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The University of San Francisco

THE EFFECTS OF EXPLICIT READING STRATEGY INSTRUCTION AND COOPERATIVE LEARNING ON READING COMPREHENSION IN FOURTH GRADE STUDENTS

A Dissertation Presented
to
The Faculty of the School of Education
Learning and Instruction Department

In Partial Fulfillment
of the Requirement of the Degree
Doctor of Education

by
Gina M. Lencioni
San Francisco
May 2013

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THE UNIVERSITY OF SAN FRANCISCO

Dissertation Abstract

The Effects of Explicit Reading Strategy Instruction and Cooperative Learning on Reading Comprehension in Fourth Grade Students

The purpose of this study was to investigate the effects of explicit direct instruction and cooperative learning on reading comprehension in fourth grade students. A quasi-experimental design was used. There were six cognitive and three affective measures used to collect quantitative data. Cognitive measures included California State Test scores, Accelerated Reader test scores, STAR Reading Test scores, Selection Test scores for MacMillan CA Treasures Series, Metacognitive Strategy Index (MSI), and district benchmark assessments. Affective measures included the Motivation to Read Profile (MRP) for both Self-Concept and Value of Reading and an overall enjoyment survey.

This study took place at two elementary schools in the suburban San Francisco Bay Area during a six-week period of instruction. Two fourth grade classes from each school site participated in the study. There were 105 participants. One group, which received explicit direct instruction and cooperative learning, consisted of 48 students. The second group, which received explicit direct instruction and independent seat work, consisted of 57 students. The students were taught the reading strategies of generating questions, making connections, summarizing, vocabulary building, and visualizing through explicit direct instruction. These strategies were practiced either independently or in cooperative learning groups.

The data showed that students who performed better on the CST, which was used as a covariate, performed better on reading comprehension assessments in cooperative

learning environments than students who scored lower on the CST. Students who scored lower on the covariate performed better with explicit direct instruction and independent practice work. Students in the cooperative learning group who scored higher on the covariate also reported a higher usage of reading comprehension strategies. Also, students in the independent work group who scored lower on the covariate reported more enjoyment for explicit direct instruction with independent work activities than higher scoring students. It can be concluded that lower performing readers benefit from explicit direct instruction with independent practice of reading comprehension strategies and higher performing readers benefit from explicit direct instruction with cooperative learning groups to practice reading comprehension strategies.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

Gina M. Lencioni May 9, 2013
Candidate Date

Dissertation Committee

Dr. Robert Burns May 9, 2013
Chairperson

Dr. Yvonne Bui May 9, 2013

Dr. Noah Borrero May 9, 2013

ACKNOWLEDGEMENTS

First, I would like to thank Dr. Robert Burns, my dissertation chair. I will never forget the day in Correlational Design class when you took an interest in my research study. I was filled with trepidation at the beginning of this journey, but your words of reassurance made it manageable and an unforgettable experience. The time you spent in assisting me in organizing my thoughts, ideas, and data was invaluable. I greatly appreciate your patience and guidance throughout this process.

I would also like to thank Dr. Yvonne Bui for your advice and suggestions. You approached the topic of cooperative learning with insight and offered constructive feedback which improved the quality of the study. Your suggestions were also very clear and concise which made changing and improving my writing easier.

In addition, I would like to thank Dr. Noah Borrero. I appreciate your enthusiasm for the study and for encouraging me to provide my vision as a teacher within the study.

Next, I would like to acknowledge my professional family. This study would not have been possible without the support of the late Howard Cohen, Alejandro Hogan, Shawnterra Moore-Thomas, John Schmella, Dalton Miranda, and Debby Mirt. You gave me the chance to try something new and provided me with the support I needed to conduct my study. I would also like to thank Cathie Alvarado, Mallory Chin, and Mike Stewart for their dedication to this study as well. Without your generosity, energy, and cooperation this study would not have been possible. To my other colleagues, it is a pleasure to work with you. Your backing and praise through the years also helped get me to where I am today.

I must extend my gratitude towards the students who participated in this study and their parents for granting permission. Without you, this study would also not have been possible. I hope that you were able to take something away from this experience. To all my past, present, and future students as well, I hope that my love of learning will be passed on to you and that you will also spread this love of learning to others.

My friends deserve a big thank you as well. To my USF friends that I have made along this journey, thank you. Having others around who were experiencing what I was experiencing really helped me stay sane. Thanks to Bianca Rowden-Quince for motivating me to complete what I needed to get done and for checking in on me. I'm sure I'd still be writing if it wasn't for you. Thank you to my best friend, Juliana Moreno, for being there for me always. You have listened to all of my struggles and picked me up when I needed it most. It has been wonderful growing up with you and it is very exciting that we keep sharing life's milestones together.

Lastly, I would like to thank my family. Thank you is not even enough to show my gratitude. Nanna and Nannu, while you are no longer here with us, I know you always wanted the best for me. Thank you for all of your love and support. Mom and Dad you have always provided me with numerous opportunities and allowed me to choose my path. I know you are proud that both of your daughters have their doctorates. Laura, you set the achievement standard which always kept me striving for more. Thank you for editing my dissertation too. Thank you to my husband, Joe Hughes, for being patient during my weekends at school and during my bouts of procrastination. You truly mean the world to me. I am so excited to be finished with this process and can now enjoy more time with you and our new son, Evan.

DEDICATION

To my son, Evan Joseph Hughes. Although you are only three months old, it has been great watching you grow and learn so far. It is true when people say that babies grow so fast. It seems like only yesterday when we brought you home from the hospital. I often find myself looking at you and wondering about your future. Will you be good in school? What sports will you play? Will you make friends easily? What college will you attend? What will you be when you grow up? All of these questions, but only time will answer them. All I can do is hope and pray that you will have a happy and successful life. I hope that daddy and I can provide you all of the opportunities that I was provided, and that we can guide and support you to achieve all that you can. I hope that you too will find a love for reading and learning and spread this love to those around you as I have.

TABLE OF CONTENTS

ABSTRACT iii
SIGNATURE PAGE v
ACKNOWLEDGEMENTS vi
DEDICATION viii
TABLE OF CONTENTS ix
LIST OF TABLES xii
LIST OF FIGURES xiii

CHAPTER I: THE RESEARCH PROBLEM 1
Purpose of the Study 6
Significance of the Study 7
Theoretical Framework 9
Background and Need 13
2009 NAEP Reading Assessment 14
California's Common Core State Standards 16
California Standards Test 17
Reading Comprehension Strategies 18
Current Research on Reading Instruction 19
Research Questions 21
Definition of Terms 21

CHAPTER II: THE LITERATURE REVIEW 23
Explicit Direct Instruction 23
Explicit Direct Instruction of Reading Comprehension Strategies 25
Cooperative Learning 32
Cooperative Learning and Reading Comprehension Strategies 32
Explicit Direct Instruction and Cooperative Learning with
Reading Comprehension Strategies 41
Motivation 48
Explicit Direct Instruction and Motivation 48
Cooperative Learning and Motivation 49
Explicit Direct Instruction, Cooperative Learning, and Motivation 53
Cooperative, Competitive, and Individualistic Environments 55

TABLE OF CONTENTS Continued

Summary 59

CHAPTER III: METHODOLOGY 62
Research Design.....62
Sample.....64
Treatment Description 67
Instrumentation 70
Curriculum Embedded Assessment 71
Accelerated Reader Tests 72
STAR Reading Enterprise Test 73
Weekly Selection Tests 74
Metacomprehension Strategy Index Grades K-8 75
3rd Grade CST ELA and Math Composite Score 76
Motivation to Read Profile for Self-Concept 77
Motivation to Read Profile for Value.....78
Enjoyment Survey 78
Teacher Log.....79
Procedures.....79
Data Analyses 82
Summary 86

CHAPTER IV: RESULTS.....88
Research Question One.....89
Research Question Two 93
Research Question Three 95
Summary 97

CHAPTER V: SUMMARY, LIMITATIONS, DISCUSSION, AND IMPLICATIONS .99
Summary of Study 99
Summary of Findings.....104
Limitations 105
Discussion of Findings.....108
Findings on Explicit Direct Instruction of Reading Comprehension Strategies 109

TABLE OF CONTENTS Continued

Cooperative Learning Findings 110
Motivational Findings 113
Conclusions 114
Implications for Research and Practice 114
Implications for Research 116
Implications for Practice 119
Summary 121

REFERENCES 122
APPENDIX A 129
APPENDIX B 134
APPENDIX C 136
APPENDIX D 137
APPENDIX E 139

LIST OF TABLES

1. Means and Standard Deviations obtained from Stevens, Slavin, and Farnish (1991)...47

2. Descriptive Statistics for All Variables 83

3. Descriptive Statistics for Groups 84

4. Independent Sample *t* Test for the Four Reading Comprehension Measures.....89

5. ANCOVA Results for Achievement Measures 90

6. Correlations between CST Covariate and Achievement Measures 93

7. ANCOVA Results for MSI Posttest Scores.....94

8. ANCOVA Results for the Enjoyment Measure.....96

LIST OF FIGURES

1. Ethnic composition of study participants 66

2. Ethnic composition by group 67

3. Weekly plan for teaching showing time allotment and activities 69

4. Administration of measures 80

5. Interaction between CST covariate and CEA posttest 91

6. Interaction between CST covariate and STAR Reading posttest 91

7. Interaction between CST covariate and AR Total scores 92

8. Interaction between CST covariate and Selection Test Total scores 92

9. Interaction between CST covariate and MSI posttest scores 94

10. Interaction between CST covariate and Enjoyment scores 96

CHAPTER I

THE RESEARCH PROBLEM

Throughout California elementary schools, it is guaranteed that, at some point during the school day, teachers will say, “Students, please take out your reading books.” Children will either love or dread this time of the day. Because there are “eight million struggling readers between grades fourth through twelfth” (Pope, 2007, p. 59), chances are more students dread rather than like this time of day. During reading time, students may participate in a variety of activities. Some may read “Round Robin Reading” style (Harris & Hodges, 1995, as cited in Ash, Kuhn, & Walpole, 2009) when each student reads a paragraph aloud in succession. Others may be called to read aloud randomly, or students may read with a partner or in a small group. Typically there are some comprehension questions that will be encountered about the reading material. Teachers may model reading through “read alouds” (Santoro, Chard, Howard, & Baker, 2008) or comprehension strategies through “think alouds” (MacMillan, 2010). What happens during this block of reading time is crucial to the development of the students’ reading comprehension.

With the average reading scores remaining unchanged for fourth grade students, as reported by the National Center for Education Statistics (NCES) (Rampey, Dion, & Donahue, 2009), teachers wonder what they can do to improve the reading comprehension of their students. Textbooks often do not include many reading comprehension activities or they may use many different approaches, but do not allow enough time for students to practice the strategies (Dewitz, Jones, & Leahy, 2009). Reading is much different than mathematics. There are no formulas to follow or

memorize and it is needed to master other subjects like science and history where reading is important to learn the concepts. Teachers may try to compensate for what textbooks lack (Hoffman et al., 1993) so they use ancillary materials and a variety of different approaches, but want to know what strategy is best for improving reading comprehension. It is clear that there is a need for better reading instruction (Williams & Sheridan, 2005).

Studies vacillate on the most effective reading comprehension instruction. Some suggest explicit instruction of reading comprehension strategies (Eliers & Pinkley, 2006; Pope; 2007; Casteel, Isom, & Jordan, 2000), cooperative learning (Kitano & Lewis, 2007; Gauthier, 2001; Gungor & Un Acikoz, 2004), using technology (Manzo, Manzo, & Albee, 2002; Wijekumar, 2007), and feedback and motivation (Agnew, 2000; Jenkins, Barksdale, & Clinton, 2001; Crowe, 2005). The bulk of the research, however, centers on explicit direct instruction (EDI) of the reading comprehension strategies and cooperative learning. Before discussing these two main strategies, it is important to fully understand what each one is and how they differ from each other.

EDI is a teaching method that can be used to teach any topic, not just reading comprehension. It is research based and has positive findings. Hollingsworth and Ybarra (2009, p. 12) define EDI as "a strategic collection of instructional practices combined together to design and deliver well-crafted lessons that explicitly teach content, especially grade-level content, to all students." While implementing EDI in a classroom, there is a specific format for checking for understanding, setting objectives, activating prior knowledge, developing student skills through explaining, modeling, and demonstrating, presenting content, and using guided practice. Hollingsworth and Ybarra (2009) note that

the repetition and student engagement used in EDI increase student achievement. Additionally, Dataworks (2011) suggests the backbone of effective instruction is continuous checking for understanding so teaching decisions like reteaching or moving forward can be made during the lesson. In order for that to occur, a series of steps with the mnemonic, TAPPLE, was designed (Dataworks, 2011).

TAPPLE stands for Teach first, Ask a question, Pause and pair-share, Pick a non-volunteer, Listen to the response, and Effective feedback (Dataworks, 2011). To open a lesson, teachers often pose a question and then ask the students for an answer before teaching anything on the topic. EDI moves away from this. The teacher teaches first and then asks a specific question directly related to what was just presented. Questions about the material typically occur about every two minutes (Dataworks, 2011). When a question is posed, teachers provide think time. During this time, students are thinking of the answer, and they may be asked to share their answer with their partner next to them before a student is called to answer out. Next, teachers pick a non-volunteer to answer the question. Generally, the teacher will call on three students to answer the same question. Teachers are listening to see if the students can answer the question correctly. Based on the responses, teachers can echo, elaborate, or explain. Echo is affirming exactly what the student said so everyone can hear it again. Elaboration occurs when a student is partially correct, but might need some paraphrasing to reinforce the correct answer. Explaining happens when two students in a row cannot answer the question correctly. Teachers need to go back immediately and explain or reteach the material that was previously presented. If two students in a row answered the question correctly, the teacher can proceed with the lesson. This series of steps and the use of non-volunteers are successful in continuously

checking for student understanding (Dataworks, 2011).

Cooperative learning differs greatly from EDI practices. While there is a plethora of research that incorporates cooperative learning methods (Kitano & Lewis, 2007; Gauthier, 2001; Gungor & Un Acikoz, 2004), there are also a variety of forms of cooperative learning. Johnson and Johnson (2004) define cooperative learning as a group working together to achieve a common goal. Five elements of cooperative learning are also outlined by Johnson and Johnson. The first element is positive interdependence. This can be achieved by providing rewards for the individual learning of each group member. Roles can also be assigned to make each person accountable for parts of the group assignment. The second element, face-to-face interaction, requires students to discuss with classmates. They need to help, share, and encourage each other throughout the learning process. Third, individual accountability ensures that each student in the group will be assessed on the group material and is responsible for knowing all of it, not just a specific section that the student may have been responsible for during a group discussion activity. The fourth element is that the groups use interpersonal skills. Students should be able to communicate, use conflict-management skills, make decisions, and provide leadership. If groups do not have the skills needed, teachers need to teach them. The final element, group processing, provides time for the group to discuss and achieve their goals. Students should be able to provide feedback about how the group is working together and what can be done to be more efficient or successful (Johnson & Johnson, 2004).

The Educational Resources Information Center (ERIC) (2003) compiled a list of 14 cooperative learning elements because a large number of classroom activities used in

classrooms by teachers are thought of as cooperative learning, but really are not. ERIC (2003) and Johnson and Johnson (2004) argue that just because students are working in small groups does not classify the activity as cooperative learning. The "jigsaw" is an example of group work that is not actually a cooperative learning task. In order for a group activity to be correctly categorized as a cooperative learning activity, it is imperative that the basic elements of cooperative learning are included and followed. Cooperative learning exists when individuals work together to achieve combined learning group outcomes (Johnson, Johnson, & Holubee, 1992).

Researchers have found that cooperative learning is a successful method in improving reading comprehension as found by Kitano and Lewis (2007), Gauthier (2001), and Gungor and Un Acikoz (2004). Other researchers believe that metacognitive strategies need to be explicitly taught in order for students to fully comprehend successfully (Eliers & Pinkley, 2006; Pope, 2007; Boulware-Gooden, Carreker, Thornhill, & Malatesha Joshi, 2007; Casteel, Isom & Jordan, 2000). Fountas and Pinnell (1996) define metacognition as thinking about thinking. Teachers can guide students by helping them understand how they process information. Metacognitive strategies in reading include asking questions, visualizing, predicting, synthesizing information, and making connections. While the above studies vary in how or which metacognitive strategies had been taught, they all had positive findings. No matter the strategy used to teach reading comprehension, the underlying message was that the more students use reading strategies, the higher reading comprehension they will have (Pressley, Wharton-McDonald, Mistretta-Hampton, & Echevarria, 1998).

While research in reading comprehension suggests that the use of EDI of reading

comprehension strategies (Graham & Wong, 1993; Eliers & Pinkley, 2006) and cooperative learning (Gauthier, 2001; Gungor & Un Acikoz, 2004) are both beneficial strategies, Van Keer and Varhaeghe (2005) found that a combination of EDI of reading comprehension strategies combined with cooperative learning can be more beneficial than using only one teaching instruction strategy in order to improve reading comprehension of students.

Unfortunately, there are few studies similar to the Van Keer and Varhaeghe study that combine both explicit instruction and cooperative learning strategies. There are also few studies on reading comprehension that include cooperative learning and motivation similar to Van Keer and Varhaeghe's. Perhaps one reason Van Keer and Varhaeghe (2005) found improvement in reading comprehension when cooperative learning was included with explicit instruction is because there was an increase in student motivation. Consequently, it is not known whether the combined treatment is effective for all students or just students similar to those used by Van Keer and Varhaeghe, and if motivation played a role.

Purpose of the Study

While EDI and cooperative learning show encouraging research in improving reading comprehension, they are greatly different teaching styles. EDI is highly teacher directed while cooperative learning is child-centered. Perhaps pairing these two strategies would offer the best of both worlds for the students. This study adds to the research of combining these two instructional strategies together to gauge the effectiveness of combining both explicit direct instruction and cooperative learning. Therefore, the purpose of this study aimed at determining whether using explicit direct instruction to

teach reading comprehension strategies with independent seatwork or with cooperative learning as an independent practice activity increased reading comprehension, metacognitive strategy use, and motivation in fourth grade students at two elementary schools in the Bay Area. This study was a quasi-experimental study, in which two fourth-grade classes at the two elementary schools all received EDI, but one class from each school practiced reading strategies with independent seatwork (EDI + IW) and the other practiced the reading strategies in cooperative learning groups (EDI + CL). All students with informed parental consent took part in a pretest and posttest survey called the Metacomprehension Strategy Index (MSI) about use of metacognitive strategies as well as a motivational inventory, the Motivation to Read Profile (MRP).

Significance of the Study

This study was important for several reasons. First, it served the educational need for improving reading comprehension of students. Second, it extended the research in reading comprehension instruction focusing on combining EDI and cooperative learning. Lastly, it helped to create better readers who can use their knowledge and apply it in society and the work force.

The educational significance of this study is that it provided teachers with more beneficial reading comprehension instruction and teaching strategies to help improve student comprehension which could be incorporated into curriculum. So far most research has isolated specific reading strategies to examine whether that they improve reading comprehension in students. Incorporating two instructional strategies that have been beneficial in improving reading comprehension will expectantly increase this effectiveness compared to implementing only one strategy. Teachers learned which

method better served higher and lower ability readers and which method motivated students to actively participate in the instruction. Teachers learned that it is best to differentiate instruction based on students' needs. It is best to support lower ability learners with EDI + IW and challenge higher ability learners with EDI +CL.

Additionally, a combined EDI + CL may help students grasp a greater number of reading comprehension strategies that they could use to comprehend both literary and informational text. Working in cooperative learning groups can increase student motivation for reading and allow for an increased amount of modeling of reading strategies from higher performing readers. Students may also be better prepared for district or state reading assessments with explicit direct instruction of the reading strategies by a teacher and through focusing on both types of text structures. The use of cooperative learning groups and book discussions with classmates may instill a greater appreciation of reading.

This study may also extend the research in reading comprehension. Currently, Van Keer and Varhaeghe (2005) are part of a few researchers that combined the two strategies of cooperative learning and explicit direct instruction to improve reading comprehension. It may be found that combining these two strategies (that are very opposite when juxtaposed, but very beneficial in each regard) together may magnify the benefits of each strategy individually. Like Van Keer and Varhaeghe (2005), the combined EDI + CL group was hypothesized to aid students' self-monitoring of the use of comprehension strategies. In addition, this study focused on a different population of students not previously researched in this area.

Theoretical Framework

This study incorporated elements of three theories: (a) Bandura's (1977) social cognitive theory, (b) Vygotsky's (1978) sociocultural learning theory, and (c) Deci and Ryan's self-determination theory (2002).

Bandura acknowledged that learning occurs on direct tuition or instrumental training. This is when instructors or parents are explicit about what they want the child to learn and use rewards or punishments to direct behavior. Second, a child can learn from parent modeling (Bandura, 1963). Supporting Bandura's social cognitive theory (1977), which states that learning occurs in a social environment, Caprara, Barbaranelli, Pastorelli, Bandura, and Zimbardo (2000) found that early prosocial behavior predicts future academic achievement. As Bandura (1989) noted, observational learning requires four component subfunctions. These include attention, retention, motor reproduction, and motivation. In order for learning to occur, it is necessary for students to pay attention to key information being modeled. Next, students must remember the information presented. "People cannot be much influenced by observed events if they do not remember them" (Bandura, 1989, p. 24). During this stage, students must incorporate what is modeled into memory. In the third subfunction of motor reproduction, students replicate the behavior demonstrated (Artino, 2007). Lastly, the learner is motivated through incentives which are direct, vicarious, or self-produced.

These subfuctions were important steps for students to follow during direct instruction because EDI requires students to pay attention, retain information, follow modeled steps, and be motivated to learn. During the EDI portion of the reading lessons in the present study, the teacher modeled reading comprehension strategies that the

students replicated and practiced repetitively to increase fluidity of use. Students were encouraged to socialize with one another through pair-shares. This pair-share time was motivating for the students because it provided them time to turn and talk with their neighbor. They were able to share answers to questions without judgment from their teacher during this time and received constructive criticism from their friend or had their answer validated. This time also built students' confidence in their knowledge and answers to the questions that teacher asked.

Similarly to Bandura, Vygotsky's (1978) sociocultural learning theory stressed the importance of communication for learning or development. He believed that cognitive and social developments are both needed to foster learning. While children play with peers, they learn from each other and can correct each other. This, as well as interaction with a teacher, is important in advancing a child's knowledge. The zone of proximal development (ZPD) is one of Vygotsky's most important concepts within his theory. Vygotsky (1978) defined the ZPD as the difference between students' actual and potential developmental level. In simpler words, the ZPD is "the distance between the most difficult task a child can do alone and the most difficult task a child can do with help" (Mooney, 2000, p. 83). To understand ZPD, psychologists needed to reevaluate the role of imitation in learning. Typically, a child's independent activity, not imitated activities, is taken into account for mental development. "Recently psychologists have shown that a person can imitate only that which is within her developmental level" (Vygotsky, 1978, as cited in Guavain & Cole, 1997, p. 7). Because of this, it is imperative for a child to interact with the teacher and peers in order to learn a new concept. This assistance is called scaffolding. When teachers observe students, they can plan curriculum and pair

students up to learn from each other. When a teacher uses heterogeneous grouping during cooperative learning activities, students can provide each other with the scaffolding they need (Mooney, 2000).

Unlike Piaget's theory (1936), which hesitated to "push" children beyond what they were developmentally ready for learning, Vygotsky believed that with support children can reach the next stage of development, if teachers plan curriculum that will stretch children's competence. Like Bandura, Vygotsky theorizes that children can acquire learning by observing and imitating peers or adults. Therefore, it is important to provide time for students to collaborate and work together. During this time, students are encouraged to converse and interact socially. Conversation helps a child learn the role of language and individual experience and opinions. "Children learn not only by doing but also by talking¸ working with friends, and persisting until they 'get it'" (Mooney, 2000, p. 92).

Based on Vygotsky's theory, the current study used the students' ZPD in reading and California State Test (CST) scores to create heterogeneous cooperative learning groups. The heterogeneous grouping allowed for higher performing students to provide a scaffold, or model, for lower performing students during group discussions. It was anticipated that the higher performing students would improve the test scores and strategy use of the lower performing students as suggested by Vygotsky's ZPD theory. The conversations encouraged by Vygotsky to promote learning were also similar to the conversations that took place among students during the cooperative learning activities.

