

## ABSTRACT

Title of dissertation: **BUILDING A READING BRIDGE:  
THE IMPACT OF RECIPROCAL TEACHING ON  
POOR READERS IN NINTH GRADE  
SOCIAL STUDIES**

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The purpose of this study was to examine the impact of reciprocal teaching, as designed by Palincsar and Brown (1984), on ninth grade students who were poor readers, as they worked to make sense of what they read in social studies textbooks. Additionally, this study attempted to make adaptations to the original reciprocal teaching procedures to determine if a simplified version of reciprocal teaching would be as effective at improving reading comprehension as the original version of reciprocal teaching has been.

The study was conducted by a teacher researcher in his U.S. History classes at a large suburban high school in the Washington D.C. metropolitan area. The study measured and compared the performance of three different treatment groups on pre and post standardized comprehension measures, pre and post social studies comprehension measures and eight weekly social studies comprehension measures. Additionally, the teacher researcher examined the nature of student discussion about what they read through the use of audio taped transcripts of the reciprocal teaching sessions.

The three treatment groups received different versions of reciprocal teaching training. The traditional group followed the procedures outlined by Palincsar and Brown (1984) which included training in the four strategies of predicting, clarifying, questioning and summarizing while working in small groups. The whole class group learned the four strategies above but worked only in a whole class setting. The two strategy group learned the strategies of questioning and summarizing only and worked in small groups. Each group experienced improved reading comprehension scores on the measures of this study.

The results of this study suggest that the reciprocal teaching procedures can be adapted to make them easier to implement and that student reading comprehension skills will still improve.

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IN NINTH GRADE SOCIAL STUDIES

by

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DEDICATION

In memory of

Irvin S. Yavelberg

father, grandfather, friend

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## **Chapter 1: Introduction**

### The Problem

The inability to read and understand texts in content area classes stands as a great barrier for many students. These students are often labeled “at-risk” and, sadly, their path towards becoming at-risk begins early in their educational life. In elementary school, poor readers struggle and fall behind when the focus of instruction shifts from “learning to read” to “reading to learn.” By middle school, these struggling readers have become reluctant or non-readers whose educational record may include discipline problems and remedial classes (Stanovich, 1994). And then they reach high school. As high school students, they become, educationally, second-class citizens. These are the students for whom we fear, but rarely voice the fear, that it is too late. I am not suggesting that teachers do not work valiantly to teach these students. Quite to the contrary, teachers try to find texts or readings that these students can successfully complete, but often the teachers simply do not have the time or resources to ensure that these students do much reading. Teachers assign readings from textbooks, or other sources, knowing that many students will not, because many of them cannot, complete these assignments (Reick, 1977; Smith & Feathers, 1983). Teachers find other methods of getting material across that do not require poor readers to read and the non-reading cycle continues (Pearson & Gallagher, 1983). Secondary schools become adept at sorting students based on reading level, but do not do a great job helping these students become better readers (Allington, 1994).

I know this cycle from first-hand experience as a ninth grade U.S. History teacher. I have been guilty of doing many things that do not help my students become better

readers. I have quickly called out the reading assignment as my students scramble for the door. I have given my students worksheets that require them to hunt and peck through the pages of a history text, but do not require them to practice strategies that would improve their ability to comprehend what they are reading. I have tried to do the creative research project, only to be stymied by my students' inability to read and comprehend what I thought was the most basic information from web pages, newspapers or encyclopedias. I have fallen into the trap of spoon-feeding information to my students that I know they did not read in their assignment in order to "cover" the required curriculum. Thus, I have helped to continue the downward spiral so that many of my students cannot read effectively enough to be successful, independent learners in school. I have faced the frustrating realization that my students struggle to read and comprehend information from textbooks and other expository sources and they are being short-changed in their educational experience. What can I do?

### A Solution

For the last 6 years, as I have been living with the day-to-day challenges of being a teacher, I have been looking for an answer to this question as a student. I have been learning about ways to help poor readers develop the reading strategies that will enable them to become more effective readers and therefore more successful students. I have discovered pages upon pages upon volumes upon tomes written about how to help students become more effective readers. Some of these research ideas have even made it into classrooms and have been shown to work. One such idea is called reciprocal teaching (Palincsar and Brown, 1984). The reciprocal teaching model teaches students how to use some of the strategies that help people to become effective readers.

Following the reciprocal teaching procedures, students work in small groups with an adult to practice the strategies of predicting, clarifying, questioning and summarizing in order to become more aware of their own reading comprehension skills. Reciprocal teaching seeks to break down the reading process for students so that they can better understand what they read.

Reciprocal teaching has been around for about 20 years and has been used successfully in different educational settings. In the original study by Palincsar and Brown, students who were trained in the reciprocal teaching strategies dramatically improved their ability to answer comprehension questions about passages they read. Students who averaged only 15% correct answers initially, moved to 85% correct answers after 20 days of reciprocal teaching training (Palincsar & Brown, 1984). The control groups in their original study only managed scores at just below 50% correct answers. The results of Palincsar and Brown's initial research suggest that reciprocal teaching works. Subsequent researchers have used the reciprocal teaching procedures in a variety of educational settings and have witnessed similar improvement in students' reading comprehension skills (Lysynchuk, Pressley & Vye, 1990; Brady, 1990; Rosenshine & Meister, 1994; Lederer, 1997; Alfassi, 1998).

In my research, I attempted to implement reciprocal teaching with my own ninth grade U.S. history students to determine if the procedure would help them better understand what they read. Additionally, I wanted to determine if changes could be made to the reciprocal teaching procedures, to make them easier to implement, while maintaining the positive results that other researchers had found.

## Research Questions

- How will reciprocal teaching impact the ability of poor readers in my ninth grade U.S. History class to understand and discuss the concepts found in social studies textbooks?
- How will adapted reciprocal teaching procedures impact the ability of poor readers to understand and discuss the concepts found in social studies textbooks when compared to the results from the traditional reciprocal teaching approach?

