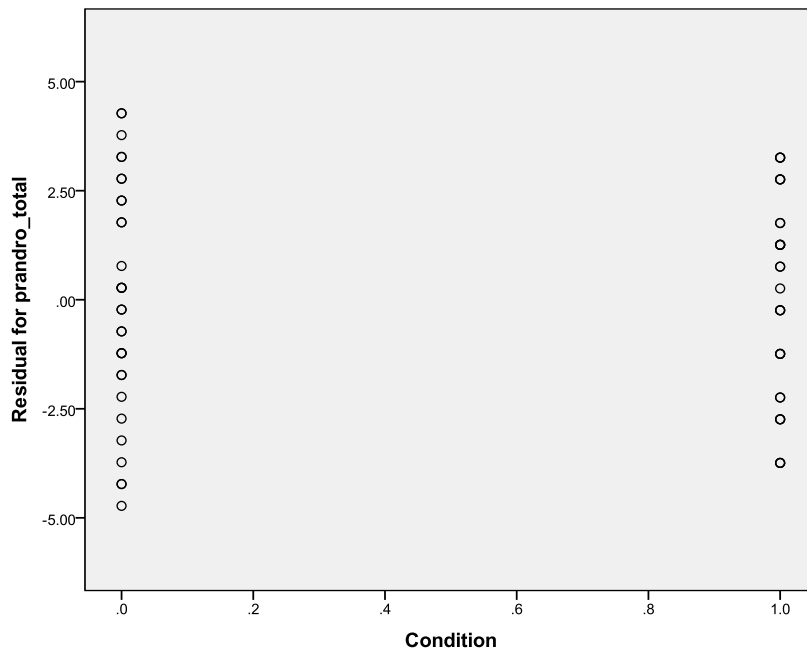
Figure 41. *Scatter plots of the residuals of the pretest narrative main idea identification measure for PALS and PALS plus transfer training.*
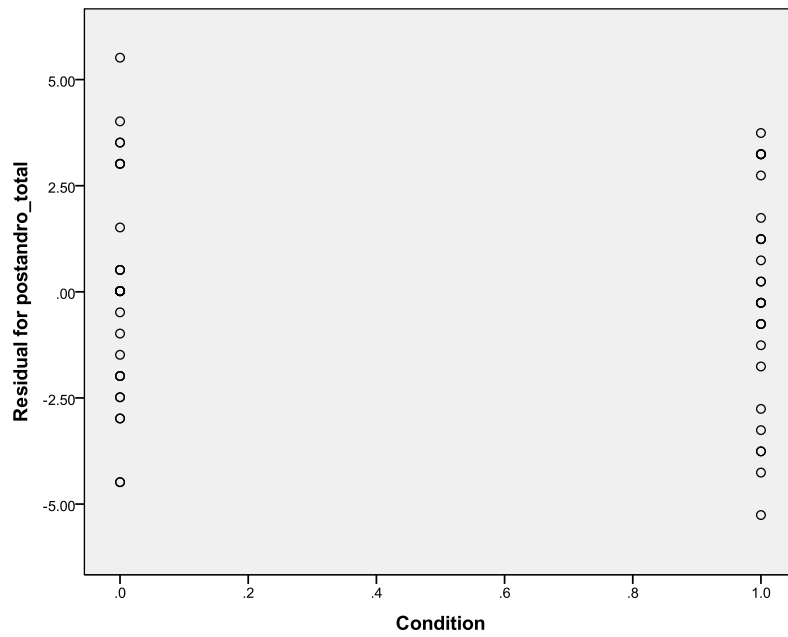
Figure 42. *Scatter plots of the residuals of the posttest narrative main idea identification measure for PALS and PALS plus transfer training.*
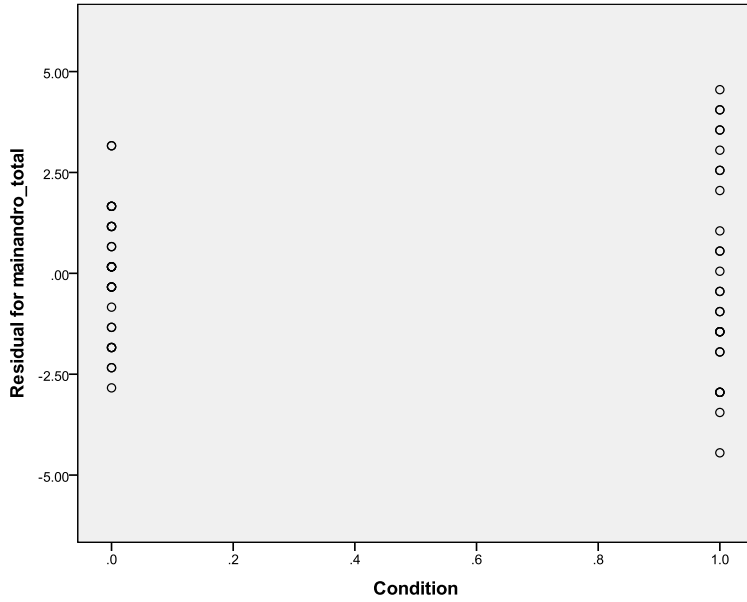