The last theory that helped shaped this research study was the self-determination theory (SDT). SDT is an area of research that stresses psychological needs

and the benefits of intrinsic over extrinsic motivation (Ryan & Deci, 2002). Strong self-determination leads to intrinsic motivation for learning. Ryan and Deci argued that healthy development, and thus a sense of self-determination, occurs in learners when three psychological needs are met: competence, autonomy, and relatedness. Competence centers on learner's belief about one's own ability. A learner's need for autonomy introduces the importance of self-determination and control over one's learning. Relatedness refers to the leaner's connection to the learning environment and those who share in the community of the classroom. Ryan and Deci (2002) posit that these three psychological needs work in conjunction with each other to help learners support their optimum level of performance and increase intrinsic motivation. This theory can easily fit in with cooperative learning and reading achievement. With regards to a learner, he or she must be competent in reading comprehension strategies, autonomous in their work, and feel a sense of relatedness to their group or class as a whole.

As Bandura (1989) and Ryan and Deci (2002) acknowledged, motivation is also a crucial factor which contributes to student achievement and success. Manzo (2008) stressed the importance of motivating students with low motivation. Improving low motivation is easier in the elementary years and gets more difficult to improve with time. Manzo states that "many teachers are still grappling with ways to motivate students to excel intellectually" (p. 22). Low motivation can be one early factor in identifying at risk students. Law (2007) found that second grade students' attitudes and positive cooperative behavior were related to their motivation and reading comprehension. "When students perceived that their peers were willing to help each other and were committed to the group, they tended to be more motivated and performed better in reading comprehension"

(p. 567). Based on this research, it was concluded that cooperative learning can be a socializing opportunity that both motivates and improves reading comprehension.

Background and Need

Since 2002 with the implementation of No Child Left Behind Act established by President Bush, there has been a nationwide push for student achievement and teacher accountability. The push for accountability has been continued with President Obama's "Race to the Top" program (Shear & Anderson, 2009). With all students expected to be proficient in reading and mathematics by 2014, teachers find themselves struggling to find best teaching practices and strategies to improve test scores (CDE, 2009).

Although state accountability tests focus on mathematics and reading competency, statistics on reading performance are exceptionally alarming. The National Assessment of Education Progress (NAEP) results in 2009 show little or no progress in reading assessments across the United States (NCES, 2009). Focusing on fourth-grade, NCES (2009) reports,

> …the average reading score in 2009 was unchanged from the score in 2007 but was higher than the scores in other earlier assessment years from 1992 to 2005. About two-thirds (67 percent) of fourth-graders performed at or above the *Basic* level in 2009, and one-third (33 percent) performed at or above *Proficient*. Both percentages were unchanged from 2007 but were higher than pervious assessment years. Eight percent of fourth-graders performed at the *Advanced* level, which was the same in 2007 but higher than in 1992. (p. 1)

There were also no gains made among ethnicity, gender, type of school, or previous achievement gaps (NCES, 2009).

Nationally, 34 % of students are *Below Basic,* 34 % are *Basic*, 24 % are *Proficient,* and 7 % are *Advanced*. In California, the average NAEP 2009 reading achievement score for fourth-grade public schools was 210, with the national average

being 220. In California, 46 % of fourth-graders fell into the *Below Basic* level, 30 % were in the *Basic* level, 18 % were in the *Proficient* level, and 5 % were in the *Advanced* level (NCES, 2009).

Across the United States, if benchmarks of *Proficiency* are not met for designated special populations at schools, the schools are designated as program improvement. Program improvement means that the state begins to change and implement programs at the school to improve state assessment scores in reading and mathematics. Many school districts in California already have at least one school in program improvement (CDE, 2009). For 2011, higher achievement gains are expected as stipulated by NCLB. School districts fear that more of their schools will fall into program improvement for not meeting their Academic Performance Index goals.

2009 NAEP Reading Assessment

In addition to knowing how well students are performing on national tests, it is equally important to know what the tests entail. The NAEP bases student assessments on the NAEP reading framework. It requires students to read literary or information passages and to answer questions (National Assessment Governing Board (NAGB), 2008). For the 2009 NAEP Reading Assessment, reading was defined as "an active and complex process that involves understanding written text, developing and interpreting meaning, and using meaning as appropriate to type of text, purpose, and situation" (NAGB, 2008, p. 2). In writing the assessment, factors that influence reading performance were taken into consideration. To accommodate for students' cultural and background differences, the NAEP assessment spans a diverse area of context and interests.

Specifically, for 4th grade, the 2009 NAEP Reading Assessment features two types of text: literary and informational. The literary texts include works of fiction, nonfiction (essays speeches, biographies, and autobiographies), and poetry. These types of texts allow students to engage in story elements such as characters, setting, plot (conflict/resolution), themes, author's craft, and figurative language. There is a wide range of genres presented. Adventure stories, historical fiction, folktales, myths, and legends just name a few. Informational texts include exposition, arguments and persuasive texts, and procedural texts or documents (i.e. how-to-guides). Through these types of texts, students engage with structure patterns of description, sequence, cause and effect, problem and solution, and compare and contrast. Texts may also include illustrations, maps, diagrams, pictures, or other nonprint elements that can aid in understanding the text.

On the 4th grade exam, 50% of the passages are literary and 50% are informational (NAGB, 2008). The passages range from 200-800 words each. Each question pertains to three specific cognitive behaviors associated with reading: (a) locate and recall, (b) integrate and interpret, (c) critique and evaluate. Thirty percent of the questions on the test assess locate and recall, 50% assess integrate and interpret, and 20% of questions assess critique and evaluate. Fifty percent of the total questions are multiple-choice and the remaining 50% are written responses which are 40% short constructed responses and 10% extended constructed responses (NAGB, 2008).

Williams and Sheridan (2005) acknowledged the importance of comprehension strategies, but also focused on the importance of text structure. Because half of the NAEP Reading Assessment focuses on literary text and the other half focuses on informational

text, teaching text structure becomes critical. Early on in reading instruction, children are exposed to narrative literary texts and begin to comprehend elements of plot, setting, and characters as they read. As a child matures, he or she must learn to generalize what they read to the world around them. Informational text is more difficult to comprehend due to a variety of organizational structures compared to literary texts. In the early elementary grades there is little exposure to informational text. Hoffman et al. (1994) found that basal readers typically include a small proportion of informational text. Chall, Jacobs, and Baldwin (1990) believe that this lack of experience with informational text contributes to the fourth-grade slump in reading achievement. In the study at hand, both literary and informational texts are included to balance the literature and increase exposure to expository texts.

California's Common Core State Standards

California chose to adopt new Common Core Standards in August of 2010 (Common Core State Standards Initiative, 2012). The adoption of these standards allows California to be eligible for federal funding. The standards will be effective for the 2014-2015 school year and are different than the current state standards. The new Common Core Standards are designed to help prepare students for college and careers. Each standard progressively builds on each other throughout the years of schooling. Looking at the new English-Language Arts (ELA) standards, they appear to be more in line with the NAEP Reading Assessment content. There is now a greater focus on informational texts. The ELA standards are split between literature and informational texts. An example of a fourth-grade standard for literature includes, "Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the

text." An example of a fourth-grade standard for informational texts includes, "Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears" (Sacramento County Office of Education, 2012, p. 19-20). While these standards are not fully in use, it is important to note that the present study did take the new standards into consideration during the design process. During the selection of the reading unit for the intervention, Unit 2 was chosen because the unit consisted of three literary selections and two informational selections. Typically, the units in the CA Treasures reading curriculum consist of four literary texts and one informational text. By implementing the intervention using Unit 2, there was a better balance between literary and informational texts which the common core standards require.

California Standards Test

The annual student achievement test in California is the California Standards Test. This test is given to students beginning in the second grade and each year thereafter. California provides test blueprints that clearly outline which state standards are tested on the CST. Viewing the fourth grade English-Language Arts blueprint, 20% of the test questions focus on reading comprehension standards and 12% come from literary analysis in which comprehension is also required (STAR CST Blueprint, 2005). The standards the CST focus on concern the students' ability to identify structural patterns found in informational text, to use appropriate strategies when reading for different purposes, to make and confirm predictions about text, to evaluate new information and hypotheses, to compare and contrast information, to distinguish between cause and effect

and between fact and opinion in expository text, and to follow multiple-step instructions in a basic technical manual. In regards to literary analysis standards, students are tested on their ability to describe the structural differences of various imaginative forms of literature, identify the main events of the plot, identify motivations to determine the causes for that character's actions, compare and contrast tales from different cultures, and define figurative language.

Similarly to the NAEP Reading Assessment, it is beneficial for teachers to know what is being assessed on the CST ELA assessment. The 2012 ELA CST results for third grade across California showed that 64% of students were advanced or proficient in ELA. Looking at the specific Bay Area school district being studied, test results were fairly consistent with the California third grade mean scale score of 363.6 in the district, but higher than the 347.1 statewide mean scale score. The two schools of focus scale mean scores were 396.0 for School A and 360.1 for School B (STAR CST, 2012).

Reading Comprehension Strategies

As seen through the 2009 NAEP Reading Assessment and CSTs, reading comprehension covers a vast area of knowledge. Children learn a variety of different comprehension strategies in a variety of different ways. Daniels and Steineke (2004) emphasize the importance of students being able to understand and remember what they read. In 1994, Daniels developed literature circles while researching inner city schools in Chicago. While the beginning of literature circles emerged 15 to 20 years ago, teachers were not modeling cognitive strategies that skilled readers use to navigate text (Daniels & Steineke, 2004). Today teachers use a set of strategies that can help students make sense of texts.

There are eight powerful strategies that good readers use: Visualize, Connect, Question, Infer, Evaluate, Analyze, Recall, and Self-Monitor (Daniel & Steineke, 2004). Sometimes these strategies can have other names, but in essence are similar. For example, infer requires a student to predict, hypothesize, and draw conclusions. Sometimes this is referred to as making predictions. Eilers and Pinkley (2006) used prior knowledge (connecting text-to-self, text-to-text, and text-to-world), predicting, and sequencing strategies to improve student reading comprehension. Kitano and Lewis (2007) used questioning, visualizing, and summarizing in their research that was found to improve reading comprehension in students as well. Research has shown that regardless of the reading comprehension strategy used, reading comprehension is higher when students employ strategies often while reading (Pressley, Wharton-McDonald, Mistretta-Hampton, & Echevarria, 1998).

Current Research on Reading Instruction

Formerly, Durkin (1978-1979), as cited by Ness (2011) found that less than 1% of instructional time was spent on reading comprehension instruction. These findings were consistent in 1998, when Pressley, Wharton-McDonald, Hampston, and Echevarria observed that explicit reading comprehension instruction was rare in fourth and fifth grade classrooms (cited by Ness, 2011). Ness (2011) sought to examine the extent in which teachers today are incorporating explicit reading comprehension instruction and which strategies are incorporated most frequently. During seven months, 3,000 observational minutes were spent in first- through fifth-grade classrooms. Twenty teachers from two school sites participated in the study. Findings indicated that 751 minutes of the 3,000 observation minutes involved language arts instruction. Of these

minutes, 25% involved explicit reading comprehension instruction. During this time, teachers used "whole-class read-alouds, small-group guided reading, mini-lessons during readers' workshop, and independent reading" instructional activities (Ness, 2011, p. 106-107). Fourth-grade had the highest amount of reading comprehension instruction (287 minutes), while third-grade had the lowest (67 minutes). As for strategy use, teachers used asking questions as the most common comprehension strategy. Other strategies used were predicting, comprehension monitoring, question generation, text structure, summarization, vocabulary, and visual representation. Predicting (184 minutes), summarizing (101 minutes), and vocabulary (85 minutes) were the three next commonly used strategies by teachers. These strategies were consistent with strategies recommended by the National Reading Panel report in 2000 (Ness, 2011).

Also curious about strategy instruction in reading programs, Dewitz, Jones, and Leahy (2009) analyzed five popular core reading textbooks. They analyzed each third, fourth, and fifth-grade textbook for strategy use and looked at the spacing and timing of them. This study was very systematic at the way strategy instruction was identified and measured. A few findings include that less than 10% of instructional time is allotted for independent practice. There is also very little time spent on guided practice where students can try out the comprehension strategies when they are first introduced. Lastly, the researchers concluded that the texts cover a broad range of reading skills and strategies, but depth is lacking. This finding is similar to the view on U.S. math curriculum which was described as, "a mile wide and an inch deep" (Schmidt, McKnight, & Raizen, 1996, p. 62 as cited by Van de Walle, Karp, & Bay-Williams, 2010, p. 6).

Research Questions

1. What are the differences in 4th grade students' reading comprehension performance for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?
2. What are the differences in 4th grade students' reading comprehension strategies for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?
3. What are the differences in the 4th graders students' motivation for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?

Definition of Terms

The following section contains definitions of terms and concepts used in this study. While there may be alternative definitions to the terms, the way they are defined in this section is the way they are used in this study.

Cooperative Learning (CL) is defined as students working together in small groups to discuss predictions, questions, and connections made to a text, summaries, and vocabulary with a common goal and culminating project (Johnson, Johnson, & Holubee, 1992).

Explicit Direct Instruction (EDI) provides instruction of reading strategies such as predicting, questioning, and making connections between student and text, text and other texts, or text and worldly situations, summarizing, and vocabulary building through the TAPPLE teaching process (Dataworks, 2011).

Metacognitive Strategies are the strategies students use to facilitate understanding during reading. The strategies include asking questions, visualizing, predicting, synthesizing information, and making connections during reading (Daniel & Steineke, 2004).

Motivation is being moved to do something (Ryan & Deci, 2000).

Reading Comprehension is defined by the 2009 NAEP Reading Assessment definition as "an active and complex process that involves understanding written text, developing and interpreting meaning, and using meaning as appropriate to type of text, purpose, and situation" (NAGB, 2008, p. 2).

CHAPTER II

THE LITERATURE REVIEW

The purpose of this study aimed at determining whether using explicit direct instruction to teach reading comprehension strategies with independent seatwork or with cooperative learning as an independent practice activity increased reading comprehension, metacognitive strategy use, and motivation in fourth grade students. In this chapter, the relevant literature in three areas will be reviewed. The first section will present studies that were successful in increasing reading comprehension with explicit direct instruction. The second section will focus on studies involving cooperative learning. This section will also include other studies that used both EDI and cooperative learning. Next, studies incorporating motivation will be presented. Lastly, the chapter will conclude with a section discussing some literature on studies involving cooperative vs. competitive learning environments.

Explicit Direct Instruction

Research on explicit direct instruction began in the early 1980s. Early studies focused on researching a specific set of teaching practices learned through teacher training to increase academic achievement in students (Rosenshine & Stevens, 1986). These practices included concepts such as reviewing material, assigning and checking homework regularly, as well as engaging the students in seatwork. Other practices included attending to inappropriate behavior, maintaining student attention, providing immediate feedback. Having fewer disruptions, clear expectations, and a supportive environment were thought as good teaching practices as well. Teachers who combined these practices with a well-structured lesson were effective (Rosenshine & Stevens,

1986). The steps of these well-structured lessons were used as a model with the TAPPLE steps of our current day EDI. TAPPLE stands for Teach first, Ask a question, Pause and pair-share, Pick a non-volunteer, Listen to the response, and Effective feedback (Dataworks, 2011). Teachers were trained to follow a process of reviewing previous material required for the new lesson, state the goal of the lesson, present the material in small steps and allow for practice after each step. They also were trained to give clear, detailed instruction, provide active practice, and check for understanding throughout. Lastly, teachers were to guide students with feedback, provide explicit instruction and practice for seatwork, as well as evaluate students during seatwork time (Rosenshine & Stevens, 1986; Dataworks, 2011).

Checking for understanding (CFU) is an important aspect of explicit direct instruction. Dataworks (2011) suggests that teachers ask questions to monitor student understanding every two minutes. These questions as well as answers are important in determining the next steps for instruction. Rosenshine and Stevens (1986) outlined inappropriate teaching practices for CFU. Teachers sometimes may ask too few questions or only call on volunteers that usually have the correct answer. Teachers then assume because one student answered the questions correctly, the others know the answer as well whether beforehand or from learning form the volunteers answer. Another error is that teachers ask, “Are there any questions?” (Rosenshine & Stevens, 1986, p. 384). If there are no questions, teachers assume student knowledge. Lastly, teachers assume that there is no need to CFU if points are repeated sufficiently to the class.

Through the correct use of CFU, teachers ask a myriad of questions, as observed by Ness (2011), throughout a lesson to determine if students are ready to proceed to the

next step of learning the material. The frequency of questions is as important as the percentage of correct student responses. Responses should be automatic, or rapid, as well as correct. An initial presentation of material should yield an 80% success rate from the class, while review material should yield a 95% success rate (Brophy, 1980). Studies show that a high percentage of correct answers positively correlated with achievement gain (Fisher et al., 1978).

While CFU, teachers actively listen to student responses. Responses can be identified as four types: correct, quick, and firm; correct, but hesitant; incorrect, but a "careless error; or incorrect, suggesting lack of knowledge of facts or process (Rosenshine & Stevens, 1986). When a teacher hears one of these responses, he or she can either echo correct information stated by a student, elaborate on the information, or explain the information again if the answer was incorrect.

Explicit Direct Instruction of Reading Comprehension Strategies

Eliers and Pinkley (2006) examined how teachers generate questions as a form of assessing comprehension. In fact, generating questions measures comprehension instead of teaching it. The purpose of the study was to examine the effects of EDI of reading comprehension strategies in first graders. Strategies of using prior knowledge, predicting and sequencing were the metacognitive strategies of focus for this study. These strategies aid students in effectively answering the comprehension questions that teachers generate. Using twenty-four first grade students, Eliers and Pinkley (2006) collected baseline data to measure students' cognitive awareness during reading through the Index of Reading Awareness (IRA) and the Beaver Developmental Reading Assessment (DRA). Twenty-one percent were below grade level in reading. Students were explicitly introduced to

each strategy one by one in a whole group setting. The first strategy introduced was prior knowledge, then predicting using prior knowledge, and lastly, sequencing. Prior knowledge connections were made text-to-text, text-to-self, and text-to-world. Students made predictions using story clues. Sequencing required students to identify important details and put the events in order as they occurred. Small group instruction was used to support the use of strategies during independent reading. Throughout the experiment, students used graphic organizers to help record personal connections, predictions, and sequencing. Trade books were chosen for small groups based on Fountas and Pinell's Guided Reading (1996). These books were high interest books matched to student ability and needs. The study took place over nine weeks with small groups meeting once a week for thirty minutes. Teachers used the Comprehension Strategy Checklist to record observed student strategies.

The results of the study showed that IRA scores were higher for the posttest than pretest. Using a *t* test (alpha = .01) mean scores after explicit instruction of comprehension strategies was 22.17 compared to 19.42 before explicit instruction. Using a paired sample *t* test, there was a significant different between pre- and posttest scores for DRA. DRA posttest mean scores were higher ($M = 17.917$) compared to pretest means ($M = 14.833$). It was also found that students used strategies outside group instruction. Results suggest that explicit instruction of metacognitive strategies is an effective instructional method in improving reading comprehension in first grade students.

Limitations of this study included a small sample size. The study also did not provide a location of the study. Findings indicated that explicit direct instruction of

reading comprehension strategies should begin at an early age, but still others feel that decoding and fluency can hinder comprehension in younger students (La Berge & Samuels, 1974; Perfetie & Lesgold, 1979). This study connected to the present study because it discussed the major reading comprehension strategies that the present study focused upon. The methodology employed was similar to the study at hand. EDI of reading comprehension strategies were presented to a whole class. Small group cooperative learning was used for practicing the strategies taught in the EDI + CL group, while independent practice was used in the EDI + IW group.

Similarly, Santoro, Chard, Howard, and Baker (2008) studied reading comprehension in a first grade classroom. Teachers of younger students often use a strategy called "read alouds" as an important part of their reading instruction. Teachers want to make sure that this time is beneficial for their students. There were three areas of focus, which were text structure, text-focused discussions, and vocabulary. The study revealed that enhancing read-alouds with comprehension strategies and text-based discussions made a positive difference in student performance. Participants could speak with more depth and metacognitive awareness about comprehension. There were no differences in at-risk or average-achieving students. It is suggested that "connecting information and events in text-to-life and life-to-text experience, predicting and justifying what will happen next in stories, and describing new information gained from text in your own words" (p. 407) are positive strategies in improving comprehension. Book selection used for read-alouds was also a key component discussed in the article. Research showed "that read-alouds, with explicit comprehension instruction and active, engaging discussions about text, can promote comprehension and vocabulary even as students are

learning to read" (p. 407).

Focusing on vocabulary achievement and reading comprehension of 119 third-grade students, Boulware-Gooden, Carreker, Thornhill, and Joshi (2007) researched whether EDI of multiple metacognitive strategies would be beneficial in improving either or both vocabulary and comprehension. Pretests were given and after five weeks of study, posttests were administered. Data collection included Word Attack, Letter-Word Identification, and Spelling subtests from the 2001 Woodcock Johnson III. Also, the Gray Silent Reading Test was used to measure progress in both comprehension and vocabulary. Lastly, a criterion vocabulary test was administered. Using reading comprehension curriculum, students received thirty minutes of EDI of metacognitive strategies for twenty-five days. The lessons had five parts: a) introduction or a hook; b) vocabulary webs; c) reading the story while thinking out loud; d) summary; and e) answering simple and complex questions. In the comparison group, similar introductory activities were conducted; however, vocabulary webs were not used and students did not think aloud or write a summary. Comparing the intervention with the control group, there was a 40% difference in gain in vocabulary and 20% difference in reading comprehension gains. Mean pretest score for the control group was 103.53 (*SD* = 10.23) and the posttest mean was 105.98 (*SD* = 12.71) in reading comprehension. Mean pretest score for the experimental group was 104.46 (*SD* =1 4.12) and the posttest mean was 111.07 (*SD* = 12.94). These findings showed that EDI of metacognitive strategies significantly improved academic reading achievement of third-graders in reading comprehension.

The researchers did not provide limitations of their study nor did they provide

ideas for future research. The study seemed to be sound and used multiple measures for data collection. Many activities used in the study were replicated in the current study like summarizing and the use of informational texts; however, vocabulary achievement was not a variable.

Other researchers have studied the effects of a reading strategy called Transactional Strategy Instruction (TSI) (Brown, Pressley, vanMeter, & Schuder, 1996; Casteel, Isom, & Jordan, 2000). Brown et al. (1996) used an approach called Students Achieving Independent Learning (SAIL) with second-grade students. This program promotes independent and self-regulated learners. Students were instructed to adjust their reading to a specific purpose. They used reading strategies of predicting upcoming events, altering expectations, generating questions, interpreting, and summarizing. Students are taught to think aloud. These processes were taught through direct explanations, modeling, coaching, and scaffolding with both group and independent practice. This study looked at ten teachers, five who had been trained in SAIL and five who had not. There were five SAIL and five non-SAIL groups each containing six matched pairs target students. In the SAIL group, teachers gave more explicit explanations and verbalized their thinking. Non-SAIL teachers provided instruction many times without stating the purpose of the lesson and gave students answers to questions when they had difficulty.

Overall, posttest performance for SAIL classes outperformed comparison classrooms with few exceptions. For example, on the Stanford Achievement Test pretest and posttest group totals for reading comprehension, SAIL groups mean scores were 22.20 (SD=6.85) for the pretest and 34.20 (SD = 2.65) for the posttest. The Non-SAIL

groups mean scores were 22.67 (*SD* = 5.89) for the pretest and 28.73 (*SD* = 3.77) for the posttest. Because this study was a year-long study, large growth rates were observed. The authors did not claim that the students were self-regulated readers as SAIL promotes, but that many years are needed to become a mature self-regulated reader. This could also be due to the young age of the students. Perhaps with older students, a year of SAIL instruction could create self-regulated readers.

Casteel et al. (2000) also investigated the use of TSI, but with older students, 20 fourth through sixth grade students. With this strategy, teachers demonstrated various modeling and coaching of a few strategies in great depth. Students then learned to choose appropriate strategies to meet their needs in reading. The purpose of Casteel et al.'s study was to see if the TSI strategy not only improves comprehension, but also affects students' views of themselves as readers. It was found that the TSI strategy did both increase comprehension and support a readers' self-perception. Using TSI, students learned the metacognitive strategies and then gradually became responsible for the process themselves. Teachers used "think aloud" to model prior knowledge and predicting. Other strategies taught included monitoring, summarizing, question answering, organizing, and applying personal information. A checklist was provided for teachers to use to keep track of how each student is progressing with the TSI strategy. Students who engaged in TSI increased their overall perceptions of themselves as readers (Casteel et al., 2000). These findings also supported the findings of Brown et al. (1996) discussed previously.