## Purpose

Over the last few years, I have heard a great deal about reciprocal teaching. Articles and books mention reciprocal teaching as a way to improve reading comprehension instruction. Workshops and county curriculum meetings recommend reciprocal teaching as a means to help at-risk students find success. Other studies (Lysynchuk, Pressley & Vye, 1990; Rosenshine & Meister, 1994) suggest how effective this method can be at helping students comprehend what they read. And yet, with these positive reviews and recommendations, when I began my research on this topic, I knew no one who actually had used or who was using the reciprocal teaching strategies. In an informal survey that I conducted among high school social studies and English teachers in a large suburban school system, only 15 out of over 400 teachers reported ever using reciprocal teaching. These findings followed a similar trend that other researchers discovered when studying reciprocal teaching. These researchers found that “an initial

challenge was to locate teachers who continued to use reciprocal teaching after a short trial period” (Marks, Pressley, Coley, Craig, Gardner, DePinto, Rose, 1993, p. 268).

I realized I had hit upon a paradox: If reciprocal teaching is such a powerful technique, recommended by researchers and curricula experts, why are so few teachers actually using reciprocal teaching in their classrooms? My study began to take shape. I wanted to know if reciprocal teaching would really work for my students. I teach students who are poor readers and who, for the most part, are not highly motivated toward school success. Would reciprocal teaching help improve their ability to understand and discuss the concepts we are learning about in U.S. History? And if so, are there ways reciprocal teaching can be adapted to make it more user-friendly, so that teachers would be more likely to use this effective method?

### Overview of the Study

In this study, I taught a research-based reading strategy, reciprocal teaching (Palincsar & Brown, 1984), to ninth grade students in my U.S. History classes. The study was an experimental case study involving three groups, my three U.S. History classes. My sixth period class received training in the four strategies of reciprocal teaching in small group settings, as defined by Palincsar and Brown(1984), and will be referred to as the “traditional” group. My seventh period class received training in the four reciprocal teaching strategies through whole class instruction (not in small groups), and will be referred to as the “whole class” group. My fifth period class received training in a truncated version of reciprocal teaching, where two strategies instead of four were taught, yet they still worked in small groups. They will be referred to as the “two strategy”

group. I hoped the adaptations of reciprocal teaching (two strategy and whole class) might be easier to implement and therefore more likely to be used by teachers.

The design of this study did not have a control group. This design was intentional. As I have cited above, reciprocal teaching has over 20 years of research supporting its effectiveness as a method to help students improve their ability to understand what they read and monitor their own comprehension. My goal in this study was to study, in a systematic way, how I could implement the reciprocal teaching procedures with my students and how I might adapt this procedure so that it would be easier to implement for teachers in the classroom.

This study of reciprocal teaching lasted for 12 weeks (21 reciprocal teaching sessions) from February 2003 to May of 2003. I served as both the teacher and the researcher for this study. I collected data from four different sources designed to assess the effectiveness of the reciprocal teaching procedures. Students took a standardized reading comprehension test before the study began and after it ended. Students took pre and post reading comprehension assessments based on reading passages from social studies textbooks. Students took weekly social studies reading comprehension assessments during the reciprocal teaching study. Additionally, I audio taped several reciprocal teaching sessions during the course of the study. I recorded an early session, a middle session and two later sessions to examine more closely how students were using the reciprocal teaching strategies in their discussions about information they read in their social studies textbook. I also kept notes related to the reciprocal teaching study and my reflections on each reciprocal teaching session.

## Definitions

*reciprocal teaching*—cognitive reading strategy developed by Palincsar and Brown

(1984) designed to help students better comprehend when reading texts and better monitor their own comprehension.

*reciprocal teaching strategies*—four strategies that comprise reciprocal teaching:

*predicting*—students make predictions about what might be upcoming in a text based upon headings, subtitles or previous reading.

*clarifying*—students ask questions to better understand terms and concepts during their reading of text sections.

*questioning*—students ask questions similar to ones a teacher might ask about a section after they have read to try to get at the main idea of the section.

*summarizing*—students offer short summaries of the text section read before moving on to the next part of the reading.

*treatment groups of this study*—three different treatments groups:

*traditional group*—students in the teacher researcher’s 6<sup>th</sup> period class who learned and practiced the four strategies of reciprocal teaching in a small group setting. These students followed the “traditional” approach to reciprocal teaching as defined by Palincsar and Brown (1984).

*whole class group*—students in the teacher researcher’s 7<sup>th</sup> period class who learned and practiced the four reciprocal teaching strategies as a whole class as opposed to a small group like the traditional group.

*two strategy group*—students in the teacher researcher’s 5<sup>th</sup> period class who learned and practiced only two of the reciprocal teaching strategies (questioning

and summarizing) instead of the four strategies of the traditional group. This group did work in a small group setting, like the traditional group.

*teacher research*—“systematic and intentional inquiry by teachers” (Cochran-Smith and Lytle, 1990, p.2). The attempt made by teachers to research their teaching and their students’ learning.

*research assessments*—three reading assessments in this research:

*Gates-MacGinitie Reading Comprehension Test*—a widely used, standardized test of reading vocabulary and comprehension that offers a grade level equivalency score given before and after the reciprocal teaching intervention.

*Social studies reading assessment*—assessments in which students read a 200-300 word passage from a social studies textbook and answered four questions and wrote a brief summary. Students in this study took one as a pre-test and two as a post-test.

*Weekly social studies reading assessments*—assessments administered approximately weekly in which students read a 200-300 word passage from a social studies textbook and created two questions, answered those questions and wrote a brief summary. Students in this study took eight weekly assessments.

*SPARC Program*—Special Alternative Reading Classes. A special program at the high school in which all of the subjects in this study were enrolled. The program targets students who are reading three or more grades below the ninth grade level.

*poor readers*—students who are reading three or more grades below their grade level as measured by the Gates-MacGinitie reading comprehension test grade level equivalency score.