Figure 43. *Scatter plots of the residuals of the maintenance narrative main idea identification measure for PALS and PALS plus transfer training.*
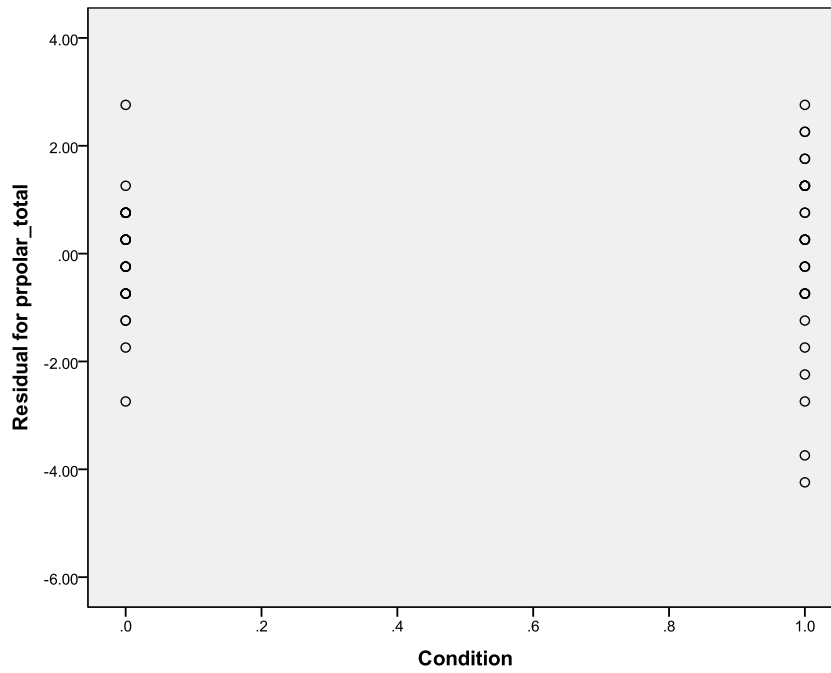
Figure 44. *Scatter plots of the residuals of the pretest informational main idea identification measure for PALS and PALS plus transfer training.*
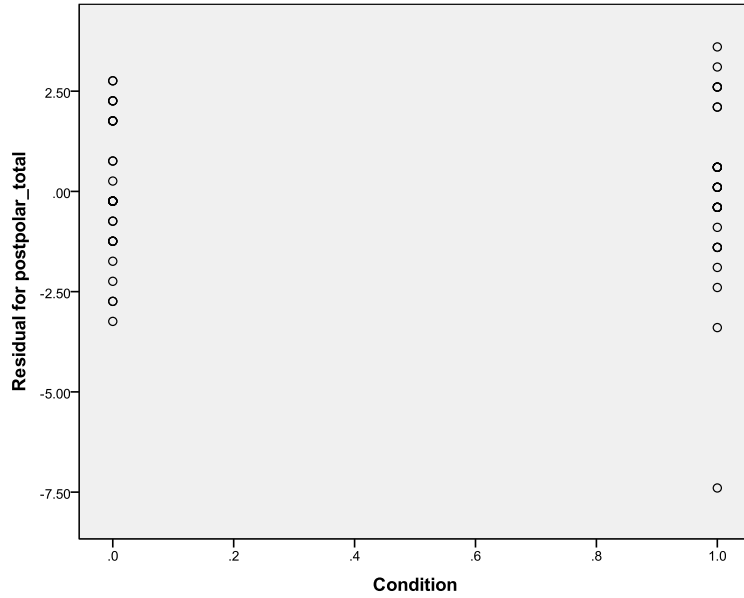
Figure 45. *Scatter plots of the residuals of the posttest informational narrative main