Another study that incorporated the use of explicit instruction of reading comprehension strategies also seemed promising despite the reading comprehension strategy focused upon. Graham and Wong (1993) used a strategy called 3Hs "Here,

Hidden, and in my Head, a strategy to identify question-answer relationships. "Here" refers to information that is text explicit. "Hidden" requires students to make inferences based on text implicit information. "Head" requires students to access and imply their own prior knowledge to answer a text based question. Didactic and self-instructional training was investigated in 90 students, but focused on 45 which were classified as poor readers from 5th or 6th grade. When students answered a comprehension question, they needed to state which "H" they could use to find the answer. Some students were also taught three follow up questions to use to aid with comprehension, in addition to using the 3H strategy. The follow up questions were: a) How will I answer this question? b) Where is the answer to this question found? c) Is my answer correct? This was a type of "think aloud" process.

The mean comprehension scores were higher for the didactic and self-instruction intervention groups than the control group. For poor readers, the self- instruction mean score was 29.06 (*SD* = 2.18), didactic teaching mean score was 27.07 (*SD* = 2.39), and control mean was 23.27 (*SD* = 3.84). For average readers, the self-instruction mean score was 30.93 (*SD* = 2.39), the didactic teaching mean was 29.40 (*SD* = 3.52), and the control mean was 26.47 (*SD* = 2.87). The self-instruction mean comprehension score was higher than the didactic teaching group as well. The self-instruction of the 3H strategy appears to have been more effective in maintaining comprehension performance than the didactic teaching of the same strategy.

This study is relevant because as noted by Eliers and Pinkley (2006) teachers often generate questions to check comprehension, not teach comprehension. The 3H strategy explicitly teaches students how to navigate through material to seek the answers

that teachers are requiring. If students do not know how to navigate or find the answers to questions in text, there is a greater chance of students answering the question incorrectly. This study also focused on students in higher elementary grades as opposed to younger students showing that EDI and "think-alouds" can be beneficial across grade levels.

The research discussed focused on explicit direct instruction of reading comprehension strategies. EDI can be used across grade levels and has positive effects on improving reading comprehension (Eliers & Pinkley, 2006; Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007; Casteel, Isom & Jordan, 2000; Brown, Pressley, vanMeter, & Schuder, 1996). The metacognitive strategies employed in each research studied varied, but findings were positive despite this difference. It is concluded that explicit direct instruction of reading comprehension strategies improves reading comprehension of students.

Cooperative Learning

In this section an overview of literature pertaining to cooperative learning will be reviewed. As noted in Chapter 1, there are five basic elements that differentiate an activity from being considered a cooperative learning activity or just activities where students can work together. This section provides literature on literature circles, book clubs, and other cooperative learning situations. While each is different in its own way, cooperative learning is at the core of each study.

Cooperative Learning and Reading Comprehension Strategies

Literature Circles (RC) are a popular teaching method where students read books individually as well as collaboratively. There are specific steps for RC which begins with book selection. Books are to be appropriate for a child's reading level. Students usually

read a certain amount of pages in a book independently and then discuss what was read in a small group. Jobs or roles are given to each student and may vary in titles from word-hunter, plotter, connector, summarizer, and interrogator. A culminating project was assigned to each group as well, which was to be presented to the class (Daniels, 1994). Avci and Yuksel (2011) examined the effects of reading circles on fourth grade students' reading habit and comprehension. This was a qualitative and quantitative study. Seventy-two fourth grade students from a private school in Istanbul participated in the study. Teacher and student interviews were used as well as a Reading Comprehension Scale. RC meetings occurred for 30-40 minutes twice a week. Based on low, medium, and high reading comprehension levels, the low and medium groups reading comprehension pre and posttest scores were statistically significant. Scale scores were 44.3 for the low group and 66.0 for the medium group. These scores increased to 65.0 for the low group and 72.9 for the medium group. Interviews from the students showed that students believed they understood the books read very well and better than if it was read individually. If they did not understand something, group members were able to clarify information for them.

The literature circle method was used in the current study to fulfill the cooperative learning variable. Slight differences were made to the set-up of the RC's such as title roles, but the main difference was that the teachers did not choose the books for groups to read. The district adopted basal reader stories were used instead. A culminating group project was also included in the activities for the EDI + CL group. Avci and Yuksel's (2011) study focused on students in Istanbul, which may be quite different from students in California, but they focused on fourth graders who are the main participants of this

study. Also, in the current study, students were be grouped heterogeneously rather than by ability level, which is suggested more often during cooperative learning (ERIC, 2003).

Through the use of book clubs, which were teacher-led, Alamar (2011) analyzed the use of comprehension strategies exhibited by 20 second-grade students. “Reading comprehension instruction involves teaching strategies to students that help them develop questioning skills and make connections to the text,” (Alamar, 2011, p. 34). The teacher in the study had previously taught the students reading comprehension strategies such as generating questions, making predictions, and making connections to the literature in a whole group setting and with partner reading. There is no mention of exactly how these strategies were taught. The teacher wanted to promote conversation around literature. Four book clubs were created which met weekly each for 30 minutes. During book club meetings, the teacher provided the students with prompts to engage their discussion around predicting, generating questions, and making connections.

Data was collected four times. The first week of book clubs was baseline data in which teacher prompting was not used. The second collection was during the first week of the experimental use of connection prompts. The third collection was the second use of prompting. The final collection occurred five weeks later, after the sixth week of prompt use. The use of teacher prompts increased, for the most part, as the weeks of use with the prompts continued. Looking at making connections, baseline data showed that 36 connections were made prior to the intervention. On the fourth day of data collection, 76 connections were observed made by students. For predictions, five predictions were observed in the first book club session, which climbed to 32 in the fourth. Lastly,

generating questions also increased from two questions in the first session to 25 in the final session.

While this study seemed to be very teacher-directed, the teacher was acting more as a moderator or facilitator for the book club discussions. Alamar noted, “During the intervention, the students began to speak impulsively without raising hands, listened to other comments, and started to take up other student comments, responding to them and expanding on them.” (Alamar, 2011, p. 68). This showed that the students were engaging with each other during books clubs similar to literature circles which are student-led. Due to the age of the students, perhaps it was more beneficial to have the teacher guide the conversation rather than a student. As the students get older, they should be able to handle this responsibility if modeled by the teacher. While this study did not conclude specifically that reading comprehension achievement was increased, the classroom teacher felt that the students understood the literature more deeply.

Cooperative Discussion and Questioning (Coop-Dis-Q) is a strategy that incorporates cooperative learning to improve reading comprehension. Gauthier (2001) studied the effects of Coop-Dis-Q. There are five steps in this strategy. The first is that teachers create groups according to individual needs of about six students. Next, they prepare questions of different cognitive processes that involve comprehension. After reading a story, the group discusses the story and divides the questions up among each student for them to answer. Step 4 allows time for students to work on their questions in smaller groups and then come together for Step 5 with their cooperative learning group and discuss their answers. Others can share alternative responses if they arise. The article provided a nice description of how to proceed to use the Coop-Dis-Q technique.

However, there was no actual "study" conducted to validate the effectiveness and usefulness of the technique. It would be interesting to look further into the benefits of Coop-Dis-Q.

"Learning Together" was a cooperative learning strategy explored by Gungor and Un Acikoz (2004). Attitudes towards reading were also researched. Typically, when students have a difficulty in an area, they tend to develop a negative attitude. Cooperative learning helps promote positive attitudes and therefore can be a possible solution to improving comprehension. "Learning Together" was used to transform passive readers to active readers and processors while promoting positive attitudes towards reading. There were 56 sixth grade participants in this study. Treatment lasted for 30 hours. Results showed that students in the cooperative learning setting employed more learning strategies. This may be due to increased interactions in groups. Students were able to "observe each other reading, explaining, questioning, criticizing and thinking aloud" (p. 498).

Very little data was presented by Gungor and Un Acikoz (2004). While it was found that participants in a cooperative learning setting employed more comprehension strategies, there was no direct link made between increasing strategy use and improving comprehension. The present study aimed to look into this possible link as well as researching motivational changes.

Stevens and Slavin (1995) conducted a two-year longitudinal study on a school-wide cooperative learning model. Stevens and Slavin were interested in seeing long-term effects of cooperative learning, if any. Critics of cooperative learning argued that cooperative learning effects were due to the method being novelty or the Hawthorne

effect. Stevens and Slavin looked at schools who volunteered to participate in the study. Five schools in Maryland agreed to participate. Two treatment schools with 21 classes ranging from second to sixth grades were compared to three matched schools with 24 classes. Not only was Stevens and Slavin looking at widespread use of cooperative learning across the curriculum, but they also focused on mainstreaming learning disabled students into regular education classrooms through the use of cooperative learning. District standardized test scores were used to decide control schools that did not change to school-wide cooperative learning. To measure achievement, data was collected using the California Achievement Test, Form E. Pre- and posttest attitude measures and social relations measures were used as well to gather information about student perceptions of ability and friendships. Initially, 1,012 students were included in the sample, but only 873 remained in the district for the two years during the study.

Hierarchical linear models were used to analyze the data because of the "nesting" design of the classrooms, schools, and treatments. This was also chosen to separate the effects schools or teachers from the treatment effects. Because there was no significance on grade-by-treatment analyses, data was collapsed across grade levels for the rest of the analyses. After the first year of treatment, only a small significant difference favoring the treatment group was found on reading vocabulary scores ($t = 2.14$, $p < .05$, with an effect size of +.17 standard deviations). After two years, more scores favoring the treatment groups emerged. Reading vocabulary, reading comprehension ($t = 3.62$, $p < .01$, $d =$ +.28), language expression, and math computation had significant effects. The effect scores ranged from .21 to .29. In regards to attitude measures and social relations for the general education population, after two years, higher perceived ability in reading ($t =$

20.2, $p < .05$, $d = +.20$) and language arts was found in the experimental group. The experimental group students also reported more friendships than their peers at the control schools ($t = 3.92$, $p < .01$, $d = .42$). For students with learning disabilities, after two years students with learning disabilities in the cooperative learning schools outperformed their control students on reading vocabulary, comprehension ($F = 14.39$, $p < .01$, $d = +.85$), language expression, math computation, and math application. The effect sizes were larger for the learning disabled population than those found for the general education population (+.35 to +.85). Learning disabled students in the experimental group reported higher perceived reading ($t = 2.01$, $p < .05$) and language arts ability. Also, a substantial difference was found in social relations of handicapped students in the treatment schools. Students in the experimental groups reported more friendships than the control schools ($t = 3.42$, $p < .01$, $d = +.86$).

While Stevens and Slavin did not initially plan to analyze data for gifted students (the top 10% of students on standardized pretests), results for gifted students also showed an increase in perception of ability, more friends, and higher achievement. In the comparison schools, gifted students attended a pull-out enrichment program two times a week. No significant differences were seen between the intervention and comparison school after one year; however, differences were seen after two years. The gifted students in the invention school reported more friends that in the comparison schools ($t = 2.64$, $p < .01$). On average the gifted students in the cooperative learning school averaged 1.5 more friends (effect size = +.46). On perceived ability, the cooperative gifted students also had a higher attitude ($t = 2.09$, $p < .05$, effect size = +.48) and perceived ability toward language arts ($t = 3.55$, $p < .01$, effect size = .68).

Due to the complexity of the study, Stevens and Slavin found it difficult to pinpoint outcomes to a specific element. Cooperative learning elementary schools outperformed traditional schools. Cooperative learning engages students through working together to achieve a common goal. Meaningful interactions and conversations occur in cooperative learning classrooms than the traditional classrooms where student have causal and superficial contact. Cooperative learning is also highly structured and promotes positive interdependence. "Students become an instructional and motivational resource in the classroom so that students who need help can rely on support and feedback from their peers, providing another mechanism for accommodating students with diverse abilities" (Stevens & Slavin, 1995, p. 343-344). Also, with the two-year study, Stevens and Slavin disputed the notion that other cooperative learning studies were successful due to their novelty or Hawthorne effect.

No major flaws were found in Stevens and Slavin's study (1995). The researchers reported that schools were not selected randomly, but volunteered to employ cooperative learning. Other limitations included the researchers not quantitatively measuring the cooperative learning implementation in schools. A major strength of this study was, of course, the length. No major differences were seen between cooperative learning schools and traditional schools after a year, but differences emerged after two years. Stevens and Slavin (1995) also showed the power of cooperative learning on various ability levels. Cooperative learning was found to be beneficial for gifted students, students with learning disabilities, and average general education students. The current study aimed at looking at cooperative learning improving reading achievement as a whole, not for a specific ability group. Stevens and Slavin's study (1995) holds promise for positive

research findings.

Having surprisingly non-significant results, Hitchcock et al. (2010) studied the effects of a cooperative learning strategy called Collaborative Strategic Reading (CSR) on the reading comprehension of fifth-graders. A sample of 1,355 students participated (681 = CSR, 674 = control). Teachers received a two-day training on CSR and then used the teaching method in their classrooms. CRS has been beneficial in increasing achievement of students with diverse abilities. Students learned and practiced reading comprehension strategies for use with informational texts. Students worked in groups of 10-12 students and progressed through four strategies: previewing text, generating questions for oneself about what the text is trying convey, clarifying information, and summarizing main points. Teachers also explicitly taught self-monitoring strategies. Group Reading Assessment and Diagnostic Evaluation was used to measure reading comprehension. CRS mean score was 98.67 (SD = 12.06) and control mean score was 98.01 (SD = 11.71). Intervention scores were not statistically significant (p = 0.11). Results also showed that there was no difference in achievement for English language learners compared to non-English language learners.

These findings are surprising due to the fact that this study had a fairly large sample size compared to other key pieces of literature that found cooperative learning to be beneficial in increasing reading comprehension (Avci & Yuksel, 2011; Steven & Slavin, 1995; Law, 2007). Implications include the use of a convenience sample and that CRS procedures were based off one observation. The use of CRS by teachers and students was measured, but how well it was implemented was not taken into consideration.

Explicit Direct Instruction and Cooperative Learning with Reading Comprehension Strategies

Another common strategy researched to improve reading comprehension was peer tutoring, a facet of cooperative learning. Kitano and Lewis (2007) believed tutoring programs in reading could contribute to improvement in reading comprehension depending on the program. If the program provided guidance, feedback, and used trained tutors, they would be more likely to be beneficial. Tutoring should involve children in reading and word analysis, scaffolding, and explicit strategy modeling. Explicit strategies instruction included in Kitano and Lewis's study were making connections to learners' prior knowledge and experience, tutor modeling of comprehension strategies, and the use of graphic organizers. Also included were three lower and three higher strategies, which included making connections, questioning, visualizing and imaging, inferring, determining importance, and synthesizing. Fifty-eight participants from third, fourth, and fifth grade participated in the study. Participants were highly gifted students. CST, Sixth Edition Survey (CAT6) scores, and Read Naturally fluency scores were used as measures. Adult tutors received comprehension strategy training for ten hours prior to the start of the school year and another half day two months later. Significant gains were made in reading fluency. Pretest mean was 109.7 words read correctly per minute (SD = 39.0) compared to posttest means of 152.8 (SD = 41.0) words read correctly per minute. National Percentile Rank for the CAT6 improved from 2003 (M = 55.7, SD = 26.8) to 2004 (M = 62.3, SD = 25.70). Students who participated in the study performed better on the CST test than the controls. Twenty six and four tenths percent of the participants scored advanced on the CST while only 16.7% of the control group performed advanced,

although the control group was not used in the study. There was no relation between the number of hours of tutoring and standardized test scores; however, reading fluency increased as the amount of time spent on decoding, visualizing, and determining importance increased. These strategies also proved beneficial for the English learners included in the sample.

Kitano and Lewis (2007) supported the importance of EDI of reading comprehension strategies. Researching six comprehension strategies and decoding, Kitano and Lewis were able to find that visualizing and determining importance strategies provided the greatest improvement. While improvements in pre- and posttest CAT6 scores are noted, it is also important to remember that growth and maturation generally happens throughout a school year. The number of advanced students on the CST was also not reported for 2003. It is difficult to know if there was a significant difference between 2003 and 2004 scores because of this. The sample size was relatively small, and focused only on gifted students (including some which were English language learners). The fact that this study took place in San Diego, California helps because it is somewhat similar to the population being studies in for this research and provided CST scores which are also going to be used as baseline measures in the study. Because the only cooperative aspect of this study was that a student work one-on-one with an adult tutor, it is difficult to classify this study as pure cooperative learning. As discussed previously, cooperative learning include working towards and common goal and creating some sort of culminating work together. A piece of culminating work did not seem prevalent in the study.

Van Keer and Varhaeghe (2005) combined explicit reading strategies and tutoring

to improve reading comprehension as well; however, in this study peer-tutoring was used. It is believed that children need to develop self-monitoring skills for comprehension. Specific cognitive strategies like rereading, activating prior knowledge, and adjusting reading speed aid in comprehension. Furthermore, the metacognitive strategies of monitoring and self-regulating also support comprehension awareness. In addition to explicit strategies, reading competency can be encouraged by interacting with peers. The study combined learning explicit reading strategies and having the opportunities to practice these strategies in a peer-tutoring setting. Peer tutoring took place across-age groups and in same-age tutoring groups. There were 444-second graders and 454 fifth graders who participated in this study. The study took place in Belgium. Pre-assessments were conducted to receive information regarding reading attitude, perceived competence, and self-efficacy perceptions. Reading comprehension was also pre-assessed as well as decoding skills for second graders. Three groups were formed which included a group that was just taught explicit reading strategies (STRAT), another that had learned reading strategies and had cross-age tutoring (STRAT + CA), and last a group with reading strategies and same-age tutoring (STRAT + SA). A control group was also used. All students in the three experimental groups were taught to activate prior knowledge, make predictions, summarize, use a dictionary for vocabulary help, and monitor comprehension and regulate understanding. To standardize EDI of the strategies, teachers were provided with materials. The lessons were designed using components of transactional strategies instruction based from Brown et al. (1996). The components included teacher modeling, scaffolding, thinking aloud, coaching, and independent practice. Peer tutoring whether cross or same-age occurred once a week for 50 minutes or two times a week for 25

minutes each. Children were taught how to be a "peer tutor" beforehand.

Findings indicated that second and fifth graders benefited from one or both parts of this intervention. No significant findings were found about self-concept and reading attitude for fifth graders. The experiment interventions scores were higher than the control group. Fifth graders that were peer-tutors for second graders reached higher scores on retention tests; however, this was not true for the same-age peer-tutors. Cross-age tutoring was more beneficial than same-age tutoring having an effect size of 0.6 *SD*. Van Keer and Varhaeghe (1995) found that practicing reading strategies was beneficial despite being under the supervision of a teacher or peer-tutor. This study did not measure reading strategy use or activity, so it cannot be determined which strategy was used by students more often or which is more beneficial.

Modeling reading comprehension strategies with cooperative learning activities to practice the strategies was the main focus of research conducted by Hollingsworth, Sherman, and Zagura (2007). Fifty-one first and second graders were given a survey about their reading habits. The questions would also be used as a posttest. Student reading levels were also obtained prior to the intervention as well as use of comprehension strategies through running records. Researchers modeled one reading comprehension strategy weekly which was followed by a cooperative learning activity such as working in a cooperative learning group, buddy reading, or Reader's Theater. After ten weeks of intervention, posttest data was collected. Student surveys showed improvement in how often the student liked to read and who felt reading was important. Students expressed that they understood books they read more after the intervention with 0% now reporting that they never comprehended stories, down from 6%. Student reports

for reading at home also increased after the intervention. Second graders increased an average of four reading levels after the intervention, while first graders increased an average of eight reading levels. Teachers also noticed an increase in strategy use based on running record data from expository and narrative text. Findings indicated that with strategy instruction and cooperative learning combined, students' reading comprehension increased.

Hollingsworth, Sherman, and Zagura (2007) conducted a thorough study. The current study sought to validate their findings on the positive effects of cooperative learning. It was anticipated that cooperative learning would improve participants' value of reading and self-concept of themselves as readers. While Hollingsworth, Sherman, and Zagura's study was conducted with first and second graders, the present study extended their research to fourth grade readers. Because first and second grade is crucial for reading development, it is uncertain if the large increase in reading level will be found with fourth-graders.

Lastly, Stevens, Slavin, and Farnish (1991) conducted a key study that also incorporated EDI with cooperative learning. The researchers focused on two experimental groups: direct instruction with cooperative learning and direct instruction in reading comprehension. These two groups were compared to a control group which received no EDI and only used the basal activities provided. The participants included third- and fourth-grade students (n = 486). Thirty teachers participated, from four school, so 30 separate classes were randomly assigned one of the three treatments. Third graders received an hour and a half of reading time a day, while fourth-graders received one hour daily. Pretests measured students' ability to identify main idea, which was the reading

strategy of focus for this study. Posttests also tested ability to identify main idea as well as inference to see if training expanded into a different comprehension skill. Hierarchical linear models (HLM) were used to compare the two treatment groups to the control group. Scores for main idea were significantly higher for the experimental groups than the control group, $t(25) = 4.45$, $p < .001$. Comparison between the cooperative learning and the direct instruction treatment groups were not significant; however, the cooperative learning treatment had an effect size of +.32 standard deviations above the direct instruction group. Table 1, taken from Stevens, Slavin, and Farnish (1991), provides the means and standard deviations.

Overall, Stevens, Slavin, and Farnish (1991) found that the impact of direct instruction and cooperative learning strategies on reading comprehension is large. Adding cooperative learning to direct instruction did not yield significant effects, but appeared to be effective. It was reported that students spend one half to one third of allotted reading time on seatwork activities which are often unsupervised by the teacher. Cooperative learning uses this time more effectively by having students work together to provide feedback and assistance as well as motivate each other throughout the completion of the task. This point about cooperative learning was the crux of the study at hand. After learning reading comprehension strategies explicitly, engaging students thought the use of cooperative learning, instead of passive seatwork, may accelerate reading comprehension.

Table 1

Means and Standard Deviations Obtained from Stevens, Slavin, and Farnish (1991)

Test	CL		DI		Control	
	M	*SD*	*M*	*SD*	*M*	*SD*
Pretest (Raw Score)						
Detail questions	6.58	2.57	6.92	2.14	7.13	2.00
Main idea questions	4.27	2.22	4.33	2.24	4.20	1.94
Inference questions	4.02	1.87	4.28	2.22	4.11	1.98
Reading achievement (z scores)	0.023	1.01	0.064	0.92	-0.085	1.06
Posttest (raw score)						
Main idea questions	6.41	1.83	6.02	1.89	4.77	2.03
Inference questions	5.75	2.14	5.77	2.19	5.34	2.08
HLM fitted means (posttest)						
Main idea questions	6.40		5.79		4.74	
Inference questions	5.69		5.60		5.28	
Number of classes	10		10		10	
Number of students	153		166		167	

Note. All pretests and posttests included 10 questions of each type. The adjusted posttests controlled for the standardized achievement test measure of initial reading ability and the premeasure of that of question. Main idea posttests controlled for main idea premeasure, and inference posttests controlled for inference premeasures. CL = direct instruction with cooperative learning; DI = direct instruction in reading comprehension; HLM = hierarchical linear model.

Motivation

Explicit Direct Instruction and Motivation

One study emerges which looked at the motivational effects of explicit direct instruction. Andreassen and Braten (2010) used multiple measures to examine the effects of EDI of reading comprehension strategies on students' strategy use, motivation, and comprehension. The study was conducted in Norway with 103 fifth-grade students participating in the experiment and 113 students participating in the control group. Teachers were trained on Explicit Reading Comprehension Instruction (ERCI) prior to the intervention. The intervention lasted for five months. Correlations of the pre-test showed that strategy use (.33) and intrinsic motivation (.22) correlated positively with reading comprehension, as did word recognition (.69) and working memory (.47). Posttest scores for three reading comprehension tests also correlated positively with strategy use and intrinsic motivation. Students in the ERCI intervention group used reading comprehension strategies more frequently than students in the control group ($F(1,176) = 21.49$, $p = .000$). Andreassen and Braten concluded that ERCI with teacher training has positive effects on strategy use and comprehension. Emphasis on reading comprehension strategies of predicting, questioning, clarifying, and summarizing were beneficial in particular. While no change was found in respect to reading motivation, the researchers explain that small reading-groups were poorly organized and there was a lack of teachers promoting interest in reading.

It seemed that Andreassen and Braten (2010) were interested in incorporating small groups of students working together to practice strategy use. This was the area of the study that the researchers found poorly organized in experimental classrooms.