## Reciprocal Teaching and Social Studies

As a social studies teacher it might seem strange that I have decided to focus my dissertation research on a “reading” issue like reciprocal teaching. However, as most social studies teachers will tell you, student reading ability is a major hurdle in the social studies classroom. Additionally, as I learned more about reciprocal teaching I began to see the potential power it could have in the social studies classroom. I also saw how reciprocal teaching fit into one of the traditions of social studies instruction. In the 1970’s, Barth and Shermis outlined approaches to teaching social studies placing great emphasis on teaching, “social studies as reflective inquiry” (Barth & Shermis, 1970, p. 748). Reciprocal teaching aligns with this social studies tradition, while at the same time offering an effective way to encourage “at-risk” students to engage in the social studies.

The reflective inquiry tradition requires students to examine problems, discover facts and grapple with solutions, not unlike the discussion that might occur during a reciprocal teaching session. Students who are in high school and struggle with reading and school, as my students do, would clearly benefit from a reflective inquiry approach to the social studies. Several studies have concluded that students who are at-risk respond more positively to teaching strategies that are connected to their own lives and interests. While this could be true for all students, it appears to be a prerequisite for success with students who are at-risk. Gary Wehlage (1987) and Larry Cuban (1989) suggest that one important component of successful programs for at-risk students is that the curriculum engage the student in discussion and analysis of real life issues and problems. Jerry Hawver (1994) pointed out the need for at-risk students to play a major role in the decisions about the curriculum in which they engaged. The reflective inquiry tradition is

unique among the three traditions described by Barth and Shermis because it allows students to help determine the direction the learning process takes.

This ownership is critical for students who have had little success in school. Dewey supported efforts to make school more relevant to students and encouraged teachers to actively engage students in the learning process. In 1916, when he wrote Democracy and Education, Dewey explained that the goal of education must be relevant to the student. He believed that education must involve the experiences of the student and that those experiences could be tapped into through a problem-solving approach to teaching. Dewey thought that students must face a problem, be taught to actively use the tools to deal with that problem and develop and test a solution to that problem. This description of school, though from 1916, supports good instruction for students who are at-risk of academic failure.

Because Dewey argued for active learning and problem solving, he likely would respond positively to reciprocal teaching process. The basic concept of reciprocal teaching is that the teacher helps the student slow down the reading and thinking process so that the student can better understand how the process works and, therefore, use it more effectively to improve his or her reading comprehension skills. In reciprocal teaching, students work in small groups to raise questions while they read, to clarify what they are reading, to predict what might be coming next and to summarize what they have read. Dewey describes a similar process in his book, How We Think (1910).

According to Dewey, thinking begins with a forked-road situation in which tension is created and a student must stop (or at least slow down) and make a decision. Dewey explained that students must be made to “reason out” their thinking. Reciprocal

teaching attempts to help students do this. Instead of simply running through the reading of a text, students break a text down, paragraph by paragraph, and thereby learn strategies that will help them think about and understand what they are reading. When boiled down to its essence, reading is thinking. Teachers must help students break down their reading so that they can better understand their thinking and learning. Reciprocal teaching offers teachers and students an opportunity to begin this process.

### Significance—Why Reciprocal Teaching?

I decided to study reciprocal teaching for several reasons. First, almost 20 years of research exists to support its effectiveness as a method for improving the ability of students to comprehend what they read and monitor their own comprehension. As a teacher and a researcher, I wanted to use and study a method that has a proven track record. By studying a research-based cognitive reading strategy, I placed my research in line with others who have used this method. The results of this study can be examined in light of other, related, theory-driven research and can be evaluated accordingly.

Second, I wanted to know why reciprocal teaching, while it has shown much promise, has not been used extensively at the high school level. Both my informal survey of my own county school system and my review of the research returned few examples of teachers who used reciprocal teaching in high school classrooms. Most of the research on reciprocal teaching focused on elementary and middle school aged students and not on struggling readers in high school. In an ERIC search in 2002, reciprocal teaching got 159 hits. Very few of the returned articles dealt with high school, very few dealt with social

studies and none dealt with high school social studies. It seemed to me that this area was ripe for exploration.

Third, reciprocal teaching seemed to offer solutions to many of the reading problems that students encounter when reading social studies texts. While a social studies teacher cannot always change the text that is assigned for a specific course, he or she can implement the methods suggested by reciprocal teaching that will help his or her students navigate these texts more successfully. I believed that careful implementation of reciprocal teaching could help students deal with the difficulties of social studies textbooks; described by one author as “the triple whammy: unfamiliar and uninteresting content linked into an organizational pattern that the child does not recognize” (Chambliss & Calfee, 1998, p. 30). Through questioning, clarifying, predicting and summarizing, reciprocal teaching offers the teacher an opportunity to break down reading assignments with his or her students. They can begin to see the patterns and better understand the complex concepts that one finds in reading about the social studies. Reciprocal teaching offers a setting for these conversations not only related to traditional textbooks, but also for newspaper articles, primary sources and other documents that might be used in a social studies class.

My study follows in line with Alfassi (1998) who examined reciprocal teaching in high school with ‘remedial readers’ and with Lederer (1997) and Brady (1990) who both examined the use of reciprocal teaching using social studies texts in elementary school students. All three of these studies made important suggestions for future research that I tried to address in my study. My study also incorporated suggestions from a review of 16 previous reciprocal teaching studies by Rosenshine and Meister (1994). Specifically I

attempted to break down the elements of reciprocal teaching in an effort to determine if certain strategies, like questioning and summarizing, are as powerful alone as the four strategies, questioning, summarizing, clarifying and predicting, are together. This line of research follows directly from recommendations from Brady (1990) and Rosenshine and Meister (1994).

Finally, I hoped my research would expand the body of literature on teacher research as I attempted to research my own practice as a teacher. One of my interests as a high school teacher and as an educational researcher is to continually look for ways to bridge the gap between research and teaching.