idea identification measure for PALS and PALS plus transfer training.*
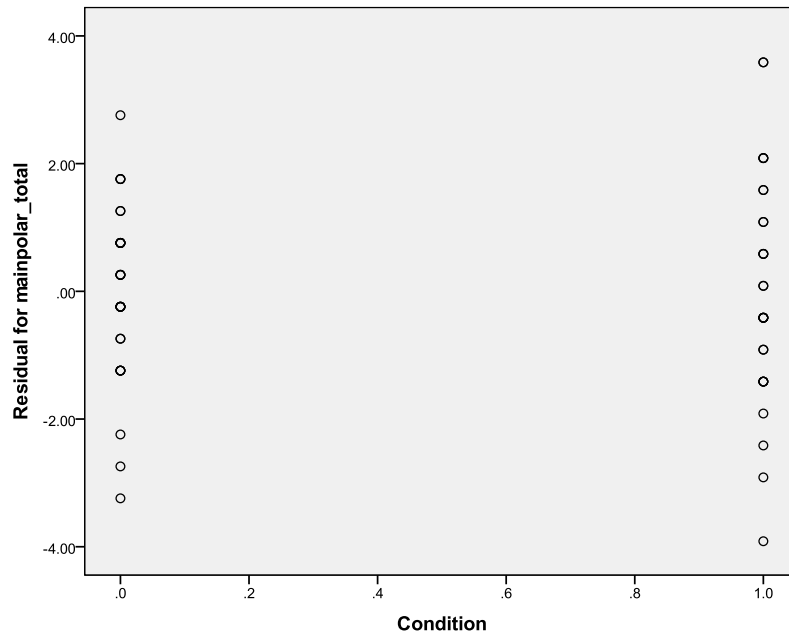
Figure 46. *Scatter plots of the residuals of the maintenance informational main idea identification measure for PALS and PALS plus transfer training.*

259
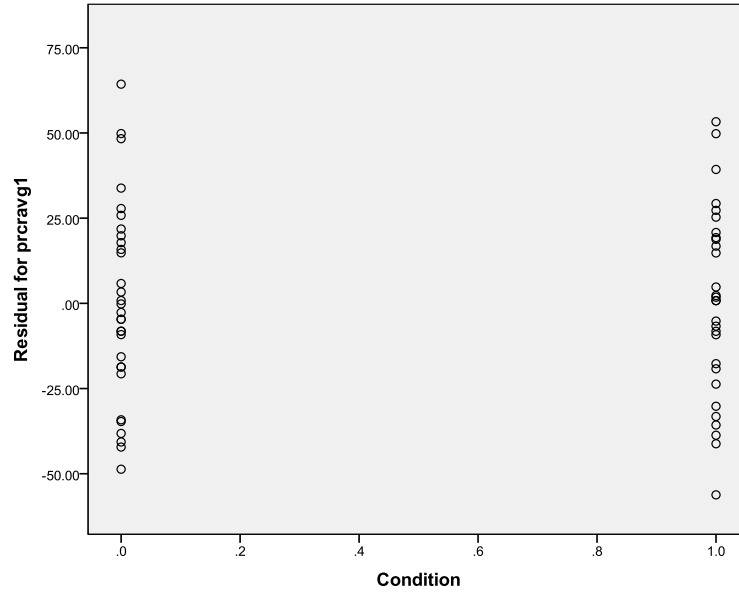
Figure 47. *Scatter plots of the residuals of the pretest oral reading measure for PALS and PALS plus transfer training.*