Researchers attributed this as the reason why no motivational significance was found between treatment and control groups. The aspect of using small groups to practice reading comprehension strategies was a main focus of the present study. Andreassen and Braten's study showed the importance of teacher training. Teachers had a three hour training on organizing reading groups and promoting social interactions. For the study at hand, organization of the reading groups needed to be highly structured so the participating teachers could implement the intervention thoroughly and completely in order provide relevant data. The methodology included group-work that was easy for the teachers to establish and facilitate in a short intervention period. This was anticipated to produce results in reading motivation which differed from Andreassen and Braten (2010).

Cooperative Learning and Motivation

Through the method of cooperative learning, Bromley and Modlo (1997) found that cooperative learning activities were motivational for students. In a qualitative study, after being trained in cooperative learning and implementing it in classroom for a year, teachers had positive feeling towards cooperative learning as well as the students. Teachers felt that cooperative learning built social skills and improved positive classroom behavior. Teachers observed students working together, sharing, and exchanging ideas. Each child made contributions to group projects. In regards to reading comprehension, using a grouping strategy called Numbered Heads Together, students worked cooperatively on workbook pages with a small group instead of working alone. Students liked cooperative learning because it was fun working as teams. They always had help which made learning easier and cooperative learning was seen as a time saver. One nine-year old student sums up cooperative learning, "I like cooperative learning—instead of

having one brain you have a lot of brains." (Bromley & Modlo, 1997, p. 1). This clearly showed that the students and teachers enjoyed and found cooperative learning as a beneficial teaching method. "The more brains the better" would be a great motto for cooperative learning.

Agnew (2000) used a game-based strategy called DRAW. The strategy was geared towards middle, high, or college level students. The idea was to motivate students who would regularly be disinterested. Teachers made questions to a story on index cards. Students "Draw" a question. Then "Read" the story. Students shared out the answers to their questions and had to "Attend" to each other. After, the teacher chose a few of the questions and the students would "Write" the answers for a graded quiz. This strategy had the observational changes that include students leaning forward in their desk participating in the discussion, work to remember information, and improved quiz grades. Motivation has been found to influence students' reading comprehension in a positive manner.

Yin-Kum Law (2008) researched the effects of cooperative learning on student motivation and reading comprehension and whether students preferred cooperative learning teaching method over traditional instruction. These two studies were conducted in Hong Kong and centered on second graders. The study, related to teaching method preference, focused on 160 students in five cooperative learning classes and 107 students in a five traditional class. Law used a shortened form of the Motivating Instructional Contexts Inventory (MICI) to measure student perceptions of teaching strategies and whether or not the strategies motivated the students to learn. On an independent sample *t*

test, students favored cooperative learning instruction ($M = 3.42$, $SD = .35$) over traditional instruction ($M = 3.27$, $SD = .45$; $t = 2.75$, $df = 236$, $p > .01$, Cohen's $d = .37$).

In the second study, Law (2008) looked at the effects of cooperative learning on motivation and reading comprehension in 51 second-graders. Law used a What Happened in the Groups Questionnaire (WHGQ) to attain information about student perceptions about their cooperative learning group. A self-reported motivation questionnaire was also administered to the students. Correlation coefficients were analyzed and found that reading comprehension positively correlated with student perceptions of cooperative learning ($r = .29$) and motivation ($r = .33$). There was no correlation found between motivation and cooperative learning perceptions. Also, using hierarchical multiple regression, when reading comprehension was regressed on student perceptions of cooperative learning, cooperative learning was found to be a predictor of reading comprehension ($\beta = .29$, $p < .05$); however, when reading comprehension was regressed onto perceptions and motivation, cooperative learning was not a significant predictor on reading comprehension, but motivation predicted reading comprehension ($\beta = .29$, $p < .05$). Law summarizes, "…these findings do suggest that cooperative learning had an effect on both motivation and reading comprehension, and that its effect on reading comprehension was mediated by motivation. Cooperative learning affected students' motivation, which in turn affected their reading comprehension." (Law, 2008, p. 577).

The previously discussed study made the important link between motivation and reading comprehension clear. Interestingly, Law (2008) also linked cooperative learning to increasing student motivation, but could not link the cooperative learning to increasing comprehension. The study at hand, aimed to verify this chain reaction between student

preference towards the cooperative learning teaching method which will increase motivation and in turn increase student reading comprehension. Due to the fact that Law (2008) conducted studies in Hong Kong and with a small sample of second graders, it is unknown if the findings can be replicated in the United States with fourth-grade students.

Reading motivation was also found to be related to readers' perceptions of themselves as readers. Readers who had positive perceptions of themselves as readers worked harder at it than those with lower perceptions (Shaaban, 2006). Forty-four fifth-grade English foreign language learners in Beirut, Lebanon participated in a study conducted by Shaaban (2006) which analyzed cooperative learning effects on vocabulary, comprehension, and motivation to read. A control group and experimental group, each containing 22 participants, was used. The same teacher taught the control and experimental group. The groups received reading instruction from the basal reading for eight weeks and 10-hour sessions a week. The control group used a traditional teaching method, whereas the experimental group was taught by the Jigsaw II method. The Jigsaw II is when a group students work together and become topic experts and then teach other team members the information (Slavin, 1995 as cited in Shaaban, 2006). In this study, Shaaban used the Motivation to Read Profile (Gambrell, Palmer, Codling, & Mazzoni; 1995), a well-recognized measure for use with elementary students, to collect information form the participants at the end of the study. To obtain comprehension and vocabulary data, the Gates-McGinitie Reading Test was administered to the students as well. Using a univariate ANCOVA, no significant differences were found between the experimental and control group on reading comprehension or on vocabulary. Significant group differences were found pertaining to the perception of the value of reading, reading self-

concept, and motivation to read. Value of reading had an effect size of 1.24 ($F(1, 44) = 24.49$, $p = .00$). The effect size for reading self-concept was 1.30 ($F(1, 44) = 23.63$, $p = .00$). Lastly, an effect size of 1.37 was achieved for motivation to read ($F(1, 44) = 28.37$, $p = .00$).

While these findings did not support Jigsaw II as a beneficial teaching method for improving comprehension than traditional teaching methods, it was found that Jigsaw II (a form of cooperative learning) improved students' perceptions of reading, their reading self-concept, and their motivation to read. Shaaban (2006) attributed the Jigsaw II for motivating students to read through the opportunities of working together which supports the social interdependence theory. While the social interdependence theory was not an underlying framework for the current study, it does have similarities with Vygotsky's (1978) social learning theory which was grounds for the study. The importance of providing time for students to converse with teachers and peers in order to work together and solve problems towards a common goal is noted as a principal of the social interdependence theory (Shaaban, 2006) which parallels Vygotsky's theory which stresses the importance of conversation for learning (1978).

Explicit Direct Instruction, Cooperative Learning, and Motivation

Law (2011) researched the effects of cooperative learning on fifth-graders in Hong Kong. Research focused on the effects of cooperative learning on achievement, motivation, and reading proficiency. While the title of the article only states cooperative learning, intervention group titles were (1) direct-instruction with jigsaw groups; (2) direct-instruction with drama activities; and (3) direct-instruction with whole-class teacher-led activities. Participants totaled 279 and came from nine classrooms. Based on

prior research that suggested students get lost in student-directed activities (Kirschner et al., 2006 as cited in Law, 2011), Law's jigsaw group was scaffolded and highly supported by teachers. ANCOVA results showed that there were significant differences between group performances on reading comprehension scores. Students in the jigsaw group (M = 20.75, SE = .28) outperformed drama (M = 19.08, SE = .27, $p < .001$) and control group students (M = 18.93, SE = .29, $p < .001$). Two measures sought to analyze autonomy motivation. Both were adapted questionnaires. The first was adapted from the Relative Autonomy Index (RAI) and the second was adapted from the MICI. A one-way ANOVA on RAI revealed group differences were statistically significant ($F(2,276) = 3.56$, $p < .05$). The drama group reported higher scores than the control group. In regards to the adapted MICI, results showed that the jigsaw group had higher perceptions of instructional practices (M = 4.85, SD = 0.78) than the control (M = 4.51, SD = 0.90, $F(2, 274) = 3.83$, $p < .05$). No difference was found between the two experimental groups.

Cooperative learning activities were again seen to motivate students through engagement and interest. While Law (2011) found that jigsaw with teacher support improves reading comprehension, further research on how "motivational factors affect children's reading performance in different cultures" (p. 418) was suggested. Taking this suggestion, the current study expanded the realm of research on motivation and reading comprehension in the United States with a greater diversity of population. Similar to Law, the current study also used only one teacher to teach both treatment and control groups to account for teacher differences. Law pointed out that this "could not ensure a true control group since the teachers teaching the control groups are familiar with the other two teaching approaches and might change their teaching practices in light of their

knowledge for the other two experimental conditions" (Law, 2011, p. 420). The present study occurred for a shorter period of time. If the participating teachers enjoyed the EDI + CL style of teaching, they could resist changing their traditional EDI + IW style of teaching until after the completion of the study.

Cooperative, Competitive, and Individualistic Environments

Typically, independent seatwork practice is seen as a competitive or individualistic working environment. When students work together or in small groups, it is seen as a cooperative environment. Seatwork in grades one through seven accounts for 50 to 75% of class time activities (Evertson et al., 1980). During this time students are less engaged then when they are receiving teacher-directed whole group instruction. Because of this, it is important for teachers to increase engagement during individual seatwork (Rosenshine & Stevens, 1986). Teachers can spend more time during the initial presentation of material, make sure there is and 80% success rate in answering questions, and have seatwork occur directly after guided practice. The activity during independent practice should be similar to what was demonstrated during guided practice as well. Guided practice can continue through the first few seatwork problems to further alleviate any confusion (Rosenshine & Stevens, 1986). Everston et at., 1980 found that students in junior high math classes who were more engaged during demonstration and guided practice were more engaged for seatwork. Effective teachers spend half the class period in demonstration and guided practice while the less effective teachers spent 1/5 of the class period on the same activities.

To determine classroom learning preference of fifth and sixth grades students, a relatively simple study was performed by Ellison, Boynkin, Tyler, and Dillihunt (2005).

A sample of 138 African-American and White American students was used to determine preference. Using the Social Interdependence Scales by Johnson and Norem-Herbeisen (1979), which was appropriate for elementary students, data was collected. Analyses showed a main effect ($F(2,268) = 179.76$, $p < .0001$) for students preferring cooperative learning rather than competitive or individualistic learning. An interaction between race and preference was also found. African-American students preferred cooperative learning more than White American students ($F(2,268) = 68.93$, $p < .0001$). Looking at correlations, as cooperative learning preference increased, preference for competitive and individualistic learning decreased. Ellison et al. concluded that African-American students prefer cooperative learning more than White students, and that White students preferred competitive and individualistic learning styles more than the African-American students. Ellison et al. (2005) added to the research on cooperative learning and continued to reason that African-American children are more apt to preferring cooperative learning because cooperation is a cultural value held by the African-American community.

One limitation warranted was that this was only a snapshot of one group of students. More research needs to be done with earlier and later grade levels to see if other patterns of preference occur. This study shed light on the current study. Perhaps, using cooperative learning increases motivation because students prefer that method of learning; therefore, they are more interested and engaged during the activities, which indirectly improves student achievement as discussed by Law (2008).

Focusing on teacher behavior and activity choice, Durik and Eccles (2006) researched classroom activity trends in math and reading in early, middle, and late

elementary school. One hundred twenty-six teachers categorized classroom activities they used as cooperative, competitive, or individual. Results showed that teachers who had been teaching for fewer years used more cooperative learning activities than veteran teachers. Also, cooperative learning activities occurred more in math than reading ($F(1,125) = 12.93$, $p < .01$). Across grade category, individual activities in math increased as grade increased. Individual activities in reading decreased as grade increased, making middle school fairly equal for the amount of individual reading and math activities. Competitive activities were more common in math than in reading.

Two major limitations arose from the Durik and Eccles (2006) study. First, teacher self-reports were used which did not collect any information on how teachers structured specific classroom activities. Second, the data analyzed were collected over 15 years ago making the results difficult to generalize to teachers today. Results showed that newer teachers were more likely to use cooperative learning activities. The two elementary teachers in the present study were veteran teachers, having taught for nine and 12 years. Although they received training on cooperative learning activities, perhaps they could easily resort back into their old teaching styles which were more individualist.

Constructive competition defined by Williams and Sheridan (2010) is "a multidimensional educational phenomenon that motivates people in learning situations to stretch their own expected abilities" (p. 338). In a qualitative study in Sweden, Williams and Sheridan interviewed 66 children, aged six to 18, and 25 teachers. Participants were chosen through stratified sampling. Interview questions gathered data about what motivates and challenges students and teachers, competition in grade levels, constructive competition, learning with constructive competition, and conditions that are important to

foster constructive competition. Three main conditions were found pertaining to constructive competition: attitudes, organization of the learning environment, and an understanding of the meaning of learning. Teachers viewed the work "competition" as negative and associated it with power. Competition was thought to hinder performance and creates pressure and stress. Due to competition, students often underestimated their abilities. While teachers understand that competition can be a motivator, teachers see students focus more on the competition rather than the learning task. Classroom climate gives way to encouraging group work. When students had mutual expectations they encouraged each other and they are motivated. Results showed that a great deal of class work is completed on an individual basis, but the students reported that even if they are working on an individual task, they would collaborate, help one another, and compete. Peer-collaboration motivated students to learn and put more effort into their schoolwork. When students and teacher understood the goals for learning, they were motivated and strived to achieve higher accomplishments. With constructive competition, students described competitive situations as experiencing "flow" (Csikszentmihalyi, 1990 as cited in William & Sheridan, 2010). Students became completely focused and engaged in the learning process.

Due to this research taking place in Sweden, it is difficult to generalize its finding to the United States. Williams and Sheridan (2010) introduced an important concept of constructive competition. Competition can be beneficial because it is a motivator. The researchers stated that children combined individual work, collaboration, and competition in the same learning activity and were successful. Also, if teachers became more aware of this type of learning, they could incorporate it into their teaching and use it as a motivator

to learn. While this study offered no quantitative data about the benefit of constructive competition, constructive competition was a new learning environment that is worth further investigation.

Summary

The small-step approach taken with the EDI method of teaching was "useful when teaching younger students, slower students, and students of all ages and abilities" (Rosenshine & Stevens, 1986, p. 378) when material was first introduced. In response to reading comprehension, it was important to focus on a particular age group. La Berge & Samuels (1974) and Perfetie and Lesgold (1979) pointed out that if students have difficulty with decoding or word recognition, they will have little time left to spend on reading comprehension. Those who are fluent readers can devote more processing time on comprehension.

Eilers and Pinkley (2006), who focused on first grade reading comprehension, recommend teaching explicit strategy instruction at an earlier stage of reading development. Perhaps learning strategies earlier on would aid in reading comprehension in the later years when reading comprehension becomes more difficult, which would carry over to fourth grade. Until further research is conducted, experimenting with explicit instruction of reading comprehension strategies through modeling or think-alouds, teamed with cooperative learning could prove to have beneficial results in improving reading comprehension in fourth grade students.

Van Keer and Varhaeghe (2005) combined both explicit strategy instruction and cooperative learning in the methodology of their study. Some students received only explicit strategy instruction, while others received peer-tutoring as well. All three

experimental groups outperformed the control group. Students who received explicit strategy instruction and cross-age peer tutoring showed to have the best gains in reading comprehension. In addition, the strategy of questioning was used studies by Kitano and Lewis (2007), Graham and Wong (1993), Brown et al., (1996), and Gauthier (2001). This strategy whether used explicitly or in cooperative groups was a beneficial strategy.

Many of the studies also incorporated motivation or self-regulation into the studies. There was a link between motivation and reading comprehension. Cooperative learning was found to be motivational and improved students' attitudes towards reading (Gungor & Un Acikgoz, 2004; Law, 2011). There was also a link between the amount of strategies used by a reader and the reader's comprehension (Eliers & Pinkley, 2006). It was important to provide students with a plethora of strategies they can use and model how to decide which strategy to use in which situation. Alamar (2010) found that teacher-guided book club conversations increased strategy use in second-grade students.

Guthrie and Davis (2003) outlined an engagement model that motivated struggling readers in middle school. While middle school was not the focus of the proposed study, Guthrie and Davis combined positive research findings on various areas and incorporated them as components of the model. It was noted that as students moved to middle school, teachers increased control over learning material and student competition increased. The six practices suggested were: (1) provide knowledge goals at the basis of reading instruction; (2) use real-world connections; (3) provide interesting books; (4) provide choice over some reading material; (5) provide direct instruction of important reading strategies; and (6) encourage collaboration. In the discussion on direct instruction, the Guthrie and Davis explained that direct strategy instruction provided

students with self-perceived confidence which was necessary for motivation (Ryan & Deci, 2000, as cited in Guthrie & Davis, 2003). In reference to collaboration, cooperative learning was used commonly to increase the motivation of disinterested students. The other practices of the engagement model also promoted motivation through the creation of learning goals, autonomy, and real-world connections. The National Reading Panel (NRP) indicated that when one is engaged in a process, one can gain reading from text (National Institute of Child Health and Development [NICHD], 2000). The NRP (2000) also suggested a multiple-strategy approach, similar to the engagement model, as a promising strategy for improving reading comprehension.

CHAPTER III

METHODOLOGY

In this chapter, the research design, sample, instrumentation, procedures, and data analysis procedures of this study are presented. The purpose of this study was to investigate the benefits of using cooperative learning to practice reading comprehension strategies that were explicitly taught to fourth grade students. Strategy use and motivation of students in the cooperative learning group was compared to a group which practiced reading comprehension strategies independently. The research questions were:

1. What are the differences in 4th grade students' reading comprehension performance for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?
2. What are the differences in 4th grade students' reading comprehension strategies for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?
3. What are the differences in the 4th graders students' motivation for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?

Research Design

This study explored the effects of direct instruction of reading comprehension and cooperative learning on reading comprehension, metacognitive strategy use, and motivation of 4th grade students. It analyzed effects on strategy use and motivation. This study used a quasi-experimental design with pretests and posttests. Nine instruments were used as measures for this study; six cognitive measures and three affective measures were

administered. Two teachers from different schools were asked to participate in this study. Each teacher implemented both treatment conditions with two groups of students, effectively controlling for school conditions. While random assignment was not used, classes were formed by the previous grade teachers prior to the end of the previous school year. The teachers divided the children as equally as possible. Gender, ability level for math and reading, English language proficiency, and special education services were all aspects that teachers used to assign students to a particular classroom. Students with moderate to severe behavioral issues were also as split evenly as possible. The teachers' homeroom class was assigned to EDI + CL group because the teachers could provide the best input for dividing students up for cooperative learning groups. The two other classrooms were assigned to the EDI + IW group.

The first school was chosen because the fourth grade teachers worked collaboratively with each other. One teacher already taught all students in fourth grade the reading components of the curriculum at this school site. The fourth grade teacher at the other school site knew the researcher well and was willing to collaborate in order to have one teacher teach both the EDI + CL and EDI + IW groups at this school site. It was decided to use two different school sites for this study because class size in the district for fourth grade is about 30 students. Each school generally has two fourth grade classes. In order to have enough students participate in the study, two schools were necessary.

The curriculum was developed based off the district-adopted reading curriculum CA Treasures by Macmillian/McGraw Hill. The second unit of this program was implemented during the intervention and data collection period. As previously noted, this unit contained three literary and two informational texts. This allowed for a better balance

of selections required by the new Common Core Standards. The teaching of Unit 2 coincided with the district's pacing calendar of October 1 thru November 9. During the first five weeks, intervention occurred for an hour Mondays thru Thursdays with 20 minutes of that time focusing specifically on student time which was done either independently or in cooperative learning groups. Assessments were administered on Fridays. The last week of the study was left for posttest assessments and the district Curriculum Embedded Assessment (CEA).

Sample

This study was conducted in a school district within San Mateo County. This county was concerned with improving reading scores. Based on California Standards Test data for 2009, 13 out of 24 school districts in the county had at least one school in program improvement (CDE, 2009). Reading Comprehension scores appeared to be low across school and grade levels in the participating school district as well. Out of the 15 schools in the school district, three schools were already in program improvement (CDE, 2009). If trends continued, many schools in the district would be classified as program improvement for the next school year.

Before this study was conducted, the previous superintendent adopted explicit direct instruction as the teaching method to be used across the school district in order to raise test scores. All teachers, irrelevant of grade level or subject matter taught, attended a district-wide professional development day. John Hollingsworth spoke to the teachers about explicit direct instruction. He shared the teaching method while modeling it with the teachers as the students. During this time, Hollingsworth shared data to demonstrate the power and benefits that explicit direct instruction had on students of all ability levels.

To follow up on the training, district language arts coaches taught further professional development sessions focusing on the stages of TAPPLE. The coaches offered to teach model lessons in classrooms and offered to observe teachers implementing the TAPPLE method and provide feedback. Model lessons and observations were not required by staff members, but the service was there for those who wanted additional support or help.

Since the adoption of explicit direct instruction, some schools have made vast improvements and were safe from program improvement state mandates. The study consisted of two school sites from a school district that were safe from program improvement mandates. The study was approved by the district superintendent. Principals and participating teachers at the school sites also consented to the study. The USF Institutional Review Board also approved the study. School A's CST ELA 2012 results showed the third-grade mean scale score was 396.9. School B's CST ELA 2012 results showed that the third-grade mean scale score was 360.1 (CDE, 2012). The 2012 mean ELA score of third graders in the school district was 363.6 and in California was 347.1 (CDE, 2012).

Each elementary school had two fourth-grade classrooms participating. Active consent was obtained from parents prior to the study. Parents were notified that all activities were based on district adopted curriculum and that all students would receive the same instruction and instructional minutes as mandated by the state. Student names and individual scores were kept confidential. In this study, one classroom at each school site received explicit direct instruction with cooperative learning activities as practice while the other classes received explicit direction of comprehension strategies with independent seat work. Each fourth-grade classroom had approximately 30 students.

There was one teacher at each school that taught all students in the intervention. Having the same teacher for the EDI +IW group and EDI + CL group at each school site helped account for teacher differences.

There were a total of 107 participants in the study. There were two participants that were dropped from the study because they missed more than one week of instruction. One student was in the EDI +IW group and the other was in the EDI +CL group. These students did not make up the missed assignments. Of the 105 remaining participants, 55 were male and 50 were female. Eighty percent of the participants were classified as English Only speakers. The remaining 20% were English Language Learners or Redesignated Fluent English Proficiency (RFEP) which means they were students who were English Language Learners, but they are now performing on the same level as English Only speaking students. There were no students with learning disabilities who participated in the study because the instruction occurred during scheduled pull-out time. Figure 1 shows the ethnic composition of all the participants. The largest group was Filipino at 52%, followed by White and Hispanic.

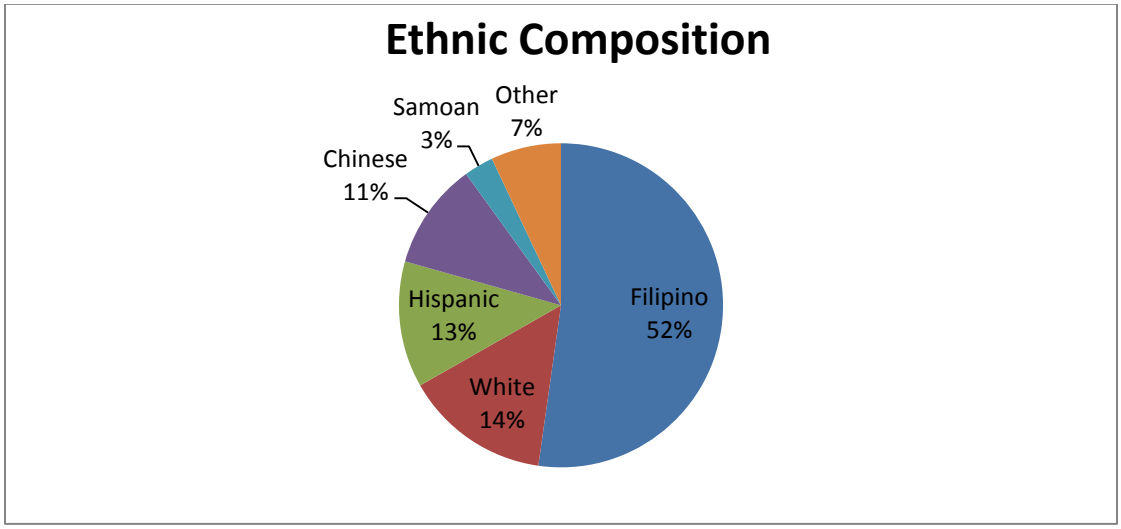

Figure 1. Ethnic composition of all study participants.