## **Chapter 2: Review of Literature**

The theoretical framework and research literature that supports this study falls into four sections. The first section of the literature review relates to the problems that many students face in school when confronted with reading tasks, and specifically, with reading tasks in the area of social studies. The second section of the review examines the power of cognitive strategy instruction, used in a social setting, that other researchers have previously discovered. The third section of the literature review deals with the work that has been done previously on reciprocal teaching. My study will draw directly on this work and the suggestions of earlier researchers. The fourth section of the literature review revolves around the persistent gap between educational research and the practice of teachers as well as research on the issue of teacher research.

### Problems with Reading in Social Studies

In this section, I discuss the problems that students have with reading, specifically with reading in content areas like social studies. Reciprocal teaching, as a teaching method, seeks to help students manage some of the reading difficulties described in this section.

Students have struggled with reading since teachers began teaching. There exists a long line of research related to reading difficulties and their root causes. Over the last 30 years, researchers have looked at problems with instruction that could lead to reading difficulties for some students. Durkin (1979) found that teachers spent very little time actually teaching students how to comprehend what they read, but instead spent most of the time assigning reading and assessing whether or not students completed the

assignment. Teachers learn to deal with the fact that some students do not read effectively, and so they teach in ways that do not require students to read. Pearson and Gallagher (1983) noted that teachers often re-tell what the reading is about because they know their students will not understand what they read.

As students, especially poor readers, are required to do less and less reading in school, they become worse and worse at reading. Many poor readers at the elementary school level begin their lives in school with a reading deficit like limited phonological awareness. This deficit, rather than being treated properly in school, gets exacerbated as students progress from early to later elementary school. “Trying to read without the cognitive resources to allocate to understanding the meaning of the text is not a rewarding experience. Such unrewarding early reading experiences lead to less involvement in reading-related activities” (Stanovich, 1994, p. 281). Stanovich explained that these poor readers face year after year of unrewarding reading experiences as the “negative spiral of cumulative disadvantage continues” (p. 281). As students progress to middle and high school, the reading demands increase and the time teachers spend “teaching” reading decreases. The end result of the process brings thousands of students into high school each year to face higher reading expectations without the tools necessary to meet these expectations. These students, because of their reading deficiencies, become those determined to be “at-risk” of failure and of eventually dropping out of school altogether.

Beyond the difficulties that many students experience with reading in general, there lies the treacherous task of reading in the content area and specifically reading in the social studies. Students of all ability levels struggle to read, make sense of and remember information from their social studies textbooks. Poor comprehension in content area

reading impacts students from fourth grade through college, but the situation is exacerbated for students who have difficulty reading. Researchers have examined this problem and have explained why students have so much trouble reading in the content area of social studies. James Voss concludes his study on this issue supporting the somewhat obvious, but important, finding that “developing meaning from text is a constructive process consisting of an interaction between the specific contents of the text and the characteristics of the individual” (Voss, 1996, p. 55). When discussing reading and understanding of a history or social studies text, one must examine both sides of the coin—the abilities, interests, knowledge of the reader and the content, vocabulary, and structure of the text. Several researchers have tried to better understand why social studies texts cause problems for students in school.

As part of their effort to improve knowledge about what instruction in social studies is and to better grasp “the enormity of content covered in social studies,” Beck, McKeown and Gromoll studied fourth and fifth grade social studies texts (Beck, McKeown & Gromoll, 1989, p. 102). They identified three problems in social studies texts that caused students to struggle in their understanding of these texts. The first problem resulted from a difficulty students had identifying the content goal of texts. The texts included a great deal of information or at least pieces of information, but lacked a clear goal of what concept the student should glean from these pieces of information. This problem could be seen in these textbooks at the unit, chapter and paragraph level. The text did not make clear the major goal that the student was supposed to learn while reading. According to the authors, effective texts must help students “to build mental

models” related to what they are learning (p. 152). Without these goals being made obvious, students will wallow about awash in unconnected facts.

The second problem grew out of assumptions the text made about the amount of background knowledge that students possessed. Beck, McKeown and Gromoll point out that social studies textbooks are “inherently incomplete, and it takes a text and a reader to construct a complete message” (p.152). Students who lack background knowledge related to a reading topic will quickly become lost in a textbook that does not fill in some of this knowledge. The authors found that concepts that might be clear to adults or older students went unexplained in the texts, leaving the student to struggle to make sense of concepts that he or she did not understand.

The third problem of social studies textbooks is related to the second: important and complex concepts were often unexplained or explained inadequately so that student confusion was not diminished. “Explanations require more than statements of facts and events; information that connects facts, events, ideas and clarifies their role in a phenomenon is needed to bring about understanding” (p. 153). Beck, McKeown and Gromoll found that many social studies textbooks lack these connections. The result was that many students who were trying to learn from texts were left unconnected in their confusion.

To understand reading difficulties, especially at the high school level and particularly in the subject area of social studies, an example will be helpful. The following passage comes from the textbook, Why We Remember, that I use with my ninth grade students. While this text is written for students in the middle school grades, a short passage will highlight some of the difficulties social studies texts present for

students and for students who struggle with reading in particular. I have italicized the words or phrases that my students did not know or could not understand when they read this section.

**African American officeholders** The South's new Reconstruction governments included a number of African American *officials*. In South Carolina, blacks made up a *majority* of the *legislature* for two years, and Jonathan J. Wright served for six years on the state supreme court. Sixteen African Americans served in *Congress* as well. Of these, 14 men served in the *House*, while Mississippi sent Hiram R. Revels and Blanche K. Bruce to the Senate. The *conduct* of these new *legislators* impressed Maine's Representative James G. Blaine, who observed:

"The colored men who *took their seats* in both the Senate and House...[were]*earnest, ambitious* men, whose public *conduct*...would be honorable to any race."