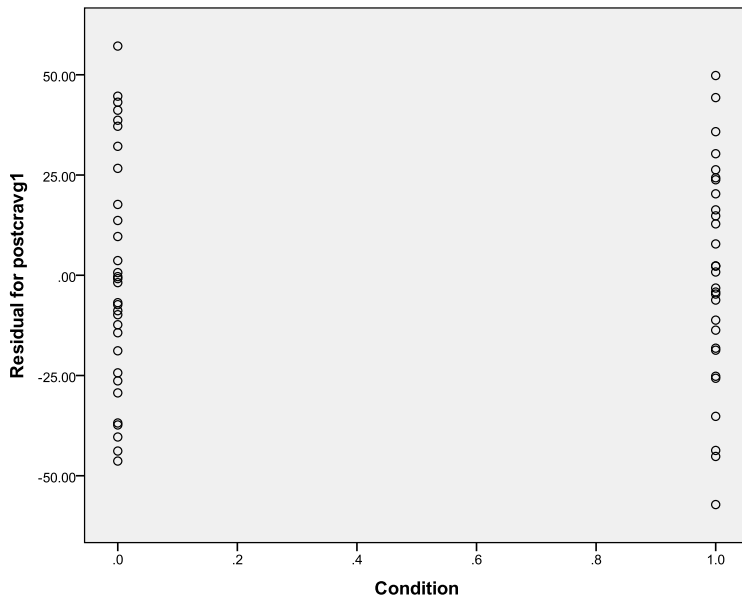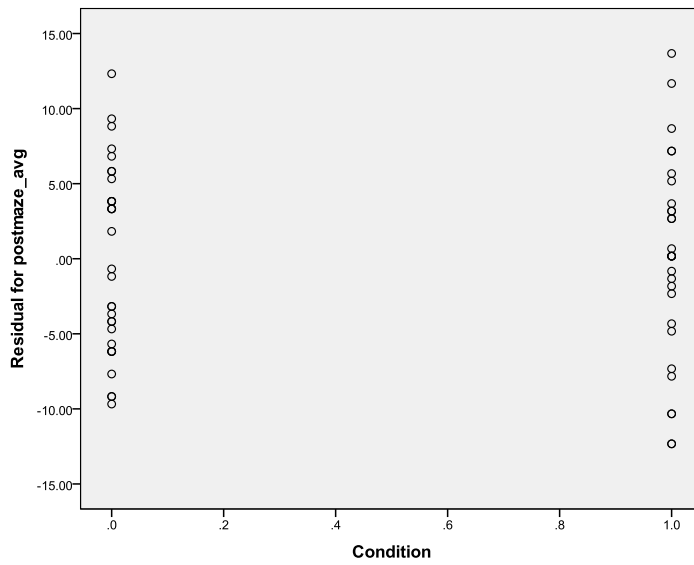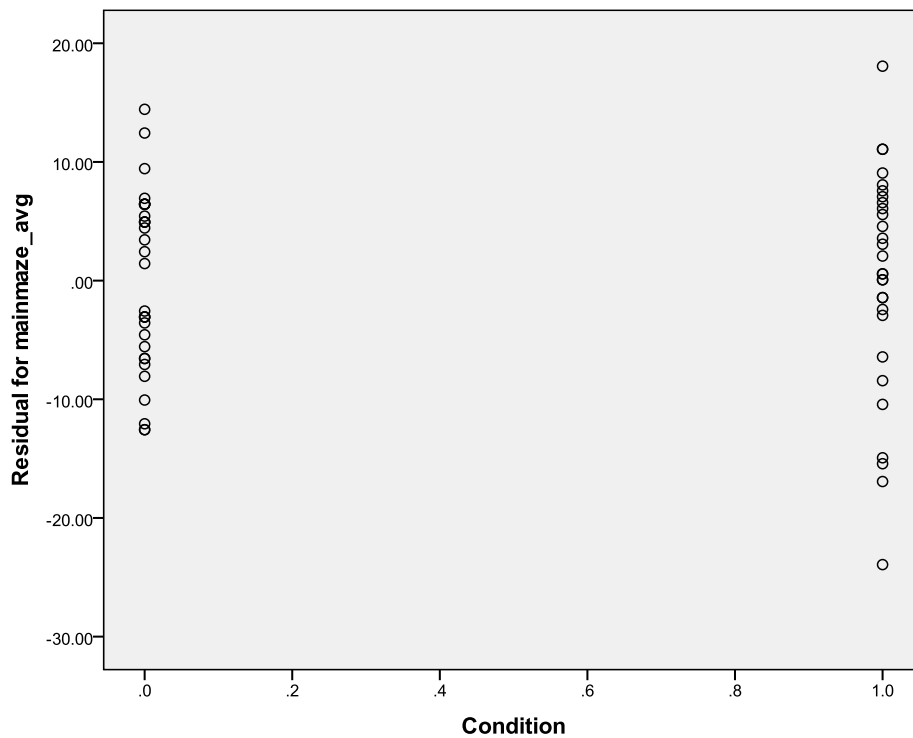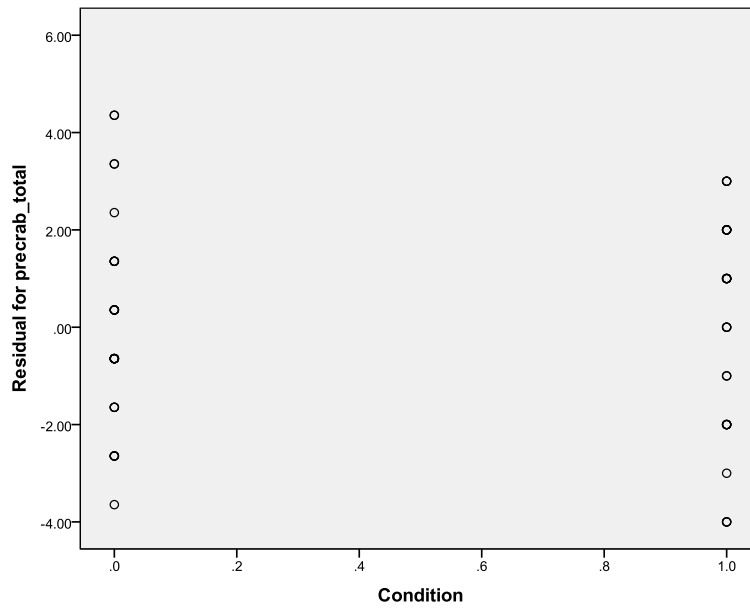

Figure 48. *Scatter plots of the residuals of the posttest oral reading measure for PALS and PALS plus transfer training.*
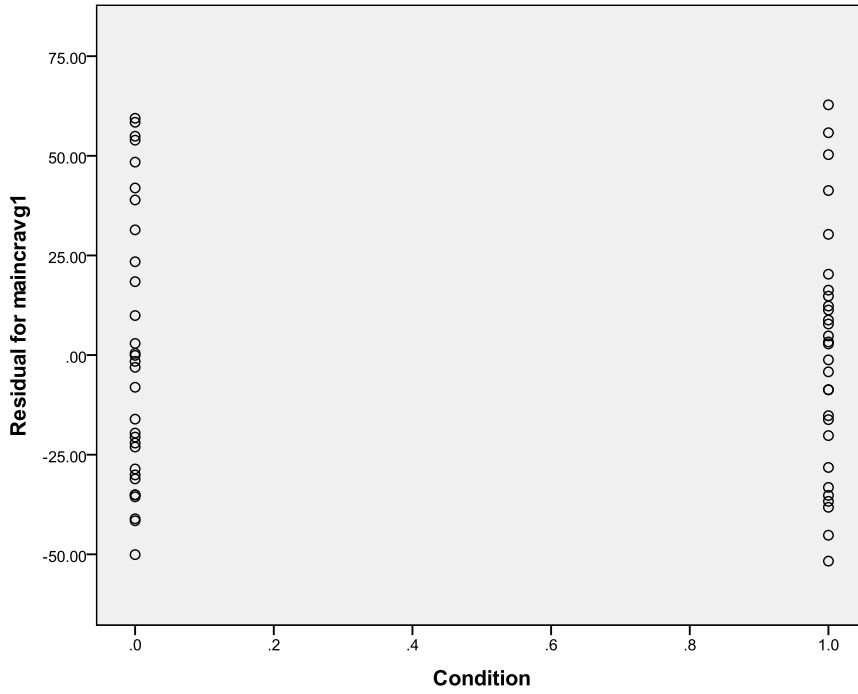
Figure 49. *Scatter plots of the residuals of the maintenance oral reading measure for PALS and PALS plus transfer training.*