The EDI +CL group consisted of 48 participants (Male = 26 and Female = 22), while the EDI +IW group had 57 participants (Male = 29 and Female = 28). Both groups were consistent with the overall total of 80% of the students being English Only speakers and 20% were ELL or RFEP. Figure 2 shows the ethnic composition of each group.

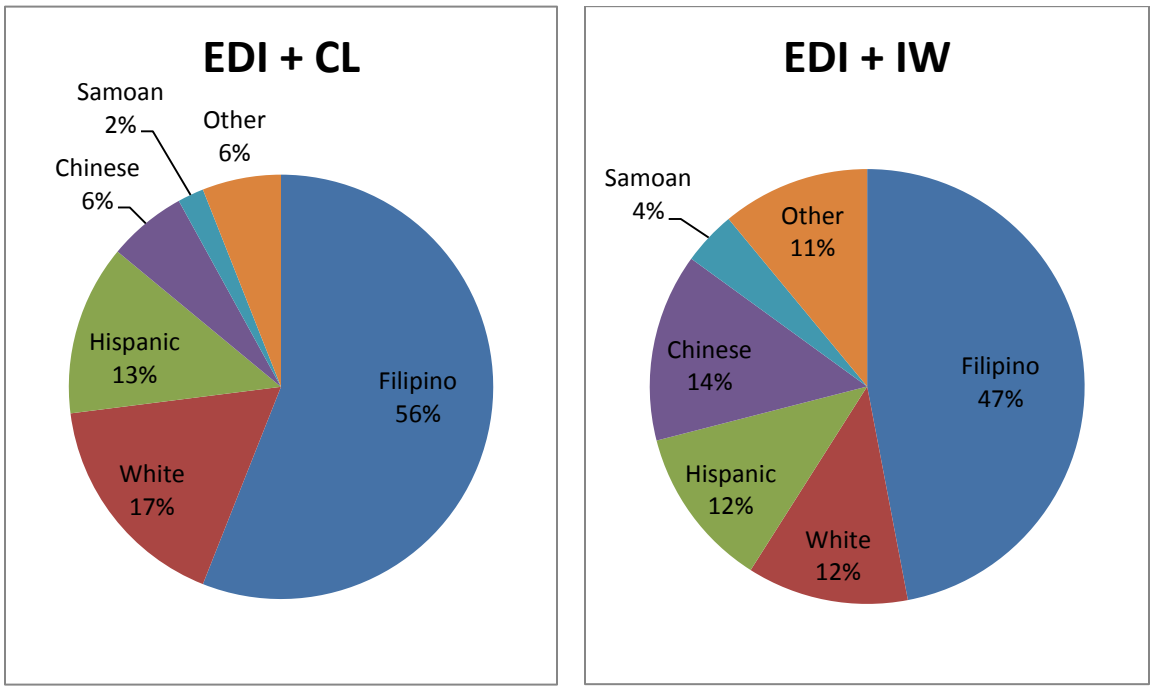

Figure 2. Ethnic composition by group.

Treatment Description

The EDI + IW and EDI + CL groups received the same explicit direct instruction of specific reading comprehension strategies using the TAPPLE steps. During the first two weeks of school, using the district-adopted curriculum, CA Treasures, teachers explicitly taught the strategies of summarizing, visualizing, generating questions, making and revising predictions, making inferences, and evaluating. They also focused on vocabulary and connection strategies which were not included in the opening Smart Start lessons. These strategies were some of the commonly used strategy by teachers as found

by Ness (2011). Teachers modeled the strategy and students had time to practice the strategy through guided practice and independent seatwork. A Cognitive Reading Strategies hand-out and practice sheet were also used to explicitly teach, model, and practice the reading comprehension strategies used in the study (Hatzigeorgiou, 2010). Treatment began after this initial learning took place.

The week before the study began, all students were guided through the reading comprehension strategies packet that was used throughout the study so they would be familiar with it and what was required. For the second unit of basal reading instruction, which had five stories (three narrative and two informational), students either practiced the strategies with varying activity types, either independently or in a cooperative group. Teachers still modeled the strategies during class time as well.

The ELA curriculum was taught for two hours each day. During the experiment occurring from October 1, 2012 thru November 9, 2012, the two hours of instruction were split. One hour focused on reading and vocabulary activities where the intervention took place. The other hour focused on writing, grammar, and spelling which had no effect on the research intervention. One teacher taught the reading and vocabulary activities and another taught the spelling, grammar, and writing portion. The students switched classes to receive all required instruction for the day. Again, all material for the EDI + IW and EDI + CL group was the same. The only difference was that the EDI + CL group performed the activities in cooperative groups while the EDI + IW group performed the activities independently.

On Mondays, students were taught the necessary story vocabulary terms. Students completed word squares which was a sheet of paper folded in fours. In the first square

students wrote the vocabulary word. The second square was where the student provided the definition and synonyms of the word. Third, students illustrated the vocabulary word. Lastly, students provided non-examples and antonyms for the vocabulary word. On Tuesdays, students read the basal reader and worked on the reading comprehension strategies packet provided. On Wednesdays, students reread the basal story and worked on comprehension questions provided in the text. After completing the comprehension questions, each group had a ten minute whole class discussion to correct and review the question answers. Thursdays, offered time to work on a culminating project that varied by week. Some examples of the culminating projects are comic strips of the basal story, mini-books, and character trait sketches. Culminating project presentations and assessments were given on Fridays. The cooperative groups worked together four times a week for twenty minutes each. (See Appendix A for complete five week lesson plan). The sixth week of the curriculum unit did not implement the reading curriculum. It was an assessment week in which the district CEA was administered, as well as other posttest measures for this study. Figure 3 shows the time allotment for the EDI +IW and EDI + CL groups as well as daily activities.

Activity Type	Monday	Tuesday	Wednesday	Thursday	Friday
EDI + IW	Vocabulary Squares Alone (20 min)	-Read Basal Story -Packet alone (20 min)	-Comprehension Questions Alone (20 min) -Whole Class Discussion (10 min)	Culminating Project (20 min)	-Presentations -Assessments
EDI + CL	Vocabulary Squares (20 min)	-Read Basal Story -Packet group (20 min)	-Comprehension Questions Together (20 min) -Whole Class Discussion (10 min)	Culminating Project (20 min)	-Presentations -Assessments

Figure 3. Weekly plan for teaching showing time allotment and activities.

Instrumentation

Nine instruments were used as measures for this study, six cognitive measures and three affective measures. The cognitive measures were: (1) the district Curriculum Embedded Assessment was administered pre- and post; (2) the Accelerated Reader computer test which tests comprehension of the basal reader stories administered weekly; (3*)* STAR Reading Enterprise Test pre- and posttest scale scores to measure reading growth obtained from student records; (4) weekly Selection Tests administered weekly; (5) Metacomprehension Strategy Index for Grades K-8 (MSI) administered prior to the start of the intervention and during week six; and (6) the most current 2012 California Standards Test scores. These scores were used as a covariate and helped group students appropriately into the heterogeneous cooperative learning groups. The affective measures were: (7) Motivation to Read Profile (MRP) (Gambrell et al., 1995) Self-Concept of reading score administered prior to the start of intervention and during week six; (8) MRP Value of reading score administered prior to the start of intervention and during week six; and (9) an Enjoyment Survey of EDI and student activities Likert measure administered at the end of the intervention. (See Appendix B).

A teacher daily log was also kept by the teachers to help assess the fidelity of treatment implementation. The log included whether or not the teachers spent the required 60 minutes for the reading period and if not, a space to fill-in why the 60 minutes were not adhered. (See Appendix C).

Assessments 1, 2, 3, and 4 were used to answer the first research question pertaining to improving reading comprehension. Assessment 5 was used to answer the second research question pertaining to strategy use. The last three assessments,

assessments 7, 8, and 9, were used to answer the third research question pertaining to motivation. Assessment 6, the 3rd grade CST scores, was used as a covariate to answer each research question. Each assessment is described in further detail below.

Curriculum Embedded Assessment

At certain points throughout the school year, the district administers CEAs to determine student progress and mastery of skills. The first CEA for English/Language Arts occurred right before the experiment and the second CEA for ELA occurred right after Unit 2 of the basal reader was completed which was at the end of the experiment. This exam was created by an ELA committee comprising of a fourth-grade teachers from each elementary school site in the district. The district previously used an exam provided by the publishing company, but after the first year of adoption, teachers found that the exam did not align with the material taught in the unit. Therefore, this committee was formed and a more aligned exam was created. The 2011-2012 school year was the first year that the district implemented the committee's assessment. Teachers found many errors and mistakes with the test. At the end of the school year in 2012, the committee met again to analyze test questions and better align the questions to standards that were taught strengthening its content validity. This assessment had comprehension questions where the students read a passage and answered questions relating to the passage. There were also passages with questions about writing strategies, grammar and spelling. Subscores for reading comprehension, writing application, and writing conventions were obtained, as well as a total score. Each assessment contained 28 problems, 26 multiple choice questions and two short answer questions. The two short answer questions were not included in the pre-CEA, so they were also excluded from the post-CEA. The 26

multiple choice problems were worth one-point each. Therefore, there was a total of 26 possible points for the pre- and post-CEA assessments. Higher scores indicated higher achievement. This assessment provided pre- and posttest scores to see if there were differences in activity type on reading comprehension. Using SPSS, Cronbach's alpha coefficient, reliability for the pre-CEA was .68 and for the post-CEA was .60.

Accelerated Reader Tests

Accelerated Reader (AR) was an online program provided through a company called *Renaissance Place*. The school district had been using AR for several years. Students first take a STAR Reading Enterprise Test online which provides teachers with students' reading level. Students are then supposed to read leveled books and then take quizzes online pertaining to the book read. It is a great way to gauge student comprehension during silent reading. It is difficult for teachers to test student comprehension on independent reading books because teachers often have not read every book students have read.

In addition to quizzing students on independent reading books, the district adopted curriculum has AR tests for each story in the anthology. After the anthology story was read each week, students took the AR quiz as a comprehension test. Each test had either five or ten questions. All questions were recall questions. For the story, *My Brother Martin*, a sample question was, "Since Martin and Daddy had the same name, what did the family call Martin? A) M.L. B) Junior C) Sonny D) Marty." Students were not allowed to use their text book while taking the quiz. AR used the same questions on each exam, but did not ask the questions in the same order for each child because testing sometimes occurs in a computer lab where all students take the quiz at the same time.

Testing took five to ten minutes per student. The assessment reviewed incorrect responses with the students when the student completed the assessment. The online assessment report did not provide an item analysis of student answers. There were five AR assessments during the intervention. Three assessments contained five problems and two assessments contained ten problems. A combined total score correct was used for the assessment score. There was a total of 35 possible points for the AR assessments. Higher scores indicated higher achievement. Reliability could not be calculated for this assessment because teachers were not given record of which responses the students get incorrect.

STAR Reading Enterprise Test

The STAR Reading Enterprise Test was a computerized reading test that had also been used in the school district for many years. The STAR Reading Enterprise Test contained 34 items. Each item had four multiple-choice answers. After reading a small paragraph, a student answered a comprehension question. An example question was, "What made the tower fall?" to assess comprehension based on cause and effect. This test had been recently revised and the school district used the newest version. Data for the new version was collected by the company *Renaissance Place* from June through September 2011 in order to obtain reliability measures using a generic reliability estimation method. With a fourth-grade sample size of 193,126, generic reliability estimates are 0.92. The average validity was 0.74 for fourth-grade where the overall validity across grades was 0.75. A 0.80 predictive validity is shown for the predicting CST results as well. STAR Reading provided information of students' Instructional Reading Level (IRL), grade equivalent, percentile rank, scaled score, and Zone of

Proximal Development. The IRL as defined by STAR Reading was "The Instructional Reading Level is a criterion-referenced score that indicates the highest reading level at which the student can most effectively be taught" (STAR Reading Technical Manual, 2012, p. 108). Scaled scores (*SS*) were used to analyze group changes due to activity type with regards to research question 1. *SS* ranged from 0-1400.

Weekly Selection Tests

At the end of each week, an assessment on the basal story was given. There were five weekly Selection Tests administered during the experiment. Each test contained seven multiple choice questions. Three of these questions tested the weekly vocabulary. A sample question was, "The King family avoided streetcars. Avoided means: A) liked; B) rode; C) stayed away from; D) collected." The other four multiple choice questions test knowledge of setting and details. For example, "The children loosen the legs on the piano bench because: A) they like sawing things; B) they want more piano lessons; C) they need wood for a school project; D) they want to avoid piano lessons." The last three questions on the exam were short answer questions. They were higher level thinking questions that have the students apply strategy use such as making inferences. A sample questions for this section was, "Why do you think people supported the courageous effort of Martin Luther King, Jr.?" The researcher graded all of the students' assessments using the basal scoring guide. The researcher covered the student names and mixed all the papers together prior to scoring. One point was given for each correct multiple-choice question, for a total of seven points. A possible three points were given for the three short answer questions, for a possible nine points. One point was given for rephrasing the question in the answer, another point was given if the student provided the correct

answer, and another point was given if the student explained the answer. Sixteen points were possible on four of the five assessments. One assessment was worth 13 points because the teachers decided to disregard the final question of the Wild Horses quiz. The five quiz scores were combined into a total score variable, with a possible total of 77. A higher total point score indicated higher achievement on these assessments. Cronbach's alpha was estimated to be .84.

Metacomprehension Strategy Index Grades K-8

The MSI was developed by Schmitt (1988, 1990). This assessment was part of the district-adopted curriculum that could be used as a diagnostic assessment tool. This instrument assessed the strategies that students used independently before, during, and after reading. Areas included predicting, previewing, self-questioning, activating prior knowledge, and summarizing. The assessment contained 25 multiple choice questions and was divided into three sections to gain insight on what strategies students were applying before reading, during reading, and after reading. The first question in the MSI was, "Before I begin reading, it's a good idea to A) see how many pages are in the story. B) look up all of the big words in a dictionary. C) make some guesses about what I think will happen in the story. D) think about what has happened so far in the story." The results showed which strategies students employed and did not employ. Teachers then used the information to provide additional strategy instruction where needed. One point was giving for each correct answer. A total score of 25 was possible with this instrument. A higher score indicated a greater use of reading comprehension strategies. There was no validity, reliability, or norming information provided in the district adopted manual; however, this assessment had been used in other similar studies (McEwan, 1993).

Schmitt (1990) reported that that an internal consistency of .87 was found by Lomberger (1988). Compared to the Index of Reading Awareness (IRA), the MSI and IRA had a correlation of $r = .48$ ($p < .001$). Reliability estimates for both the pre- and post- MSI were .73.

3rd Grade CST ELA and Math Composite Score

After 80% of the school year was complete, each public school in California took the CST. In third grade, the test was comprised of ELA and Mathematics. The ELA portion of the exam was administered in three parts which took approximately 50 minutes each to complete, but overall the test is untimed. There were a total of 71 multiple questions. For part of the exam, students read passages then answered comprehension questions. Other parts, students read passages and answered questions which apply writing conventions or strategies. A sample question from 3rd grade release questions that are no longer in use was, "What did Monkey do as soon as the dogs become bored and went away? A) He looked for something delicious to eat. B) He stayed in the chili pepper tree to sleep. C) He climbed down the tree and ran to a stream. D) He opened the bag to see what was inside (CST Test Release Questions, 2012). The state reported overall ELA scores, as well as subscores for word analysis, reading comprehension, literary response and analysis, writing conventions, writing strategies, and writing applications.

The Mathematics portion of the CST is also had 71 questions. The state reported overall Mathematics scores, as well as subscores for number sense, algebra and functions, measurement and geometry, data analysis and statistics, and math reasoning. Scores for both portions were initially reported as scale scores from the state. These scores were summed to create the covariate score by first converting the scale scores to z-scores,

summing them, and then adding 50 to each score. The final covariate thus had a mean = 50. Teachers met with the researcher to group students into cooperative learning groups. Using the covariate and STAR reading pretest scores, two high, two medium, and two lower ability readers were placed into each group. Males and females were balanced as equally as possible so that there were no groups of all one gender.

Motivation to Read Profile for Self-Concept

The Motivation to Read Profile (MRP) was developed by Gambrell, Palmer, Codling, and Mazzoni in 1995. MRP is a public instrument that was developed to assess reading motivation. There was a quantitative and qualitative component to the profile. The quantitative portion called The Reading Survey, which was the part used in this study, consisted of 20 Likert-type questions that were administered in a group setting. A 4-point scale was used to assess two areas of reading motivation: self-concept as a reader and value of reading. Each area had ten focus questions. A total score of 80 points was possible on this instrument. Forty points were for the subscore of self-concept and 40 points were for the subscore of value of reading. A higher score indicated a more favorable self-concept the participant had of themselves as a reader and that they valued reading as important. A sample question for self-concept was, “My friends think I am: a very good reader, a good reader, on OK reader, a poor reader.” The MRP took approximately 15-20 minutes to administer. Teachers read the questions aloud to the students to aid students with reading difficulty. Results were used by teachers to make instructional decisions based on individual student responses. After narrowing down appropriate questions to test each domain, 330 third- and fifth-grade students participated in a field test. Cronbach’s alpha for third-grade was .70 and .76 for fifth-grade. In this

study, Cronbach's alpha for self-concept as a reader was .73 for the pretest and .78 for the posttest.

Motivation to Read Profile for Value

As discussed above, the Motivation to Read Profile for Value was incorporated into the Motivation to Read Profile for Self-Concept. A subscore was obtained for the students' perceptions of the value of reading. A sample question for value of reading was, "Reading a book is something I like to do: never, not very often, sometimes, often." Pretest reliability for value of reading was .80 and posttest reliability was .78.

Enjoyment Survey

Because the MRP does not explicitly reveal if students who worked in cooperative learning groups enjoyed the activities more than the students in the independent work groups, an enjoyment survey was administered. In order to gain insight on student enjoyment of the activity formats used during the intervention, the researcher created a short ten item Likert survey. This measure was designed to see if there was a difference in enjoyment for each activity format that may impact student motivation. Five of the questions pertained to the teacher EDI part of the reading lessons and five of the questions pertained to the student part of the reading lessons that were either done independently or in cooperative learning groups. The enjoyment survey was given as a posttest assessment and took no longer than five minutes to complete. A sample question from this survey was, "What was your level of enjoyment while working on your strategies packet?" Students chose from a scale of 1 to 5. A rating of 1 signified low enjoyment, while a rating of a 5 signified a high level of enjoyment. Higher overall scores indicated a high level of enjoyment. The reliability for enjoyment survey was .81.

Teacher Log

The researcher met with the teachers every Friday to discuss the week, collect assessments, and go over the following week's activities; however, because the researcher was unable to observe in each classroom during the experiment, a simple teacher log was used to gather data about fidelity. The log included a choice for teacher to check off if they followed the procedure details and record the time spent on reading activities for the day. If the procedures were not followed, the teachers wrote in why a deviation occurred. The Monday of Week 3 was the only instance where the schedule was not adhered to. One teacher was sick and the other teacher was on a field trip. Both teachers condensed Monday's and Tuesday's activities to accommodate for the missed day. The log was completed for each of the five weeks the experiment was conducted.

Procedures

The first step to conducting this study was to obtain consent from the USF Institutional Review Board and from the school district in which the study took place. Next, parental consent was obtained for students participating in this study (See Appendix D). The researcher provided participating teachers with a 30- minute training on the cooperative learning literature packet and independent work packet. The cooperative learning packet was a set of literature circle worksheets from Superteacherworksheets.com (2012). The independent work packets were similar to the Super Teacher Worksheets. The worksheets were retyped and slightly changed so that the independent group did not know that the work should have been completed in groups. The Discussion Leader role in the EDI + CL group was titled Question Generator in the EDI + IW group. (See Appendix E for both group packets). The necessary materials for

independent and cooperative learning activities and all assessments were provided for the teachers. Teachers followed the two-week Smart Start introduction provided in the basal reader to explicitly teach each reading comprehension strategy and used the cognitive reading strategies handouts from Hatzigeorgiou (2010). During these initial two weeks, baseline data on CST Reading Comprehension subscores and IRL scores obtained by the STAR Reading test were collected from the teachers. The MRP was also administered to students during this time. Figure 4 shows where each assessment occurred in study.

Before Intervention	During Intervention	After Intervention
6. 3rd Grade CST Scores 1. Pre District CEA 3. Pre STAR Reading Test 5. Pre MSI 7. Pre MRP Self-Concept 8. Pre MRP Value	2. Accelerated Reader 4. Weekly Selection Tests 10. Teacher Log	1. Post District CEA 3. Post STAR Reading Test 5. Post MSI 7. Post MRP Self-Concept 8. Post MRP Value 9. Enjoyment survey

Figure 4. Administration of measures.

Through each basal story of Unit 2, both groups continued to receive strategy instruction modeled by the teacher. On Mondays, students learned and practiced the vocabulary terms for the week through word squares. On Tuesdays, the classes read the basal story together. After reading the basal story, students in the EDI + IW group filled out all five strategy worksheets (summarizer, illustrator, word wizard, story and real life connector, and question generator) individually for each basal story for 20 minutes. On Wednesdays, students answered the basal's comprehension questions independently. Time allotted for this activity was also 20 minutes. Ten minutes was set aside for a whole class discussion to correct and review the comprehension questions. On Thursdays, students worked independently on the culminating project for the week. Lastly, projects were presented and assessments were administered on Fridays. Teachers collected the strategy packets for accountability.

As discussed in the research design section, the EDI + CL group received the same direct instruction. For each story, the cooperative groups met for 20 minutes four times a week. On Mondays the students worked on word squares for vocabulary terms. On Tuesdays, the basal story was read and cooperative learning groups met together to discuss and fill out their strategy packet. To ensure fairness, students led the discussion on one strategy each week and rotated strategies weekly. This ensured that the students had a chance to work on each of the five comprehension strategies throughout the five weeks. For example, in week one, a student may have been the summarizer. In week two, the student would be the illustrator. In the following weeks, the student would be the story and real life connector, question generator, and word wizard. On Wednesdays, time was spent completing comprehension questions in their groups and then ten minutes was spend reviewing the answers together as a whole class. On Thursdays, students worked together in their cooperative groups to complete the weekly culminating project. These projects were presented on Fridays. Also on Fridays, assessments were administered and the teachers collected group packets to ensure student accountability.

After five weeks, when the unit was complete, students were tested on the unit content by a district benchmark exam. The students also retook the STAR Reading assessment on the computer to see if there was a change in their IRL and *SS*. The MSI was administered to gauge changes in strategy use. Lastly, the students completed the affective measures of the MRP and the enjoyment survey to measure motivation.

Data Analyses

The final sample for the study consisted of 105 fourth-grade students from two elementary schools. Scores were initially obtained on nine measures for 107 students, 58 in EDI + IW and 49 in EDI + CL. Scores for two students, one in each group, were dropped because they missed a whole week of instruction. There were few missing scores in the data set. Nine CST scores were missing due to students being out of the state for the 2012 school year. One value was missing from the pre and post CEA scores, the STAR Reading pretest, and the MTR scores. For AR quizzes, one score was missing from the *Wild Horses* quiz and two were missing from the *Mystic Horse* quiz. Three *Wild Horses* Selection Test scores were missing as well as two scores for the *Mystic Horse* Selection Test. The SPSS Multiple Imputation module was used to impute single scores for these missing values. Because of the imputation, there was a constant *n* of 57 for the EDI + IW group and 48 for the EDI + CL group.

Scores for each instrument were raw scores except for CST Math and CST ELA scores, initially reported as scale scores from the state. These scores were summed to create the covariate score by first converting the scale scores to z-scores, summing them, and then adding 50 to each score. The final covariate thus had a mean = 50. Table 2 gives a summary of the variables with their overall means, standard deviations, and reliability values while Table 3 provides the means and standard deviations for all variables by group.