Most whites in the South *detested* the Reconstruction governments. They *resented* having had these governments "forced" on them by the much-hated *Yankees*. Even more they *resented* seeing former slaves *holding public office* and talking about equality. (Viola, 1998, p. 534, italics added by this author)

This passage exemplifies some of the ideas that Beck, McKeown and Gromoll found. First, look at how much extraneous information is contained in this short passage—2 years, 6 years, 14 men, 2 men—it is very difficult for students to decide what is important to know and what is just additional information. Second, notice the assumptions about the students' background knowledge and vocabulary that have been made. The authors of the textbook assumed that by the upper grades of middle school or the lower grades of high school students would know words like *legislature, conduct, majority, earnest, ambitious, detested, resented*. My students would have to ask about most of these words, if they bothered to ask at all. Additionally, the authors of the textbook assumed that students would know that an *officeholder* was a person who had been elected to office. My students understood this to mean that African Americans could get jobs in offices.

While this textbook assumes its readers possess a great deal of knowledge, it does little to help them connect this information to any larger insights or goals. As discussed by Beck, McKeown and Gromoll there is almost no explanation offered for the information provided. What is an eighth or ninth grader supposed to take away from this passage? African Americans played a role? They did a good job? Some whites did not like the role they were playing? We can see that this textbook example is not well organized to convey a clear goal or concept to the young reader.

I hope this example shows why students struggle to comprehend some social studies texts. The assumptions made by the text and the connections and structures not made lead to a very difficult text for readers to comprehend. Other authors have studied this issue and have offered suggestions about how textbooks can be written and organized in ways that would be more helpful to all students, but especially to students who struggle with reading.

Chambliss and Calfee (1998) examined many textbooks to come to conclusions about how these texts could be improved. They identified three key elements that are necessary for students to comprehend what they are reading in textbooks: familiarity with and or interest in the topic and a well-structured text that students can follow. Chambliss and Calfee explained that, unfortunately, content area texts, like those in history or science, “offer a triple whammy: unfamiliar and uninteresting content linked into an organizational pattern that the child does not recognize” (p. 30).

To improve the situation, according to Chambliss and Calfee, textbooks need to deal with this “triple whammy” of trouble. Familiarity is the idea that texts should be written to connect to students varied background knowledge. While this is a challenge

for textbook companies, the link between background knowledge and reading comprehension is well known. Text must also work to build interest in topics that students could care less about. Using more lively language, vivid verbs, or stories to connect to student interest can improve student comprehension and memory of what they have read. Introducing students to the structure of expository writing helps their understanding as well. Students do well with and are used to reading stories. From an early age, they understand that stories have patterns—beginning, middle, end. Social studies textbooks can also have structures—cause and effect, compare and contrast, problem and solution—but these structures need to be introduced and intentionally explained to students. Textbook authors (and teachers) must be more cognizant and make students aware of the structures that should exist in a coherent text.

Beck and McKeown (1991) examined this issue of text structure or text coherence and background knowledge. The authors revised social studies texts to make them more coherent for students and then compared student performance on more or less coherent texts. The students in the study had more or less background knowledge based on pre-teaching on certain topics. Beck and McKeown found that both background knowledge and text coherence impacted what students understood and learned from texts. However, students with adequate background knowledge who were asked to read a less coherent text performed poorly (Beck & McKeown, 1991). Again, this highlights the importance of a coherent text structure in helping students become more effective readers in social studies.

Other authors discussed problems facing students trying to read and understand their social studies texts. Brophy and VanSledright (1997) echoed the concerns of Beck

and McKeown related to the problems of texts assuming too much background knowledge, but they added that the vast amount of information included in most textbooks overwhelms students. Pursuit of chronological history might not be the best way for students to come to a working understanding of the past. The authors looked at the use of narrative stories, trade books and textbooks with fifth grade students and found that the students enjoyed and engaged more positively with the trade books than the textbook because of the narrative structure (Brophy & VanSledright, 1997). Students were not comfortable looking at different sources for the same information and were very unsure when the sources contradicted one another. VanSledright, as well as others, suggested that students need practice reading a variety of sources to gather historical knowledge.

Acknowledging the difficulty students have with reading in social studies and history, Afflerbach and VanSledright (2001) attempted to examine how students would handle reading different sources in their history textbook experiences. They worked with fifth graders who were reading text passages with embedded alternative sources, like primary sources and poems, related to early colonial America. The researchers conducted verbal protocols as their fifth grade subjects read history texts. The results of this study varied. Students who were more able readers benefitted from and were enriched by the alternative sources in their text readings. “When I read something like this I try to put myself in their places” one reader responded to the primary sources (p. 699). Others, some of the less able readers, “ahhh....I have no idea what that and [hath] is” struggled to make sense of these different types of texts (p. 699). From this research, we can see that even when trying to deal with the difficulties students have with reading

in social studies, one thing remains—that the teacher will have to continue to play a big role when the student is trying to learn from reading. Teachers must continue to play a major role in making meaning from texts.

If teachers know that students struggle to make meaning from textbooks, why do they not make adjustments for these students in their instruction and in their use of texts? This is an important question. Many teachers try to make adjustments. Much of the current research on the teaching of social studies recommends changes to address the issues of textbook dominance, however these changes are slow to arrive to the typical classroom (Stahl, Hynd , Britton, McNish, Bosquet, 1996). Wineburg (1991) and other social studies researchers want to see a more constructivist approach to the teaching of social studies, where students engage in examination of several sources of information to come to an understanding of what has happened in the past or what might happen in the future. Yet making these changes requires hard work and will take some time. A few examples may help to explain why.

Alvermann and Hayes (1989) tried to bring about more effective use of texts by changing student and teacher patterns of interaction and encouraging higher order thinking and critical reading in high school social studies classes. This intervention study asked teachers to change how they asked questions related to readings to bring out more thoughtful student responses. While the study saw some changes, most teachers continued to dominate discussions with “right-wrong” or “yes-no” type of question and answer patterns. The authors concluded, “convincing teachers to change their verbal interaction patterns for the purpose of higher levels of response to text appears difficult to accomplish” (Alvermann & Hayes, 1989, p. 333).