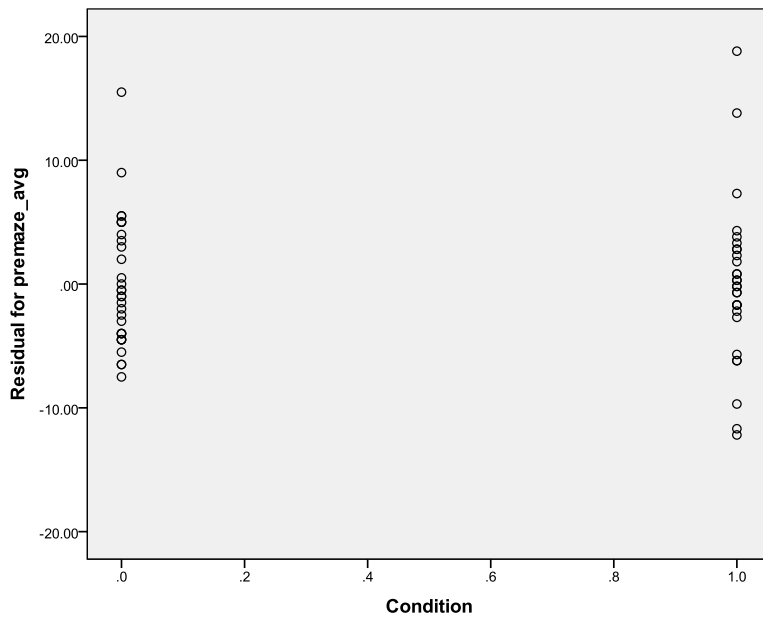
Figure 50. *Scatter plots of the residuals of the pretest maze measure for PALS and PALS plus transfer training.*
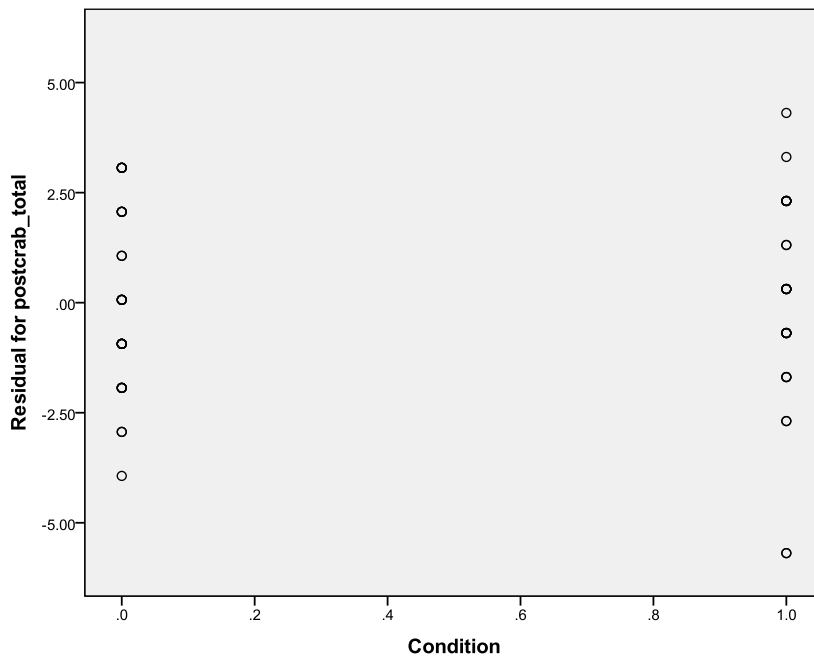
Figure 51. *Scatter plots of the residuals of the posttest maze measure for PALS and PALS plus transfer training.*

Figure 52. *Scatter plots of the residuals of the maintenance maze measure for PALS and PALS plus transfer training.*