Table 2

Descriptive Statistics for All Variables (*N*=105)

Assessment		*M*	*SD*	$r_{xx'}$
CEA	Pre	18.01	4.10	0.68
	Post	16.87	4.18	0.60
AR Total	Post	29.79	4.77	--
STAR Reading	Pre	490.92	148.59	--
	Post	540.23	151.06	--
Selection Test Total	Post	62.17	8.08	0.84
MSI	Pre	11.28	4.27	0.73
	Post	11.18	4.59	0.73
Covariate	Pre	50.0	18.70	--
MRP Self-Concept	Pre	29.07	4.30	0.73
	Post	28.76	4.80	0.78
MRP Value of Reading	Pre	30.38	5.37	0.85
	Post	30.92	4.60	0.86
Enjoyment	Post	37.97	6.41	0.81

Table 3

Descriptive Statistics for Groups

Assessment		EDI + IW (*n=57)*		EDI + CL (*n*=48)	
		M	*SD*	*M*	*SD*
CEA	Pre	18.09	3.37	17.91	4.87
	Post	16.67	3.70	17.12	4.71
AR Total	Post	31.07	3.36	28.26	5.70
STAR Reading	Pre	514.44	152.55	462.98	140.21
	Post	551.49	144.91	526.85	158.55
Selection Test Total	Post	62.61	6.25	61.65	9.87
MSI	Pre	11.04	3.76	11.56	4.83
	Post	11.11	4.20	11.27	5.06
Covariate	Pre	50.26	18.27	49.69	19.40
MRP Self-Concept	Pre	29.70	4.50	28.31	3.98
	Post	28.99	4.70	28.48	4.95
MRP Value of Reading	Pre	31.42	5.56	29.14	4.92
	Post	31.38	4.31	30.38	4.91
Enjoyment	Post	37.98	6.56	37.96	6.29

Five instruments, three cognitive and two affective, were administered both as pretests and posttests. In addition, the two CST scores in math and language arts were combined into a covariate for use with analysis of covariance statistical procedures. Because this was a quasi-experiment, where intact classrooms were used to form the two treatment groups, it is important to examine any evidence on pretreatment equality of the two groups. To do this, two-tailed independent sample *t* tests were conducted on the six pretest scores between the two groups. Of the six measures, only the MRP Value demonstrated a statistically significant difference between the two groups in favor of the EDI + IW group ($t = 2.20$, $df = 103$, $p = .03$). The four cognitive measures, including the covariate, were not statistically different.

To answer research question one, focusing on improving reading comprehension, four assessments were used: (1) the district curriculum embedded assessment, (2) AR assessments, (3) STAR reading pre- and posttests, and (4) weekly selection tests. For research question two, the MSI posttest was used to determine strategy differences among the groups. For research question three, addressing affective outcomes, three assessments were used: (1) MRP Value, (2) MRP Self-Concept, and (3) an enjoyment survey.

Each research question was answered using the same data analysis strategy, with one minor exception noted below. The data analysis strategy, using SPSS software, consisted of three parts. First, an independent sample *t* test was done on each measure to determine if there were statistically significant differences in scores between the EDI + IW and EDI + CL groups. Second, an ANCOVA was run on scores for each measure to control for possible pretreatment differences between groups. Third, as part of the

ANCOVA, the covariate x treatment interaction was examined to determine whether the homogeneity of regression coefficient assumption of ANCOVA was met, (Pedhazur, 1997). If so, the ANCOVA results were presented. If not, the results were not presented, but the interaction was graphed and examined for substantive implications. The exception to this strategy is for the MRP Value analysis, where the MRP Value pretest scores were included along with the covariate in the ANCOVA because it was the one measure among six that showed a statistically significant difference on the pretest scores.

Summary

This study explored the effects of direct instruction of reading comprehension and cooperative learning on reading comprehension, metacognitive strategy use, and motivation of 4th grade students at two schools in San Mateo County. There were four schools included in the sample. Two school sites participated in the study. There was one EDI + IW and one EDI + CL group at each site. One teacher from each school site taught both instructional groups. There were a total of 105 students who participated. The study used a quasi-experimental design with pretests and posttests. Nine instruments were used as measures for this study; six cognitive measures and three affective measures were administered. The research study took place over a six week period. Pretest data were collected prior to the start of the six week period and posttest data were collected during the sixth week. Pretest data showed equity among groups.

There were 60 minutes of reading instruction Monday thru Thursday. Weekly assessments were given during the 60 minute period on Fridays. During each week, students were modeled reading strategies (making connections, summarizing, vocabulary, generating questions, and visualizing) and given twenty minutes of class time daily to

practice these strategies either independently or in cooperative learning groups. There was 15 minutes allotted on Fridays for culminating project presentations prior to assessment administration. Data were analyzed using SPSS software. Independent sample *t* tests and analysis of covariance were computed for each variable.

CHAPTER IV

RESULTS

The purpose of this quasi-experimental study was to examine the effects of the use of explicit direct instruction of reading strategies and cooperative learning on reading comprehension and motivation in fourth grade students in the Bay Area. Students from four intact classrooms from two school sites participated in this study. All four classes received explicit direct instruction of reading comprehension strategies. There were five strategies taught: (1) summarizing, (2) making connections to the text, (3) generating questions, (4) visualizing (illustrating), and (5) vocabulary (word wizard). Two classes, one from each school site, practiced these strategies in cooperative learning groups (EDI+CL). The two other classes practiced these strategies through independent work (EDI+IW). The study took place over a five-week time period.

Quantitative data were collected on six cognitive measures and three affective measures. For cognitive measures, CST scores from third grade were used as a covariate measure. Pretest and posttest measures included district CEA tests, STAR reading test, MSI, and posttest measures of five Accelerated Reader tests combined and five selection tests combined. The three affective measures were pre- and posttest scores for the MRP for the value of reading and self-concept of reading and a posttest enjoyment measure pertaining to the activities completed during the teacher portion of reading time and the student portion of reading time. The independent variable was practice type, independent or cooperative learning. Independent sample *t* tests were conducted for each of the dependent measures to see if there were statistically significant differences among the

groups, as were ANCOVAs using the CST covariate scores. Results are presented below by research question.

Research Question One

Research Question 1: What are the differences in 4th grade students' reading comprehension performance for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?

To answer this question, two-tailed independent sample *t* tests were conducted on the four reading comprehension posttests. Table 4 shows the *t* test values, the *df*, and the probability of the statistic for each of the four measures. The independent sample *t* tests revealed no statistically significant differences for three of the four variables. There was a statistically significant difference in Accelerated Reader total ($p = .002$) between treatment and control group, with students in the EDI + IW group scoring higher ($M = 31.07$, $SD = 3.36$) than students in the EDI + CL group ($M = 28.26$, $SD = 5.70$).

Table 4

Independent Sample *t* Tests for the Four Reading Comprehension Measures

Measure	*t*	*df*	*p*
CEA	-.551	103	.58
STAR Reading	.831	103	.41
AR Total	3.13	103	.002*
Selection Test Total	.579	103	.56

The results of the ANCOVA for each of the four reading comprehension measures are shown in Table 5. As with the independent sample *t* tests, there were no between group differences for CEA or STAR Reading, and there was a statistically significant difference in favor of the EDI + IW group for AR total. In addition, there was a statistically significant difference in favor of the EDI + IW group for Selection Test total as well. Unfortunately, neither of these two differences can be interpreted for main effects because all four interaction terms were statistically significant, indicating that the test for homogeneity of regression slope assumption in ANCOVA was not met.

The graphs of the interactions, shown in Figures 5 thru 8, were all consistent. EDI + IW students did better than EDI + CL students for those students scoring low on the covariate, but for students scoring high on the covariate, EDI + CL students did better.

TABLE 5

ANCOVA Results for Achievement Measures

Measure	Source	Sum of Squares	*df*	Mean Square	*F*	Sig.
CEA Post	Treatment	26.61	1	26.61	2.50	.117
	Covariate	703.39	1	703.39	66.19	.000
	Treatment x Covariate	42.52	1	42.52	4.00	.048
	Error	1073.32	101	10.63		
	Total	31710.26	105			
STAR Post	Treatment	76783.87	1	76783.87	7.21	.008
	Covariate	1231225.28	1	1231225.28	11.62	.000
	Treatment x Covariate	65083.15	1	65083.15	6.11	.015
	Error	1075573.67	101	10649.24		
	Total	33016911.17	105			
AR Total	Treatment	209.28	1	209.28	15.97	.000
	Covariate	745.43	1	745.43	56.89	.000
	Treatment x Covariate	104.91	1	104.91	8.01	.006
	Error	1323.49	101	13.10		
	Total	95527.06	105			
Selection Test Total	Treatment	412.15	1	412.15	11.39	.001
	Covariate	2759.94	1	2759.94	76.24	.000
	Treatment x Covariate	406.00	1	406.00	11.22	.001
	Error	3655.11	101	36.19		
	Total	412653.39	105			

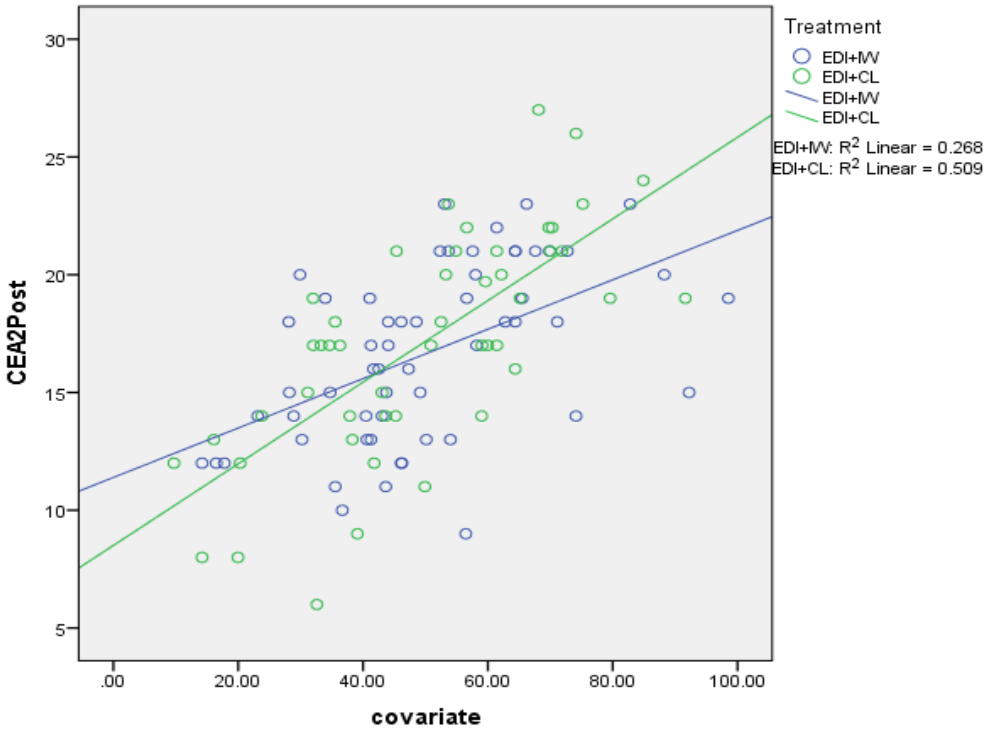

Figure 5. Interaction between CST covariate and CEA posttest.

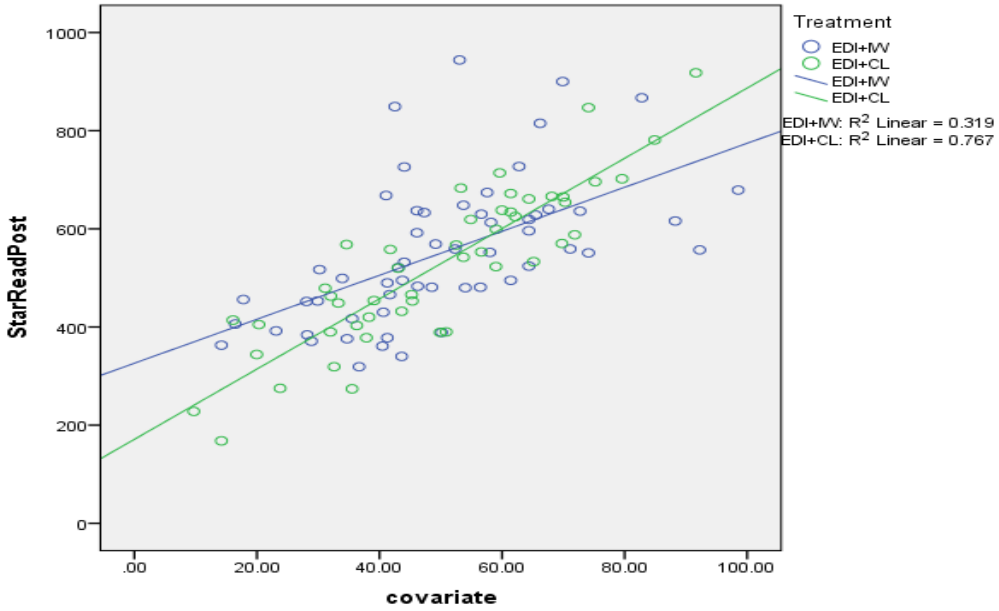

Figure 6. Interaction between CST covariate and STAR Reading posttest.

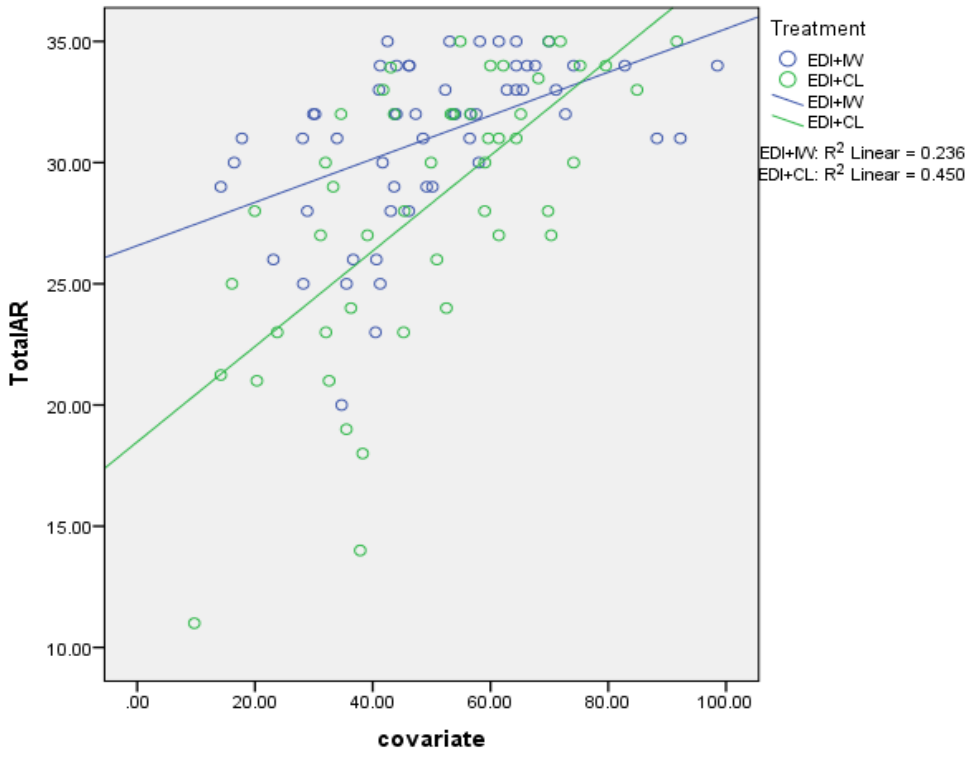

Figure 7. Interaction between CST covariate and Accelerated Reader total scores.

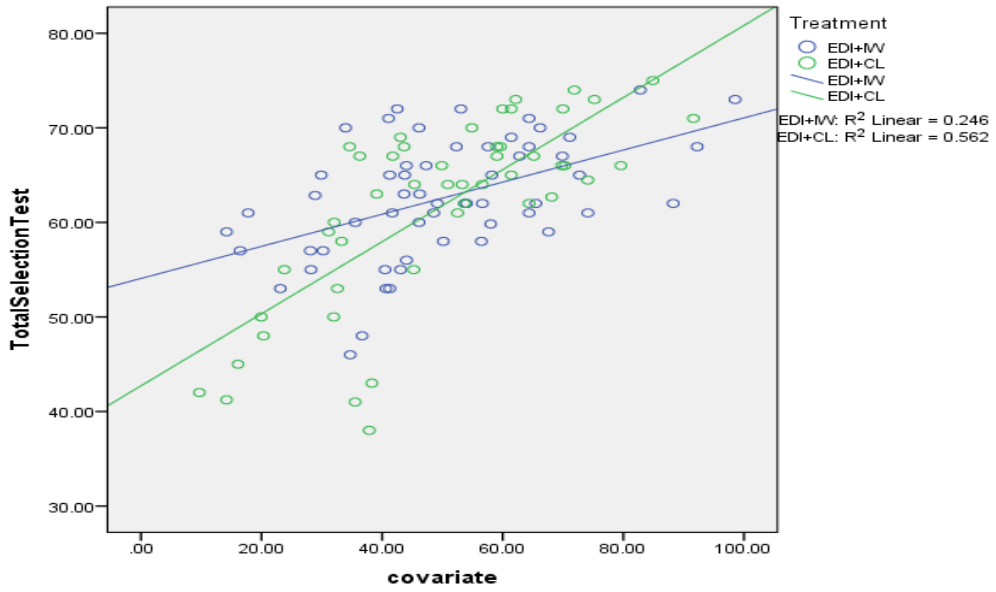

Figure 8. Interaction between CST covariate scores and Selection Test total scores.

Table 6 shows the correlation coefficients between the covariate and each of the four reading comprehension measures within each treatment group. An examination of the correlations, all of which were statistically significant at the .05 level of significance, shows the source of the interaction effects. For all four measures, the correlations were larger within the EDI + CL group than the EDI + IW group, with some of the differences in the correlations quite sizeable. Not only are the interaction effects all statistically significant, three of the four regression lines cross in the middle of the range on the covariate. STAR Reading was the only posttest where the interaction occurred toward the upper end of the covariate.

Table 6

Correlations between CST Covariate and Achievement Measures

Measure	*EDI+IW*	*EDI+CL*
CEA	.52	.71
STAR Reading	.57	.88
AR Total	.49	.67
Selection Test Total	.50	.75

Research Question Two

Research Question 2: What are the differences in 4th grade students' reading comprehension strategies for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?

To answer this research question, only the MSI was used. An independent sample *t* test was conducted to see if there was a statistically significant difference in MSI scores between the two experimental groups. There was no statistically significant difference

found between the two groups (t = -.18, df = 103, p = .89). However, a statistically significant interaction effect, similar to the ones found with the four reading comprehension measures, was observed. The covariate correlation coefficient with the MSI scores was only .10 within the EDI + IW group, but .54 within the EDI + CL group. Table 7 presents the results of the ANCOVA and Figure 9 graphs the interaction.

Table 7

ANCOVA Results for MSI Posttest Scores

Measure	Source	Sum of Squares	*df*	Mean Square	*F*	Sig.
MSI Post	Treatment	101.90	1	101.90	5.61	.020
	Covariate	241.53	1	241.53	13.30	.000
	Treatment x Covariate	125.00	1	125.00	6.89	.001
	Error	1833.58	101	18.15		
	Total	15318.00	105			

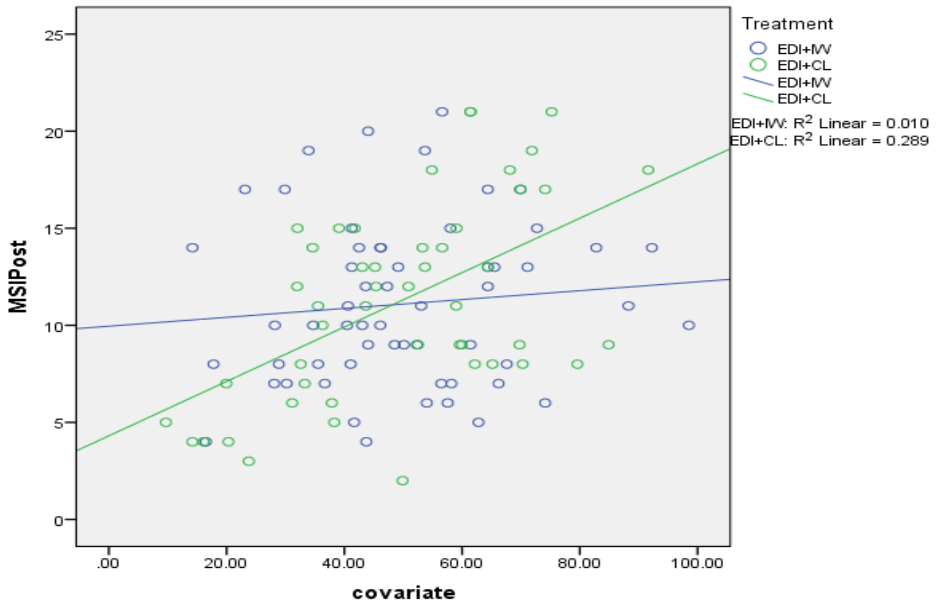

Figure 9. Interaction between CST covariate and MSI posttest scores.

Research Question Three

Research Question 3: What are the differences in the 4th graders students' motivation for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?

To answer the final research question, independent sample *t* tests were performed on the three affective measures; MRP Value of Reading, MRP Self-Concept of Reading, and the Enjoyment Survey measure. None of the mean scores for the three affective measures showed a statistically significant difference between the two groups ($t = 1.12$, $df = 103$, $p = .27$; $t = .54$, $df = 103$, $p = .59$; $t = .02$, $df = 103$, $p = .99$, respectively).

Neither of the two ANCOVAs for MRP Value or MRP Self-Concept were statistically significant for treatment effects, including the ANCOVA for MRP Value when the MRP Value pretest scores were added as a second covariate. This was done because MRP Value was the only pretest among six that had shown a statistically significant difference between treatment groups. However, the ANCOVA for enjoyment was different. Once again, a statistically significant interaction effect was found, where students scoring higher on the covariate enjoyed the work more in the EDI + CL group and students scoring lower on the covariate enjoyed the work more in the EDI + IW group. Table 8 shows the ANCOVA results and Figure 10 graphs the interaction. The two regression lines intersect virtually at the mean of the covariate. The interaction derives from the difference in correlation coefficients between the covariate and the enjoyment measure within the two treatment groups: -.21 in EDI + IW and .18 in EDI + CL.

Table 8

ANCOVA Results for the Enjoyment Measure

Measure	Source	Sum of Squares	*df*	Mean Square	*F*	Sig.
Enjoyment	Treatment	145.03	1	145.03	53.57	.062
	Covariate	3.39	1	3.39	.08	.773
	Treatment x Covariate	163.79	1	163.79	4.03	.047
	Error	4102.30	101	40.62		
	Total	155663.00	105			

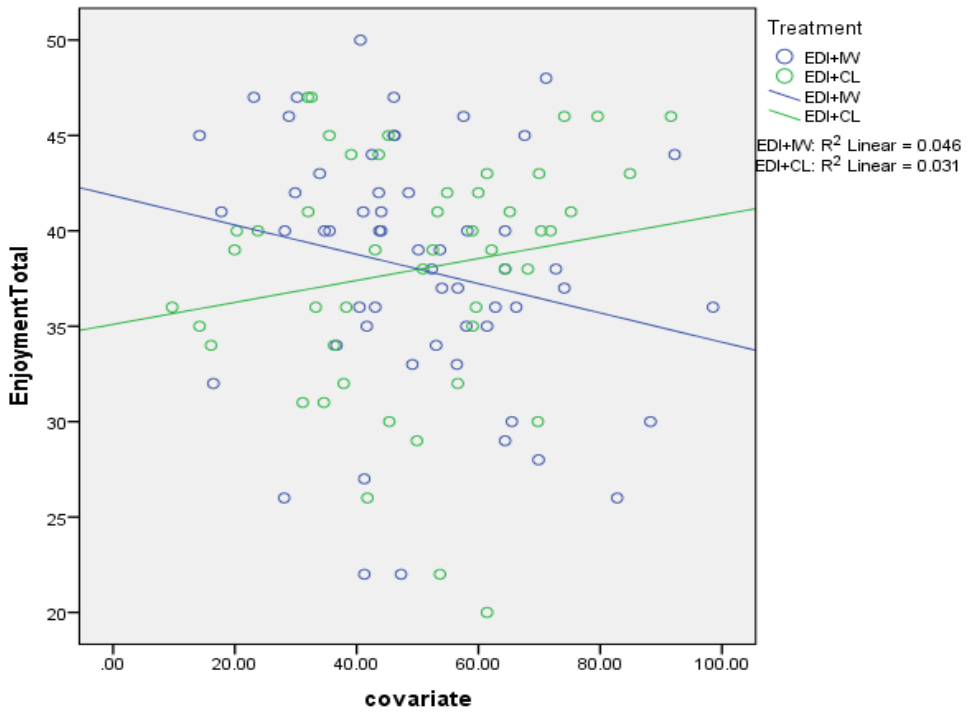

Figure 10. Interaction between CST covariate and Enjoyment scores.

Summary

This chapter presented the results of the three research questions pertaining to this study. To answer the three questions, independent sample *t* tests were computed for each of the five cognitive and three affective measures on treatment. An ANCOVA was run on the scores for each measure to control for possible pretreatment differences between groups. Third, as part of the ANCOVA, the covariate x treatment interaction was examined to determine whether the homogeneity of regression coefficient assumption of ANCOVA was met, (Pedhazur, 1997).