O'Brien, Stewart and Moje (1995) analyzed reasons for this difficulty when they tried to understand why it was so hard to do content literacy instruction in secondary schools. They concluded that teaching literacy strategies in the content classrooms presented challenges because of the primacy of curriculum over process. High school teachers in disciplines like social studies believe their role is to instruct students about the content of their discipline. The classic, "I am not a reading teacher" attitude is still pervasive in the high schools. When the teacher attempted reading strategy instruction, the approach was usually over-simplified and short-lived (O'Brien, Stewart & Moje, 1995).

The preceding section addresses some of the difficulties students face in attacking the task of reading and understanding in a content area like social studies. While solutions to some of these problems do exist in the research (and will be discussed in the next section), it is difficult for classroom teachers to implement the researched strategies. This reality supports my attempts to study adaptations to reciprocal teaching that will help make that strategy easier for teachers to use in their classrooms.

### Solutions in Reading Research

While the problems related to reading, especially in high school social studies, are serious, research suggests potential solutions to these problems. Researchers and teachers have used cognitive strategy approaches to help improve the reading ability of students. The example of research in this field that will inform my study is the work on reciprocal teaching done by Palincsar and Brown (1984). I will discuss their work in

greater detail in the third section of this literature review. Others have helped to show the power of such an approach.

Much of the research I will discuss in this section is based on the concept that reading is a constructive endeavor and that metacognition is a critical component of successful reading. A constructive view of reading means that the reader actively engages in making meaning of the text that is read. My research grows out of the theoretical framework that the reader interacts with the text to construct a meaning and an understanding of what is written. The reader uses his or her own background knowledge to help construct an understanding of what is being read. Metacognition describes the processes by which the reader becomes aware of his or her level of understanding of what is being read. The reader checks to find out what do I know and how do I know that I know it?

Pressley and Afflerbach (1995) closely examined what readers do when they read and found interesting activities that will help to explain the reciprocal teaching work Palincsar and Brown. In their exhaustive review of think-aloud studies in reading, Pressley and Afflerbach sought to better understand what good readers actually do when they read. Their research led them to three types of activities in which readers engage. Most of the time readers engaged in strategies to help make meaning and understanding of the text they were reading. However, readers also spent time on two other activities, monitoring their own comprehension (am I losing concentration, am I reading too fast, am I understanding) and evaluating the text as they read (do I approve or disapprove of this reading, what is the author's purpose). Pressley and Afflerbach also found that these three activities were addressed by the reader before reading, during reading and after

reading. The activities that readers do before, during and after reading are quite varied and some examples may help.

Before reading, good readers set a purpose for their reading, they overview or skim the text and activate their prior knowledge related to the topic they will read about. During reading, these readers repeat or restate important points, take notes, make predictions about what may be coming next or paraphrase what they have read. After reading, good readers will reread, reflect, question themselves or summarize what they have read. Pressley and Afflerbach found that good readers who read for a variety of purposes engaged in these types of activities to enable them to better understand what they read.

Pressley and Afflerbach assert that their findings support much of the earlier research related to the constructive nature of the reading process, “making the case that excellent readers are actively constructive as they interact with and respond to information in text while reading for a particular purpose” (p. 83). This type of research underscores many of the ideas found in the reciprocal teaching work of Palincsar and Brown which I will discuss. In fact, Pressley and Afflerbach recognize that many of the comprehension processes they found being used by good readers like predicting, self-questioning, clarifying and summarizing are being taught to students through procedures like reciprocal teaching (p. 113).

While the work of Pressley and Afflerbach highlight the importance of teaching comprehension processes to students, the use of cognitive strategy approaches to improve students’ reading is nothing new. In the 1960s, Robinson (1961) developed SQ3R—Survey, Question, Read, Review, Recite—and Manzo (1969) practiced ReQuest. Both of

these methods asked the reader to break down the reading process and interact with the text as he or she read. Throughout the 1980s, researchers expanded on cognitive strategies instruction practices and showed positive results in student reading achievement. Brown, Campione and Day (1981) examined how to improve the ability of teachers to help students learn how to learn. Their research pushed teachers to aim for more metacognitive goals in their strategy instruction. “Training studies aimed at improving students’ academic performance can succeed by adding substantially to the students’ knowledge; or they can succeed by instructing students in ways to enhance their own knowledge....It is this latter outcome that we now think is most desirable ” (Brown, Campione & Day, 1981, p. 14). They explained how important it was for the student to be a knowing participant in his or her strategy instruction. Students should be made aware of the reasons and purposes for using the strategy. Brown, Campione and Day opened a field of research that would prove to be fertile ground for many researchers.

Pressley, Borkowski and O’Sullivan (1984) picked up on the idea that “strategy use is tied to knowledge about the strategy” (p. 94), and that if teachers expected students to use strategies beyond the short term, the students needed to have a greater understanding of the strategy itself. These authors pushed for more metacognitive approaches to strategy use. Corno and Mandinach (1983) saw another important role to be played by metacognitive awareness or self-regulated learning. The authors examined the connection between a student’s cognitive engagement and his or her motivation to learn in the classroom. Many students who seem unmotivated or who appear to be less able readers or learners probably also do not possess the strategies to monitor their learning. They need to be taught how to “learn to learn” (Corno & Mandinach, 1983, p.

105). If students can be taught to self-regulate or monitor their own learning, it may increase the students' motivation to learn. Dole, Brown and Trathen (1996) echoed these results as they looked specifically at the impact cognitive strategy instruction could have on "at-risk" students. At-risk learners, or students with reading deficiencies, showed significant gains when engaged in cognitive strategy instruction that helped them to activate their background knowledge. This research adds to the ever-growing body of knowledge that suggests the importance of cognitive strategies instruction.