Figure 53. *Scatter plots of the residuals of the pretest CRAB measure for PALS and PALS plus transfer training.*

Figure 54. *Scatter plots of the residuals of the posttest CRAB measure for PALS and PALS plus transfer training.*
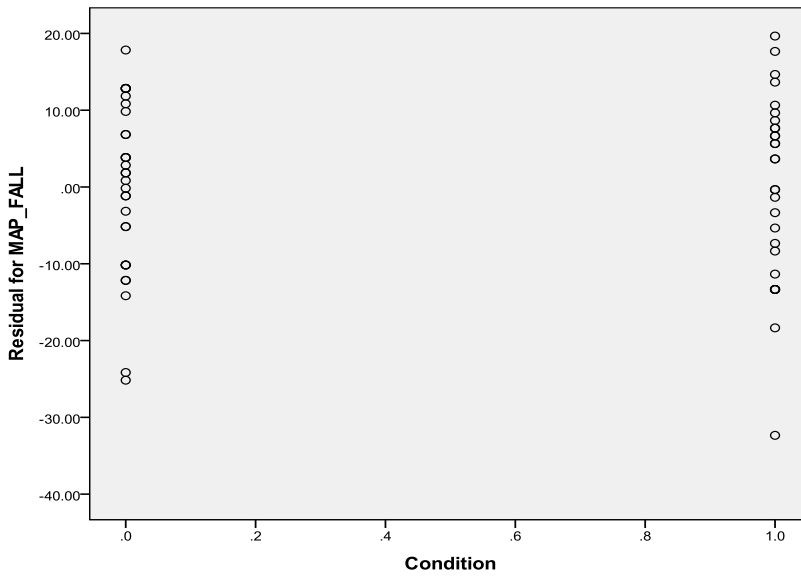
263

Figure 55. *Scatter plots of the residuals of the pretest Northwest Evaluation Association Measures of Academic Progress (NWEA-MAP) measure for PALS and PALS plus transfer training.*