For research question one, for four comprehension measures, the *t* test findings indicated that only the AR Total measure had a statistically significant difference in favor of the EDI + IW group. For the four comprehension measures, none of the main effects for the ANCOVAs can be interpreted because the interaction terms (covariate x treatment) are statistically significant. Each of the interactions with the covariate indicated that students scoring higher on the covariate learned better in an EDI + CL environment and students scoring lower on the covariate learned better in an EDI + IW environment.

For research question two, for the MSI measure, there was no statistically significant difference found between the EDI + IW and EDI + CL groups. The main effect for the ANCOVA could not be interpreted because the interaction between the covariate and the MSI was statistically significant. The interaction indicated that students who scored higher on the covariate and were in the EDI + CL group reported higher use of reading strategies.

For research question three, using three affective measures, all measures were not significant. Interactions of the first two measures, the MRP for Value and Self-Concept measures, were also not significant. There was a significant interaction, similar to the four comprehension measures, on the enjoyment measure. Students who scored lower on the covariate reported higher enjoyment for the EDI + IW activities while students who scored higher on the covariate reported lower enjoyment for the EDI + IW activities. The reverse was true for the EDI + CL group. Students who scored lower on the covariate reported lower enjoyment for the EDI + CL activities while students who scored higher on the covariate reported higher enjoyment for the EDI + CL activities.

In summary, the main finding of this study was a statistically significant aptitude-treatment interaction (Cronbach and Snow, 1997) with students who scored higher on the covariate doing better in the EDI + CL group and students with lower scores on the covariate doing better in the EDI + IW group. One reason may be that the enjoyment expressed by the students showed that the higher performing students in EDI + CL group enjoyed the activities while the higher performing students in the EDI + IW group did not. Students who scored lower on the covariate reported higher enjoyment levels in the EDI + IW group than those in the EDI + CL group.

CHAPTER V

SUMMARY, LIMITATIONS, DISCUSSION, AND IMPLICATIONS

This chapter first provides a summary of the study and its research findings. Limitations are then presented and explained. Next, a discussion of the findings and how they relate to relevant literature is presented with concluding thoughts. The implications for practice and research conclude the chapter.

Summary of Study

The National Assessment of Education Progress results in 2009 showed little or no progress in reading assessments across the United States (NCES, 2009). Focusing on fourth-grade, NCES (2009) reported the average reading score was unchanged from 2007. There were also no gains made among ethnicity, gender, type of school, or previous achievement gaps (NCES, 2009). Teachers wonder what they can do to improve the reading comprehension of their students. Textbooks often do not include many reading comprehension activities or they may use many different approaches, but do not allow enough time for students to practice the strategies (Dewitz, Jones, & Leahy, 2009). Reading is much different than mathematics because there are no formulas to follow or memorize; it is needed to master other subjects like science and history where reading is important to learn the concepts. Teachers may try to compensate for what textbooks lack (Hoffman et al., 1993) so they use ancillary materials and a variety of different approaches, but want to know what strategy is best for improving reading comprehension. It is clear that there is a need for better reading instruction (Williams & Sheridan, 2005).

While research in reading comprehension suggests that the use of EDI of reading

comprehension strategies (Graham & Wong, 1993; Eliers & Pinkley, 2006) and cooperative learning (Gauthier, 2001; Gungor & Un Acikoz, 2004) are both beneficial strategies, Van Keer and Varhaeghe (2005) found that a combination of EDI of reading comprehension strategies combined with cooperative learning can be more beneficial than using only one teaching strategy in order to improve reading comprehension of students.

Unfortunately, there are few studies similar to the Van Keer and Varhaeghe study that combined both explicit instruction and cooperative learning strategies. There were also few studies on reading comprehension that included cooperative learning and motivation similar to Van Keer and Varhaeghe's. Perhaps one reason Van Keer and Varhaeghe (2005) found improvement in reading comprehension when cooperative learning was included with explicit instruction was because there was an increase in student motivation. Consequently, it was not known whether the combined treatment is effective for all students or just students similar to those used by Van Keer and Varhaeghe, and if motivation played a role.

This study incorporated elements of the theories of Bandura's (1977) social cognitive theory, Vygotsky's (1978) sociocultural learning theory, and Deci and Ryan's self-determination theory (2002). Bandura acknowledged that learning occurs on direct tuition or instrumental training. This is when instructors or parents are explicit about what they want the child to learn and use rewards or punishments to direct behavior. Second, a child can learn from parent modeling (Bandura, 1963). Observational learning requires four component subfunctions of attention, retention, motor reproduction, and motivation. In order for learning to occur, it is necessary for students to pay attention, retain

information, replicated behavior, and be motivated. These subfuctions were important steps for students to follow during direct instruction because EDI requires students to pay attention, retain information, follow modeled steps, and be motivated to learn.

Vygotsky's (1978) sociocultural learning theory stressed the importance of communication for learning or development. He believed that cognitive and social developments are both needed to foster learning. When teachers observe students, they can plan curriculum and pair students up to learn from each other. When a teacher uses heterogeneous grouping during cooperative learning activities, students may provide each other with the scaffolding they need (Mooney, 2000). Vygotsky believed with support children can reach the next stage of development. Therefore, it was important to provide time for students to collaborate and work together. Conversation helps a child learn the role of language and individual experience and opinions. The conversations encouraged by Vygotsky to promote learning were similar to the conversations that took place among students during cooperative learning activities.

Self-determination theory (SDT) was an area of research that stressed psychological needs and the benefits of intrinsic over extrinsic motivation (Ryan & Deci, 2002). Strong self-determination leads to intrinsic motivation for learning. Ryan and Deci argued that healthy development, and thus a sense of self-determination, occurs in learners when three psychological needs are met: competence, autonomy, and relatedness. Ryan and Deci (2002) posit that these three psychological needs work in conjunction with each other to help learners support their optimum level of performance and increase intrinsic motivation. This theory fit in with cooperative learning and reading achievement. With regards to a learner, he or she must be competent in reading

comprehension strategies, autonomous in their work, and feel a sense of relatedness to their group or class as a whole.

This study aimed to further research the benefit of incorporating both EDI and cooperative learning as a way of improving the reading comprehension of fourth grade students. Perhaps pairing these two strategies would offer the best of both worlds for the students. Therefore, the purpose of this study was to investigate the benefits of using cooperative learning to practice reading comprehension strategies that were explicitly taught to fourth-grade students. This study used a quasi-experimental design with pretests and posttests. The three research questions were: (1) What are the differences in 4th grade students' reading comprehension performance for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning? (2) What are the differences in 4th grade students' reading comprehension strategies for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning? (3) What are the differences in the 4th graders students' motivation for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning?

Nine instruments were used as measures for this study; six cognitive measures and three affective measures were administered. The cognitive measures used were: (1) the district Curriculum Embedded Assessment that were administered pre- and post (2) the Accelerated Reader computer tests administered weekly; (3) STAR Reading Enterprise Test pre- and posttest scale scores to measure reading growth obtained from student records; (4) Selection Tests administered weekly; (5) Metacomprehension Strategy Index for Grades K-8 pre- and post; and (6) a covariate created from combining

the two ELA and Math CST scores. The affective measures were (7) Motivation to Read Profile (Gambrell et al., 1995) Self-Concept of reading score pre-and post; (8) MRP Value of reading score pre- and post; and (9) an Enjoyment Survey of activities Likert measure administered at the end of the intervention during week six. A teacher daily log was also kept by the teachers to help assess the fidelity of treatment implementation. The log included if the teachers spent the required 60 minutes for the reading period and if not, a space to fill-in why the 60 minutes were not adhered.

Assessments 1, 2, 3, and 4 were used to answer the first research question pertaining to improving reading comprehension. Assessment 5 was used to answer the second research question pertaining to strategy use. The last three assessments, assessments 7, 8, and 9, were used to answer the third research question pertaining to motivation. Assessment 6, the prior achievement measure derived from the 3rd grade CST scores, was used as a covariate in analysis of covariance.

Two classes from each school participated in the study. One class from each school was part of the EDI + IW group and the other class was the EDI + CL group. One teacher from each school site implemented both conditions, effectively controlling for school conditions. There were a total of 105 participants with 57 in the EDI + IW group and 48 in the EDI + CL group. The EDI + IW group used EDI of reading strategies with independent seatwork while the EDI + CL group used EDI of reading strategies with cooperative learning. The curriculum was developed based off the district-adopted reading curriculum CA Treasures by Macmillian/McGraw Hill. The second unit of this program was implemented during the intervention and data collection period. During the first five weeks, intervention occurred for an hour Mondays thru Thursdays. The first 40

minutes was EDI of reading strategies. The last 20 minutes of the hour focused specifically on student time which was done either independently or in cooperative learning groups. Assessments were administered on Fridays. The last week of the study was left for posttest assessments and the district CEA. During the student time, students filled out worksheets pertaining to specific reading strategies of making predictions, summarizing, generating questions, making connections, visualizing, and vocabulary development. These strategies were found to be some of the most common strategies used by teachers and were consistent with strategies recommended by the National Reading Panel report in 2000 (Ness, 2011).

Summary of Findings

For research question one, pertaining to differences in 4th grade students' reading comprehension performance for students taught with explicit instruction plus independent seatwork or explicit instruction plus cooperative learning, only the AR Total measure had a statistically significant difference favoring the EDI + IW group. There were interactions with the covariate on all four reading comprehension measures. Higher ability readers performed better in an EDI + CL environment while lower ability readers performed better in an EDI + IW environment.

For research question two, there was no statistically significant difference between 4th grade students' reading comprehension strategies for students taught with EDI + IW or EDI + CL. When the MSI pre- and posttest scores were analyzed with an independent sample *t* test, no statistically significant difference was found. However, there was an interaction effect found with the covariate. Students who were higher ability readers reported using more reading comprehension strategies than lower ability readers.

The higher the z-score, the higher the amount of reading strategies utilized. This also coincided with practice type. Because cooperative learning was found to be more beneficial for higher ability readers, those students in the EDI + CL group reported slightly more strategy use.

There were three instruments that focused on student motivation for the third research question. There were no statistically significant differences found between the groups on the three affective measures. There was an interaction effect found with the covariate on enjoyment. Students who scored lower on the covariate reported higher enjoyment for the EDI + IW activities while students scoring higher on the covariate reported higher enjoyment for during EDI + CL activities.

Limitations

There were six main limitations of this study. The first limitation had to do with the sample. The sample was relatively small and used four intact classrooms from two school sites. In a study involving more than one school, researchers cannot prevent any between-school differences. The school sites used in the study were different from each other. School site A began with higher mean scores on the CST than school site B. School site A also had larger class sizes than site B. Also, the sample only consisted of 105 fourth-grade students from the Bay Area. Because this sample is relatively small and groups were not randomized, results are not easily generalizable to other populations.

Second, one teacher per school was used for both treatments, thus controlling for school effects. While this is not representative of traditional classrooms and decreases external validity, Law (2011) also used one teacher to teach treatment and control groups in her research to account for teacher differences. She noted that critics may question the

internal validity of the study because the teacher was familiar with the other teaching approach. This may cause the teachers to change their practices. To account for this, teachers kept a fidelity log about instructional minutes and deviations from the intervention manual. Law continued to argue that researchers cannot prevent teachers and children from discussing the approaches during the study. Informal sharing of information by teachers and students may affect the results.

The third limitation was the length of the study. The treatment occurred for only five weeks and may not have been enough time for students to learn the process of cooperative learning in order to show differences among the EDI + IW and EDI + CL groups. Stevens and Slavin (1995) found that cooperative learning effects were not evident after a year of school-wide use, but emerged after two years. While there was a week before the treatment that was used to familiarize both groups with the new strategy packet, the actual treatment only occurred for five weeks. While this may not have been a limitation for the EDI + IW group, it might have affected the results for the EDI + CL group. One week might not have been enough time for students to learn the process of cooperative learning in order to show differences among the groups. Cooperative learning takes time and practice to perfect. In addition to students in the EDI + CL learning a process that was mainly unfamiliar to them, the students also had less time to practice each reading comprehension strategy themselves. Students in the EDI + IW group were able to practice all five strategies for each of the five weeks, whereas the cooperative learning group was only able to practice each strategy one time in the five week period. Because the amount of individual use of the strategies varied between groups even with practice time remaining consistent, internal validity may have been affected. Students in

the EDI + IW group might have been more familiar or comfortable with the reading strategies. Students in the EDI + CL group could have relied too heavily upon reading group members which effected measurement outcomes.

Fourth, although many other researchers have used the MRP to assess reading motivation, it does not directly show whether independent seatwork or cooperative learning activities were responsible for motivational changes. Outside factors may contribute to students' value and self-perception of reading. Some families may put more emphasis on reading than others. Students may base their beliefs off previous reading grades from report cards. The EDI + IW group may not have had as many opportunities to compare themselves as readers or receive compliments or feedback from peers that the EDI + CL group may have experienced.

The fifth limitation of the study was that there were three measures in this study that were self-report. The MRP was a pre- and post-self-report assessment, as was the MSI. The post enjoyment survey was also self-report. Winters, Green, and Costich (2008) suggested that students have difficulty reporting their behaviors accurately. For the enjoyment survey, students may have chosen affirmative responses pertaining to teacher time because their teacher would be collecting the surveys and may look at their results. This could have jeopardized the honesty of their responses and decreased the internal validity of the study.

Lastly, an issue arose when the students were taking the MSI. Teachers reported that students had questions about this assessment because different questions provided the same item choice. For example, question one and eight stated, "Before I begin reading, it is a good idea to." Choice A for question one reads, "See how many pages are

in the story." This same wording was provided as choice B in question eight. Students may have been led to choose this answer because of its repetition, or may have chosen another choice because they may have chosen it as an answer to a prior question already. To increase internal validity on this assessment, all groups should have been explained the format prior to test administration. Because this formatting confusion was not anticipated prior to the start of the study, internal validity on the MSI was decreased.

Discussion of Findings

The findings of this study strongly support the aptitude-treatment interaction (ATI) model (Corno & Snow, 1976). The ATI model aims to understand which type of educational condition would benefit different students. It is understood that each student possesses specific characteristics and prior knowledge that can affect learning. Corno and Snow (1976) suggested that teachers adapt their teaching to learner differences. Because of individual differences, a one-size fits all approach to teaching does not work. Many studies construct treatments to raise the average outcome for all participants in the study. While that was the initial aim of the current research study, that effect was not found. The research findings favor EDI + IW and EDI + CL depending on the ability or aptitude of the student. Low ability students performed better in EDI + IW environments, while higher ability students performed better in EDI + CL environments. These findings are consistent with Cronbach and Snow's (1977) research when they found strong ability and treatment interactions when there was a difference in structure. Cronbach and Snow found that high structure treatments, similar to EDI, aid low ability learners, but hinder high ability learners. Conversely, in low structure treatments, similar to cooperative learning, higher ability learners did well while low ability learners performed poorly.

The present study also relates favorable to many findings in the literature of improving reading comprehension however, there are a few discrepancies. Because there were few differences found between the experimental groups for this study, many of the main effect findings do not agree with past research; however, the overall broad concepts do connect with past research.

Findings on Explicit Direct Instruction of Reading Comprehension Strategies

Hollingsworth (2010) claimed that EDI is beneficial for all students. Through this research, it is apparent that EDI does support reading comprehension in low ability students. On the other hand, it does not appear to be the best strategy to use for higher ability students. Higher ability readers achieved higher reading comprehension scores when EDI was combined with cooperative learning. Because the schools in the study were required to use EDI, a cooperative learning only group was not studied. It is unclear if cooperative learning itself is beneficial for higher ability readers or if it is the combination of EDI and cooperative learning that allowed for greater improvements.

The underlying message in the research of Pressley, Wharton-McDonald, Mistretta-Hampton, and Echevarria (1998) was that no matter the strategy used to teach reading comprehension, the more students used reading strategies, the higher reading comprehension they had. This same message is seen in the current study. Students who were higher ability readers were found to use reading strategies more than lower ability readers. Although higher ability participants used more strategies than lower ability counterparts, no statistically significant difference in achievement was found at the end of the five week study.

Eliers and Pinkley (2006) and Boulware-Gooden, Carreker, Thornhill, and Joshi

(2007) also upheld that EDI of reading comprehension strategies improved reading achievement. Eliers and Pinkley found that explicit instruction of metacognitive strategies was an effective instructional method in improving reading comprehension in first grade students. After a five week study, Boulware-Gooden, Carreker, Thornhill, and Joshi (2007) found a 20% increase in reading comprehension in third-grade students after strategy instruction. While the present study was also five weeks long, no significant improvements in reading comprehension were found after five weeks of strategy instruction with fourth-grade students. La Berge and Samuels (1974) and Perfetie and Lesgold (1979) believe that explicit direct instruction of reading comprehension strategies should begin at an early age. Perhaps no significant improvements were found because the students in the study had been learning reading strategies taught explicitly for the past two years. Overtime, the effects of EDI of reading comprehension strategies may not be as significant or may diminish overtime.

Cooperative Learning Findings

Pertaining to cooperative learning, the present study either supported or did not support the literature directly. The interaction found between the covariate for high ability readers and cooperative learning connects to Gungor and Un Acikoz (2004). Gungor and Un Acikoz found that sixth-grade participants in a cooperative learning setting employed more comprehension strategies, but there was no direct link made between increasing strategy use and improving comprehension. The present study found that the high ability readers in a cooperative learning setting employed more reading strategies than those in the independent group or lower ability readers, but there was no significance between the increase in strategy use and increase in reading comprehension.

After ten weeks of intervention with first and second grade students, which involved modeling reading comprehension strategies with cooperative learning activities to practice the strategies, Hollingsworth, Sherman, and Zagura (2007) found second graders increased an average of four reading levels after the intervention, while first graders increased an average of eight reading levels. Findings indicated that with strategy instruction and cooperative learning combined, students' reading comprehension increases. This link between strategy instruction and cooperative learning increasing reading comprehension was not supported by the present study. Again, Perfetie and Lesgold (1979) suggest beginning strategy instruction at an early age. Perhaps the grade level of the students sampled in this study accounts for not having a statistically significant effect on improving reading comprehension.

Stevens, Slavin, and Farnish (1991) also conducted a key study that also incorporated EDI with cooperative learning. The researchers focused on two experimental groups: direct instruction with cooperative learning and direct instruction only. These two groups were compared to a control group which received no EDI and only used the basal activities provided. The participants included third- and fourth-grade students. Scores were significantly higher for the experimental groups than the control group. Comparison between the cooperative learning and the direct instruction treatment groups were not significant, which the current study supports. However, Stevens, Slavin, and Farnish found that the cooperative learning treatment had an effect size of +.32 standard deviations above the direct instruction group.

Overall, Stevens, Slavin, and Farnish (1991) found that the impact of direct instruction and cooperative learning strategies on reading comprehension is large. Adding

cooperative learning to direct instruction did not yield significant effects, but appeared to be effective due to higher mean scores and differences approaching significant. This is consistent with the present research findings. Adding cooperative learning to direct instruction does appear to be effective, especially for higher ability readers, but the difference between the EDI and cooperative learning groups did not yield significant effects.

Stevens and Slavin (1995) conducted a two-year longitudinal study on a school-wide cooperative learning model. Participants spanned second through sixth grades. Stevens and Slavin were interested in seeing long-term effects of cooperative learning, if any, and they also focused on mainstreaming students with learning disabilities into regular education classrooms through the use of cooperative learning. While the current study did not focus on students with learning disabilities, a portion of Stevens and Slavin's study focused on gifted students, which can be related to the higher ability students in this study. No statistically significant differences were seen between the intervention and comparison school after one year; however, differences were seen after two years benefitting both students with learning disabilities and gifted students. This relates to the current study because it was found that cooperative learning is beneficial for higher ability readers. However, the current study did not support that cooperative learning increases reading achievement. Again, the length of the study may not have been long enough to support the link between cooperative learning and increasing reading achievement.

Lastly, the current study did not support the findings of Avci and Yuksel (2011). The researchers examined the effects of reading circles (cooperative learning) on fourth

grade students' reading habit and comprehension. Based on low, medium, and high reading comprehension levels, the low and medium groups' reading comprehension pre and posttest scores were statistically significant. The current study found that lower ability readers performed better with EDI + IW than EDI + CL.

Motivational Findings

Stevens and Slavin (1995) and Law (2008) found that cooperative learning engaged students through working together to achieve a common goal. Meaningful interactions and conversations occurred in cooperative learning classrooms, as opposed to traditional classrooms where student have causal and superficial contact. When students relied on each other for support and feedback, they motivated each other. Interestingly, Law (2008) linked cooperative learning to increasing student motivation, but could not link the cooperative learning itself to increase comprehension. The current study aimed to link student preference toward cooperative learning which would increase motivation and in turn increase student reading comprehension. This link was not found as a result of the study. There were no differences found between the overall motivational and enjoyment levels of EDI and independent seat work and EDI and cooperative learning. Students who scored lower on the covariate and were part of the EDI and independent seat work group did enjoy the activities more than higher performing students.

Shaaban (2006) stated that reading motivation was related to readers' perceptions of themselves as readers. Readers who had positive perceptions of themselves as readers worked harder at it than those with lower perceptions. Shaaban used the Motivation to Read Profile instrument as well. Significant group differences for traditional teaching versus cooperative learning were found pertaining to the perception of the value of

reading, reading self-concept, and motivation to read. Similar to the present study, Shaaban did not find that cooperative learning improved comprehension, Shaaban did find that cooperative learning improved students' perceptions of reading, their reading self-concept, and their motivation to read. This last finding of Shaaban was not supported by the current research findings. There was a difference found on students' motivation for the MRP value score on the pretest. After the intervention, there were no differences found between the groups in this study.

Stevens, Slavin, and Farnish (1991) reported that students spend one-half to one-third of allotted reading time on seatwork activities which are often unsupervised by the teacher. Cooperative learning uses this time more effectively by having students work together to provide feedback and assistance as well as motivate each other throughout the completion of the task. This point about cooperative learning was the crux of the study at hand. It was predicted that cooperative learning would improve participants' value of reading and self-concept of themselves as readers. It was believed that after learning reading comprehension strategies explicitly, engaging students thought the use of cooperative learning, instead of passive seatwork, would accelerate reading comprehension. These beliefs were not supported by the data. There was no difference in the value of reading, self-perceptions of the participants themselves as readers, or enjoyment of the students in EDI + IW and EDI + CL situations.

Conclusions

Due to this study supporting Cronbach and Snow's (1977) ATI concept, the primary conclusion focuses on the prior achievement-treatment interaction. First, EDI + IW and EDI + CL do not provide significant main effects for all students. There can be

no conclusions specifically on EDI itself, but EDI with independent seatwork is more beneficial for lower ability students. EDI with cooperative learning is better suited for higher ability students. Differentiated instruction and the use of heterogeneous groups are suggested to improve reading comprehension and account for individual learner differences (Corno & Snow, 1976).

This finding suggests that it may be profitable to train teachers to use both EDI and CL in their instruction. EDI allows teachers to monitor and control student attention and behavior. It is a strong teaching method to train students on cognitive reading strategies. Across both learning groups, lower ability students were found to use reading strategies less frequently than higher ability students. When it comes time to practice these strategies, lower ability students can benefit from independent seatwork. If cooperative learning is being used for practice time with lower ability students, it is suggested that teachers use teacher-led cooperative learning discussion groups (Alamar, 2010) to provide scaffolding in cooperative learning environments.

While the research presented strengthens the research in individualized or differentiated instruction, it is not supporting research on ability grouping. Students need to be grouped heterogeneously during cooperative learning activities. This study found that EDI + CL was not as beneficial to lower ability students, but other studies found that small, mixed-ability groups foster the learning and motivation in lower achievers (Webb, 1982 as cited in Corno & Snow 1976). This research study also did not provide conclusive evidence that either EDI + IW or EDI + CL increased student motivation in reading; however, EDI + IW was favored more highly overall by lower ability students and EDI + CL was favored more highly overall by higher ability students.

Implications for Research and Practice

Based on the design and results of the study, there are several implications for educational practice and future research. First, the findings of the study will be used to draw conclusions about the problem of teaching reading comprehension in the classroom and improving reading achievement. Next, this section will discuss the research implications, potential study modifications, and recommendations for future research. Lastly, educational implications and future recommendations for teachers will be presented.

Implications for Research

There are a few recommendations for future research. First, this study was a small scale, quasi-experimental study. Intact classrooms were used and the sample was relatively homogeneous. It would be beneficial to replicate this study on a larger scope in various parts of the United States. The population included few English language learners and no students with identified learning disabilities. During the time of the reading activities, the students with identified learning disabilities were in a pull-out classroom with the special education teacher.