Researchers continue to explore the role of cognitive strategy instruction, especially in the form of self-questioning strategies. Raphael (1981) asked students to focus closely upon where in the text answers to questions could be found with her QAR—Question-Answer-Relationship strategy. Helfeldt and Henk (1990) combined Raphael's QAR strategy with the earlier ReQuest strategy of Manzo. ReQAR pushed students to ask questions about the text they were reading and to determine where in the text their answers could be found. These researchers, building on the work of Andre and Anderson (1979), saw great value in the use of self-questioning techniques to bring about better comprehension for what was read.

To this point in the literature review I have examined the problems students have with reading from texts and some of the solutions that have proven effective in the research. I will now focus specifically on one research-based instructional practice, reciprocal teaching, that has shown promise for helping students better understand what they read by improving their ability to monitor their comprehension.

## Reciprocal Teaching

In this section of the literature review, I focus on the elements and effects of reciprocal teaching as developed by Palincsar and Brown (1984). The reciprocal teaching model has shown particular success in helping students who struggle with reading to improve their reading comprehension and their own monitoring of that comprehension. In this model, struggling readers practice and learn to use reading strategies that are used by more effective readers. In addition to the seminal work by Brown and Palincsar, in this section I will examine other studies that used reciprocal teaching and reviews of reciprocal teaching research.

With reciprocal teaching, Palincsar and Brown (1984) developed an effective method to help students improve their comprehension and their ability to monitor their own comprehension. Reciprocal teaching has been shown to be successful not only in the original studies by Palincsar and Brown, but in subsequent studies where researchers have employed the techniques developed by the authors. Rosenshine and Meister (1994) reviewed 16 published articles that used reciprocal teaching methods and found that reciprocal teaching resulted in significant reading comprehension improvement in virtually every type of educational setting. To understand the effectiveness of this method, we will look closely at the original research by Palincsar and Brown.

Following in the footsteps of other researchers, Palincsar and Brown (1984) realized the important role students played in constructing an understanding of what they read. They also knew that students needed to be aware of the strategies that they were using as they worked to comprehend what they read. "Learning from texts demands a split mental focus. Learners must simultaneously concentrate on the material they are

reading and on themselves as learners, checking to see if the mental activities engaged in are resulting in learning” (Brown & Palincsar, 1987, p. 82). They created a method that would allow students to improve comprehension, while at the same time improve comprehension monitoring. Reciprocal teaching was born.

Before settling on the strategies that would become reciprocal teaching, Palincsar and Brown examined the literature on the teaching of reading to determine the activities that were viewed as critical to the reading process. They found

six functions were common to all [the research]: (1) understanding the purposes of reading... (2) activating relevant background knowledge; (3) allocating attention so that concentration can be focused on the major content at the expense of trivia; (4) critical evaluation of content for consistency, and compatibility with prior knowledge and common sense; (5) monitoring ongoing activities to see if comprehension is occurring, by engaging in periodic review and self-interrogation; (6) drawing and testing inferences of many kinds, including interpretations, predictions, and conclusions. (Palincsar & Brown, 1984, p.120)

These six important elements used by successful readers pointed Brown and Palincsar in the direction of the strategies they would select for reciprocal teaching.

The four strategy pillars of reciprocal teaching are questioning, summarizing, clarifying and predicting. Each of these strategies helps to address one or more of the six critical elements of reading described above. As Palincsar and Brown explained, both questioning and summarizing require students to pay attention to content, function three, and to make sure they understand, function five. Clarifying forces students to critically evaluate what they have read, function four. Predicting gets the student to engage in the testing of inferences, function six. The nature of the entire reciprocal teaching process helps to activate background knowledge, function two, and helps to set a purpose for why students are reading, function one. The four strategies were “selected because they

provide a dual function, that of enhancing comprehension and at the same time affording an opportunity for the student to check whether it is occurring” (Palincsar and Brown, 1984, p. 121). By explicitly teaching these four strategies to students who struggle with reading, Palincsar and Brown attempted to provide these students with the tools that more effective readers were already using.

The reciprocal teaching model builds on these four strategy pillars through a cooperative learning setting in which students and teachers work together to model and practice strategy use to gain a better understanding of a text. The students and the teacher play specific roles and swap these roles so that everyone remains engaged in the process. Palincsar and Brown explained that it is important to implement reciprocal teaching in this way to avoid the student becoming too passive. Reciprocal teaching requires active participation from the student and the teacher and provides feedback to the student so he or she might see the utility of the strategies being taught (Palincsar and Brown, 1984).

Palincsar and Brown’s design of reciprocal teaching also relies on what they call “expert scaffolding and proleptic teaching” (Palincsar & Brown, 1984, p. 122). This process is based on the idea that a person learning a new strategy or idea must first practice the strategy in a small group setting. Reciprocal teaching encourages the student to attempt to use the strategies of questioning, summarizing, clarifying and predicting before he or she has mastered these concepts. This is “proleptic” teaching. In this way, students gain practice with the strategy and, because they are working with an expert in their group, feedback on the effectiveness of their strategy use. “The child learns about the task at his own rate, in the presence of experts, participating only at a level he is capable of fulfilling—or a little beyond, thereby presenting a comfortable challenge”

(Palincsar and Brown, 1984, p. 123). The authors refer to Vygotsky's (1978) discussion of a child's "zone of proximal development" to support the design of their reciprocal teaching intervention. Reciprocal teaching was set up as a "guided learning" opportunity to assist struggling readers in acquiring the strategies that would help them comprehend and better monitor their own comprehension as they read.

The authors decided to target their initial study on poor comprehenders who would be less likely to possess or to use the four strategies that make up reciprocal teaching. During the study, which lasted for 20 days, a small number of seventh grade poor comprehenders worked individually or in small groups with the researchers. The authors defined poor comprehender as a student who decoded adequately but whose comprehension was at least two years below grade level.