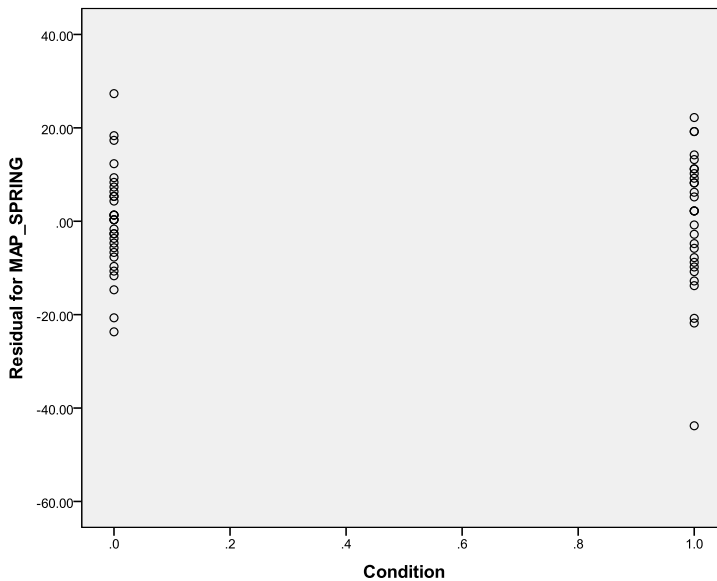

Figure 56. *Scatter plots of the residuals of the posttest Northwest Evaluation Association Measures of Academic Progress (NWEA-MAP) measure for PALS and PALS plus transfer training.*
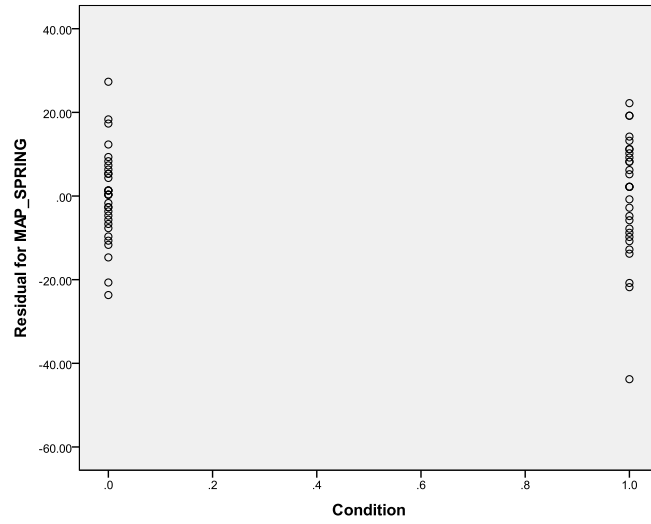
Figure 57. *Scatter plots of the residuals of the posttest Minnesota Comprehensive Assessment (MCA-II) measure for PALS and PALS plus transfer training.*