The duration of the study may also have impacted the results. While other studies lasted a similar length of time (Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007; Alamar, 2011), Stevens and Slavin (1995) found large effect sizes for cooperative learning after two years. A training week was built in prior to the start of data collection so students could become familiar with the strategy packet they would be working with, but this may not have been enough practice for the low ability readers. The high ability readers may only have needed one week to learn what was expected of them. They may

be learners who naturally learn at a faster rate. The low ability readers may have needed another week or two of guided instruction for the packet and literature group norms. Some students, especially lower achieving students might have needed more guidance on how to provide and accept feedback from classmates. Based on Vygotsky's zone of proximal development, the heterogeneous grouping of the literature circles should have provided a benefit for lower achieving students; however, there was no significant difference in their reading comprehension achievement after five weeks of cooperative learning. This finding sheds light on an important piece of instruction that was missing from the research study. More time and training on cooperative learning could have benefited the students in this learning environment.

A longitudinal study to show effects of strategy instruction across age would also be important to research further. La Berge and Samuels (1974) and Perfetie and Lesgold (1979) believe that explicit direct instruction of reading comprehension strategies should begin at an early age. Perhaps, no significant achievement improvements were found because the students in the study had been learning reading strategies taught explicitly for the past two years. Overtime, the effects of EDI of reading comprehension strategies may not be as significant or may diminish overtime. If students were followed from the onset of early strategy instruction, differences in age level, reading ability, strategy use, and comprehension may be exposed.

Another change that could have added to the current research study would have been including a time on task measure. No data were kept for how much focus and attention was put into work for either group or for independent participants beyond allotted instructional minutes. There is a slight chance that results may have been

affected because low ability readers may not have been focused or attentive during cooperative learning time or higher ability readers were not focused during independent work. It is more difficult for a teacher to monitor student behavior and attention when the students are working in multiple groups. Students may not have been actively listening or engaged for a certain amount of minutes during group work time. Time on task can also be an issue when looking at strategy use. Students in the EDI + IW classes were able to practice each of the five strategies five times during the study. Students in the EDI + CL classes were able to practice each of the five strategies one time during the study. With regards to cooperative learning, the question of dependency arises. Because students in a cooperative learning environment were used to the support and help from classmates, they may underperform their independent working counterparts on assessments when help of friends is not allowed.

Teacher interviews or classroom videos could have provided a clearer picture of what instruction looked like and how the students behaved during the activities. The quality of EDI and CL could affect the results of the study. The teachers who participated in this research study were trained in EDI and had support coaches to reach out to if questions arose. By all accounts, the EDI instruction was good. The CL instruction could have been expanded upon. The teachers did not receive any formal CL training other than the 30 minute training from the researcher prior to the study. There was only one week to train students on how to complete their work packets and how to work in groups. As noted before, there could have been more training for the students on how to accept and provide feedback to group members. This extra training might have changed to outcome of the study. The teachers in the study did not stop and give a formal example or

modeling on how to carry out a group discussion beyond the rules of taking turns, listening, and being responsible for completing group work.

Lastly, the results on the cooperative learning treatment group are also difficult to attribute to cooperative learning because it was combined with EDI. In future studies, three groups of EDI and independent seat work, EDI and cooperative learning, and cooperative learning only may yield more significant results. The results would also be more generalizable with regards to cooperative learning as being beneficial strategy to use in improving the reading comprehension of students.

Implications for Practice

Prior research found that explicit instruction of reading strategies improved reading comprehension in students (Eliers & Pinkley, 2006; Pope; 2007; Casteel, Isom, & Jordan, 2000). Other researchers demonstrated that cooperative learning also improved reading comprehension (Kitano & Lewis, 2007; Gauthier, 2001; Gungor & Un Acikoz, 2004). One expectation of this study was that by incorporating the two strategies, exponential results would be found compared to implementing only one strategy in the classroom. It was also expected that students would be motivated to actively participate in the instruction and, in turn, learn the strategies of reading comprehension more effectively to transfer to independent reading activities and assessments. In the end, the greater effect would be raising students' test scores on state and national assessments.

The data presented in the study did not support the expectation discussed above. As a teacher, it is important to remember that not all students learn in the same way. One standard approach to teaching does not work. This is why teachers are taught to differentiate instruction. Some students learn better one way while others learn better

another way. The results of this study showed that higher ability readers were successful in cooperative learning groups while lower ability readers were not. This can be due to many factors. First, higher ability readers may feel more confident in their skills and find it easy to provide feedback to other students in their literature group. They may also not be timid to share their work because they are confident it is correct. On the other hand, lower ability students may hesitate to share responses with their peers because they are not as confident in their answers. They may take a back seat in discussions and participate minimally. During EDI + IW, lower ability students were more successful. There is predictable structure which may be easier for them to follow. Pair share allow for a low ability student to discuss answers with one partner before sharing out to the whole class. This can build confidence in the students' responses (Hollingsworth & Ybarra, 2009).

Looking at these findings from a teacher's perspective, one can envision a classroom with small group center activities to be a perfect time to differentiate instruction for reading comprehension. For a portion of the time, teachers could group students based on ability. The higher ability groups would be able to meet together for literature circles where they would discuss their literature strategies packet similar to what occurred in the study. The lower ability groups would meet with the teacher to continue EDI of reading comprehension strategies and to have a teacher-led literature circle. Teacher-led literature circles would allow for more structure and guidance, which seems to be needed for the lower ability readers. This teacher-led method would be similar to the study by Alamar (2011) in which the teacher provided second grade students with prompts to engage their discussion around predicting, generating questions

and making connections. Through teacher modeling, the students increased the amount that they used the reading strategies that were explicitly taught. In the end, after more guided practice with the lower ability readers, the teacher can form heterogeneous groups and the lower ability students would be able to begin to work in student-led literature circles with the higher ability readers as their models.

There needs to be further research on increasing student motivation to improve reading comprehension. The findings of this study did not yield statistically significant results. However, the students at these two school sites, based on CST scores, appear to be highly motivated learners from the start. The climate of the schools and classrooms are very positive. The students seem to like school and are agreeable towards their teachers.

Summary

After looking at the data and connecting the present findings to past research, it is apparent that improving reading comprehension is not an easy task. While EDI of reading comprehension strategies is more beneficial for low ability readers, cooperative learning is more beneficial for high ability readers. While it was believed that combining two methods may produce a super effect on improving reading comprehension, that effect was not found. Teachers know that one standard way of teaching does not work for everyone. This fact aims at the importance of differentiated instruction by providing a variety of teaching methods. Perhaps, differentiated instruction is the key that may open the door to begin to reduce the number of struggling readers in American schools.

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APPENDIX A

Theme 2 Intervention Manual

Prior: CST 2012, STAR Reading test, Metacognitive Strategy Index, Motivation to Read Profile

Week 1: My Brother Martin

		Manual Pg.	Strategy/ Skill	Co-Learn	Independent
Mon.					
10 min	Read Aloud	p. 134L/M			
25 min	Vocabulary	p. 136 & 137		Word Squares & PB p. 71	Word Squares & PB p. 71
25 min	Reading	p. 137A/B Trans. #9	Evaluate/ Author's Purpose	PB p. 72	PB p. 72
Tues.					
5 min	Vocabulary	p. 138-Review			
40 min	Reading	p. 138-151	Evaluate	Strategy Log/ PB p. 73	Strategy Log/ PB p. 73
15 min	Reading		Various	Lit. Packet (jigsaw)	Lit. Packet
Wed.					
10 min	Reading	CD-ROM			
30 min	Reading	p. 153	Various	20 min- ?s 10-discuss	20 min- ?s 10-discuss
20 min	Reading		Various	Lit. Packet-home group	Lit. Packet
Thurs.					
20 min	Reading/Vocab	p. 154-157	Letter Writing	PB p. 75	PB p. 75
40 min	Reading/ Extension	p. 153B		Timeline	Timeline
Fri.					
15 min	Presentations of Timelines			All groups	6 students
20 min	Selection Test				
15 min	AR Quiz				

Week 2: Mighty Jackie The Strike-Out Queen

		Manual Pg.	Strategy/ Skill	Co-Learn	Independent
Mon.					
10 min	Read Aloud	p. 160L/M			
25 min	Vocabulary	p. 162 & 163		Word Squares & PB p. 83	Word Squares & PB p. 83
25 min	Reading	p. 163A/B Trans. #9	Inferences	PB p. 84	PB p. 84
Tues.					
5 min	Vocabulary	p. 164-Review			
40 min	Reading	p. 164-179	Inferences	Strategy Log/ PB p. 85	Strategy Log/ PB p. 85
15 min	Reading		Various	Lit. Packet (jigsaw)	Lit. Packet
Wed.					
10 min	Reading	CD-ROM			
30 min	Reading	p. 181	Various	20 min- ?s 10-discuss	20 min- ?s 10-discuss
20 min	Reading		Various	Lit. Packet Home group	Lit. Packet
Thurs.					
20 min	Reading/Vocab	p. 182-185	Letter Writing	PB p. 87	PB p. 87
40 min	Reading/ Extension	p. 181B	Venn Diagrams	Character Traits	Character Traits
Fri.					
15 min	Presentations of Character Traits			All groups	6 students
20 min	Selection Test				
15 min	AR Quiz				

Week 3: Making a Splash TFK

		Manual Pg.	Strategy/ Skill	Co-Learn	Independent
Mon.					
10 min	Read Aloud	p. 188L/M			
25 min	Vocabulary	p. 190 & 191		Word Squares & PB p. 95	Word Squares & PB p. 95
25 min	Reading	p. 191A/B	Main Idea/ Details	PB p. 96	PB p. 96
Tues.					
5 min	Vocabulary	p. 192- Review			
40 min	Reading	p. 192-195	Summarize	Strategy Log/ PB p. 100	Strategy Log/ PB p. 100
15 min	Reading		Various	Lit. Packet (jigsaw)	Lit. Packet
Wed.					
10 min	Reading	CD-ROM			
30 min	Reading	p. 195	Various	20 min- ?s 10-discuss	20 min- ?s 10-discuss
20 min	Reading		Various	Lit. Packet Home group	Lit. Packet
Thurs.					
20 min	Reading/Vocab	p. 196-199	Test Prep		
	Study Skill	p. 195C/D	Parts of a Book	PB p. 99	PB p. 99
40 min	Reading/ Extension		Mini-Books using parts	Paralympic Mini-Book	Paralympic Mini-Book
Fri.					
15 min	Presentations of Paralympic Mini-Book			All groups	6 students
20 min	Selection Test				
15 min	AR Quiz				

Week 4: Wild Horses

		Manual Pg.	Strategy/ Skill	Co-Learn	Independent
Mon.					
10 min	Read Aloud	p. 200L/M			
25 min	Vocabulary	p. 202 & 203		Word Squares & PB p. 108	Word Squares & PB p. 108
25 min	Reading	p. 203A/B Trans. #5	Text Structure Cause/Effect	PB p. 109	PB p. 109
Tues.					
5 min	Vocabulary	p. 204- Review			
40 min	Reading	p. 204-217	Cause/Effect	Strategy Log/ PB p. 110	Strategy Log/ PB p. 110
15 min	Reading		Various	Lit. Packet (jigsaw)	Lit. Packet
Wed.					
10 min	Reading	CD-ROM			
30 min	Reading	p. 219	Various	20 min- ?s 10-discuss	20 min- ?s 10-discuss
20 min	Reading		Various	Lit. Packet Home group	Lit. Packet
Thurs.					
20 min	Reading/Vocab	p. 220-223	Tall Tales	PB p. 112	PB p. 112
40 min	Reading/ Extension	p. 219B	Main Idea	Horse Story Maps	Horse Story Maps
Fri.					
15 min	Presentations of Horse Story Maps			All groups	6 students
20 min	Selection Test				
15 min	AR Quiz				

Week 5: Mystic Horse

		Manual Pg.	Strategy/ Skill	Co-Learn	Independent
Mon.					
10 min	Read Aloud	p. 226L/M			
25 min	Vocabulary	p. 228 & 229		Word Squares & PB p. 120	Word Squares & PB p. 120
25 min	Reading	p.229/B Trans. #10	Summarize/ Sequence	PB p. 121	PB p. 121
Tues.					
5 min	Vocabulary	p. 1230- Review			
40 min	Reading	p. 230-249	Summarize	Strategy Log/ PB p. 122	Strategy Log/ PB p. 122
15 min	Reading		Various	Lit. Packet (jigsaw)	Lit. Packet
Wed.					
10 min	Reading	CD-ROM			
30 min	Reading	p. 251	Various	20 min- ?s 10-discuss	20 min- ?s 10-discuss
20 min	Reading		Various	Lit. Packet Home group	Lit. Packet
Thurs.					
20 min	Reading/Vocab	p. 252-255	Tables	PB p. 124	PB p. 124
40 min	Reading/ Extension			Comic Strip	Comic Strip
Fri.					
15 min	Presentations of Comic Strips			All groups	6 students
20 min	Selection Test				
15 min	AR Quiz				

Week 6: Assessments

1. Theme 2 CEA
2. STAR Reading Test
4. Motivation to Read Profile
5. Enjoyment Survey

3. Metacognitive Strategy Index

APPENDIX B

Name_____ Date_____

Teacher Time

1. To what degree did you enjoy your teacher practicing reading strategies with you?

1	2	3	4	5
No Enjoyment	A Little	OK	A lot	Very Much

2. To what degree did you enjoy pair-share activities during reading time?

1	2	3	4	5
No Enjoyment	A Little	OK	A lot	Very Much

3. To what degree did your teacher teach you new reading strategies?

1	2	3	4	5
No new Strategies	One new Strategy	A few Strategies	Some Strategies	Many more Strategies

4. To what degree did you enjoy your teacher demonstrating how to use reading strategies?

1	2	3	4	5
No Enjoyment	A Little	OK	A lot	Very Much

5. To what degree would you enjoy your teacher to continue to work with your class on reading comprehension strategies?

1	2	3	4	5
No Enjoyment	A Little	OK	A lot	Very Much

Student Time

6. To what degree did you enjoy working on your literature packets?

1	2	3	4	5
No Enjoyment	A Little	OK	A lot	Very Much

7. What degree of effort did you put into your literature packets?

1	2	3	4	5
None	A Little	Medium	A lot	Very Much

8. Would you like to continue with literature packets?

1	2	3	4	5
No	A Little	Maybe	Yes	Yes, I loved them!

9. Do you think the reading strategies are helpful?

1	2	3	4	5
No	A Little	Sometimes	A lot	Very Much

10. How much did you enjoy the special weekly projects these last five weeks?

(Character traits, story map, mini-books, etc.)

1	2	3	4	5
No Enjoyment	A Little	OK	A lot	Very Much

APPENDIX C

Teacher Log

Name_____ Week 1 2 3 4 5

Date: Monday _____

I followed the curriculum plan. _____

I did not follow the curriculum plan because _____

_____

Date: Tuesday _____

I followed the curriculum plan. _____

I did not follow the curriculum plan because _____

_____

Date: Wednesday _____

I followed the curriculum plan. _____

I did not follow the curriculum plan because _____

_____

Date: Thursday _____

I followed the curriculum plan. _____

I did not follow the curriculum plan because _____

_____

Date: Friday _____

I followed the curriculum plan. _____

I did not follow the curriculum plan because _____

_____

APPENDIX D

PARENTAL CONSENT FOR RESEARCH PARTICIPATION

Your child's classroom has been invited to participate in a research study from October 1, 2012 thru November 9, 2012. The research study has already been approved by the school district, the school principal, and your child's teacher. Ms. Lencioni, a 4th grade teacher at Junipero Serra Elementary, will be researching reading comprehension in fulfillment of her doctoral degree. This form will discuss the study, the procedures, and what is required if you allow your child to participate.

Purpose and Background
Ms. Lencioni, a doctoral student of Learning and Instruction at the University of San Francisco, is doing a study on reading comprehension strategies of 4th graders. Because test scores indicate that 4th graders struggle on reading comprehension, the researcher is interested in learning whether certain teaching methods in the classroom will strengthen and improve reading comprehension of the students. Motivation will also be a factor of interest because prior research shows that motivation and reading achievement are linked.

Procedures
If you agree to allow your child to be in this study, the following will happen:

1. Your child will continue to receive the district adopted classroom curriculum and assessments. For six weeks, students will have instruction for 1 hour in reading and vocabulary by one teacher and instruction for 1 hour in grammar and writing by another teacher.

2. Your child will take additional assessments as follows: Pretests will include a reading strategy assessment and a motivation to read survey. These will take 45 minutes to complete. Posttests will include the reading strategy assessment, motivation to read survey, and an enjoyment survey. These will also take 45 minutes to complete. Assessments will be made available if you would like to view the material prior to authorizing consent. Contact the researcher directly.

3. The researcher will be able access your child's CST 2011-2012 results and prior classroom reading scores from the STAR Reading test given at the beginning of the school year. Weekly reading assessment test scores, Accelerated Reader tests scores that coincide with the weekly basal story and post-STAR Reading Test scores will also be collected by the researcher.

Risks and/or Discomforts
1. There are no anticipated risks to your child.
2. Participation in research may mean a loss of confidentiality. Study records will be kept as confidential as is possible. No individual identities will be used in any reports or publications resulting from the study. Study information will be coded and kept in locked files at all times. Only study personnel will have access to the files.

Benefits
There will be no direct benefit to you or to your child from participating in this study. The anticipated benefit of this study is a better understanding of teaching methods that may improve reading comprehension of students. There is no guarantee that your child's reading comprehension will improve directly from this study.

Costs/Financial Considerations
There will be no costs to your or to you child as a result of taking part in this study.

Payment/Reimbursement
Neither your child nor you will be reimbursed for participation in this study.

Questions
Please speak to Ms. Lencioni about this study and have any questions answered. You may call her at (650) 877-8853 or email her at glencioni@ssfusd.org.
If for some reason you do not wish to do this, you may contact the IRBPHS, which is concerned with protection of volunteers in research projects. You may reach the IRBPHS office by calling (415) 422-6091 and leaving a voicemail message, by FAX at (415) 422-5528, by e-mailing IRBPHS@usfca.edu, or by writing to the:
IRBPHS, Department of Counseling Psychology Education Building
University of San Francisco
2130 Fulton Street, San Francisco, CA 94117-1080.

Consent
I have been given a copy of the "Research Subject's Bill of Rights," and I have been given a copy of this consent form to keep. PARTICIPATION IN RESEARCH IS VOLUNTARY. I am free to decline to have my child be in this study, or to withdraw my child from it at any point. My decision as to whether or not to have my child participate in this study will have no influence on my child's grades or classroom involvement during reading activities.

My signature below indicates that **I agree** to allow my child to participate in this study.

_____ _____ _____
Signature of Subject's Parent/Guardian Date of Signature Student's Name

_____ _____
Signature of Person Obtaining Consent Date of Signature

APPENDIX E

Literature Packet

My Name: _____
Book Title: _____
Author: _____

Here is a picture of the book's cover.

Question Generator

Directions:
Write three questions you could ask your friend during a class discussion. Pretend you are the teacher. The questions need to be related to the story you read this week. They should be open-ended meaning they do not just have a yes or no answer.

Example: How did you feel when_____ happened?
What would you have done if you were in the character's situation?
Why do you think the main character decided to _____?

Question #1:

_____

_____

Your Answer:

_____

_____

Question #2:

_____

_____

Your answer:

_____

_____

Question #3:

_____

_____

Your answer:

_____

_____

Word Wizard

Directions:
Find two words in the story that your or others might not know. Write the word, the page you found it on in the text, and the sentence from the story. Then, use a dictionary to find the definition.

Word #1: _____Page Number: _____

Copy the sentence this word was used in.

_____

_____

Definition of the word:

_____

_____

Word #2: _____Page Number: _____

Copy the sentence this word was used in.

_____

_____

Definition of the word:

_____

_____

Illustrator

Directions:
Draw a picture from part of the story that you were able to visualize. It is best if you do not use a picture that is already drawn. Make sure your artwork is colorful and includes details.

Real-Life Connections

Directions:
Write about parts of the story that happened to you or someone else you know in real life. Give as many details as possible in your descriptions.

Story event:

_____
_____
_____

Something similar happened to me or someone else when:

_____
_____
_____

Another story event:

_____
_____
_____

Something similar happened to me or someone else when:

_____
_____
_____

Story Connections

Directions:
Identify parts of the story that remind you of things that happened in another story you've read. Describe how the stories are alike using as many details as possible.

Story event:

_____
_____
_____

Something similar happened in another story when:

_____
_____
_____

Another story event:

_____
_____
_____

Something similar happened in another story when:

_____
_____
_____

Summary

Directions:
Write a summary that describes what happened in the story using the components of a summary that you have learned. Include the title and author in the first sentence.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Literature Circle Packet

My name: _____

Book Title: _____

Author: _____

People in my group:
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Draw a picture of the book's cover below.

Super Teacher Worksheets - www.superteacherworksheets.com

Name: _____ Book Title: _____

Date Due: _____ Pages: _____ to _____

Literature Circle Role

Discussion Leader

Your job:

Write questions for your group to discuss. The questions should have to do with the section of the book you're reading. Be sure your questions are interesting and open-ended so everyone will be able to answer it in their own way.

Examples: Were you surprised when ___? Why or why not?
Do you think the main character made a good choice when he/she ___?
Why do you think the main character decided to ___?

When you meet with your group:

You will read your questions to the group and give everyone a chance to answer. After everyone has answered, share your answer with the group.

Question #1: _____

_____

Your Answer: _____

_____

Question #2: _____

_____

Your Answer: _____

_____

Question #3: _____

_____

Your Answer: _____

_____

Name: _____ Book Title: _____

Date Due: _____ Pages: _____ to _____

Literature Circle Role

Word Wizard

Your job:

Your job is to search for words in this section of the book that you (or others in your group) might not know. After you find challenging words, tell where they are used in the story and find the definitions.

When you meet with your group:

First, share the challenging word you found. Show them where it is in the story. Then, have each person try to predict the definition. After everyone has shared their definitions, you can tell them the real meaning of the word.

Word #1: _____ Page Number: _____

Copy the sentence this word was used in. _____

_____

Definition of the word: _____

_____

Word #2: _____ Page Number: _____

Copy the sentence this word was used in. _____

_____

Definition of the word: _____

_____

Super Teacher Worksheets - www.superteacherworksheets.com

Name: _____ Book Title: _____

Date Due: _____ Pages: _____ to _____

Literature Circle Role

Illustrator

Your job:

Draw a picture of one scene from the section of the book you're reading. Your picture should be colorful and have lots of details.

When you meet with your group:

Have each member of the group describe what's happening in your picture.

Super Teacher Worksheets - www.superteacherworksheets.com

Name: _____ Book Title: _____

Date Due: _____ Pages: _____ to _____

Literature Circle Role

Real-Life Connector

Your job:

Your job is to find parts from the story that remind you of things that happened to you or someone else in real life. When you describe the real-life connection, give as many details as possible.

When you meet with your group:

Describe the section of the story that reminds you of real life. Then, tell how something similar happened to you or someone you know. After that, you can ask everyone in your group if anything similar has happened to them or someone they know.

Event from the story: _____

_____

_____

Something similar happened to me (or someone I know) when: _____

_____

_____

_____

Another event from the story: _____

_____

_____

Something similar happened to me (or someone I know) when: _____

_____

_____

_____

Name: _____ Book Title: _____

Date Due: _____ Pages: _____ to _____

Literature Circle Role

Story Connector

Your job:

Your job is to find parts from this section of the the story that remind you of things that happened in another story you've read. Then, describe how the two stories are alike.

When you meet with your group:

Describe the event from the story you're reading and tell how it connects to another story you have read before. Describe the similarities to the group. Then, ask if anyone else can make other story connections.

Event from this story: _____

_____

_____

Something similar happened in another story when: _____

_____

_____

_____

Another event from this story: _____

_____

_____

Something similar happened in another story when: _____

_____

_____

_____

Super Teacher Worksheets - www.superteacherworksheets.com

Name: _____ Book Title: _____

Date Due: _____ Pages: _____ to _____

Literature Circle Role

Summarizer

Your job:

Write a summary that describes what happened in this section of the book. Be sure you write in complete sentences and include lots of details. Your writing should fill most (or all) of the lines below. If you need more space, continue on the back.

When you meet with your group:

You will read the summary to the group. Ask them to tell you about other important parts you may have missed. Have each person tell you about their favorite part.

Super Teacher Worksheets - www.superteacherworksheets.com