The teacher and students took turns in the role of dialogue leader either in one-on-one settings or in a small group. The teacher modeled this process for several sessions until students felt competent to take on the role of dialogue leader. The reciprocal teaching process worked as follows. The teacher and students read text. The teacher and students ask a question about a section of the text read. The teacher and students discuss and answer the questions as a group. The teacher and students clarify misunderstandings that some group members may have about the text. The teacher and students summarize what they have read. The teacher and students predict what may be coming up in the text before moving on to next text section. Palincsar and Brown gathered data from daily reading comprehension assessments administered after the reciprocal teaching session, where students had to answer ten questions about a passage they read on their own after

the reciprocal teaching session. Palincsar and Brown also relied on their notes on the discussions about the text for insights into the reciprocal teaching process.

The results, both in the initial study and in a follow up study using the reciprocal teaching model, showed significantly higher levels of comprehension by the students involved as measured by the daily reading assessments. The students receiving training in the reciprocal teaching procedures improved from 15% correct answers before the training to over 80% correct answers after reciprocal teaching. The control groups in this study did not show similar improvement and only had scores near 50% correct answers. The authors also found that the students trained in reciprocal teaching scored higher on social studies and science measures within their social studies and science classes than did a control group of students who were not trained in reciprocal teaching. The improved comprehension existed not only for tasks immediately following the intervention, but was maintained for up to eight weeks after the study (Palincsar and Brown, 1984).

Further research on reciprocal teaching by Lysynchuk, Pressley and Vye (1990) as well as by Bruce and Chan (1991) showed the power of this method to help students monitor their comprehension. Lysynchuk, Pressley and Vye (1990) used reciprocal teaching with 36 fourth graders and 36 seventh graders who were recommended by their teachers as adequate decoders, but poor comprehenders. Using reciprocal teaching with an intervention group and a control group, the authors attempted to measure the effectiveness of the intervention by comparing the performance of the students in different groups on standardized reading assessments before and after the intervention. They followed the protocol and process described by Palincsar and Brown in their initial

studies except that the intervention only lasted for thirteen days (Palincsar and Brown study had been for 20 days). The daily assessment required students to answer ten questions about a passage on half the days, while retelling the story as the assessment on the other half of the days. Additionally, the students took pre and post intervention standardized comprehension measures. Lysynchuk, Pressley and Vye (1990) found that the reciprocal teaching students made improvement in their ability to answer questions on the daily comprehension assessments and their performance on the standardized reading assessment improved far more than the students in the control group. These results supported the findings of Palincsar and Brown and this study involved more students and students at different ages suggesting that reciprocal teaching could be used effectively at different ages and grade levels (Lysynchuk, Pressley and Vye 1990).

Bruce and Chan (1991) examined the effectiveness of the reciprocal teaching intervention being generalized to the classroom setting. Using three types of interventions with seven students of ages 11 to 12 years old, the authors found that reciprocal teaching could be generalized to classrooms. In this study, reciprocal teaching was used in a resource setting and then studied in a reading and a social studies classroom. The authors determined that for students to transfer use of the reciprocal teaching strategies to other reading and learning settings, the students first needed to clearly understand and practice these strategies. The results that Bruce and Chan found were that students trained in reciprocal teaching improved their ability to offer correct answers to questions. In baseline measures students answered 20% to 30% of questions correctly and after reciprocal teaching training they consistently answered 70% to 80% of the questions correctly. They found similar improvement when the students trained in reciprocal

teaching moved into their social studies classrooms. However, they found less effective transfer to the classroom settings by students who had not fully grasped the four reciprocal teaching strategies (Bruce and Chan 1991).

Reciprocal teaching has been used and studied at a variety of grade levels from elementary age students, discussed above, to college age students in Hart's work using reciprocal teaching with "at-risk" students at a community college (Hart, 1998). Levin (1989) was able to use reciprocal teaching effectively with middle school students who were either learning disabled or who were poor readers. Another study particularly relevant to my work is that of Alfassi (1998), who used reciprocal teaching with high school students who were struggling readers. I will return in greater detail to Alfassi's work below.

To implement a study of reciprocal teaching in my own classroom, I examined the work of several researchers who used reciprocal teaching. Specifically, I looked for and found studies that resembled my proposed topic (reciprocal teaching with ninth graders in U.S. History) either by content area (social studies) or by age group (high school students). The work of the researchers I will discuss below helped to refine my second research question, where I sought to adapt the original reciprocal teaching model to determine if a truncated version would return similar results as the original. For theoretical and research support, I turned to the work of several researchers who have studied the use of reciprocal teaching for struggling readers in high school and specifically with social studies.

Brady (1990) used reciprocal teaching methods in the content area of social studies. The participants in his study were younger than my ninth graders, but this study

provided helpful insights for my research. Brady worked with 18 students in fifth to eighth grade in a small village in Alaska. He used the materials developed by Palincsar and Brown to introduce reciprocal teaching and to measure student progress with ten comprehension questions administered daily after reading a new passage. He attempted to measure the progress of students as they became familiar with reciprocal teaching strategies over this five week intervention by comparing their daily results to their baseline achievement on assessments administered before the intervention began. Brady's results again showed the effectiveness of the reciprocal teaching intervention in improving the ability of students to comprehend what they read and monitor their own comprehension. Additionally, Brady analyzed the treatment effect by examining the impact reciprocal teaching had on higher-achieving, medium-achieving and lower-achieving students. He discovered that students in the medium and lower groups experienced greater increases in their reading comprehension scores after the reciprocal teaching intervention. All of the students in his study showed significant gains in their reading comprehension as measured by daily reading assessments.

Several elements of Brady's study guided the design and implementation of my research. Brady included a handout that was used as a reciprocal teaching prompt. This handout helped his students remember what to do when they were in charge of leading the discussion of the text, especially early in the reciprocal teaching training. Brady also designed procedures to help his students become better at the challenging strategy of summarizing. In the pilot phase of his study, Brady noticed that students made basic or general statements about a paragraph, instead of actually summarizing. Therefore, Brady instructed his students to say: "This paragraph tells us that..." which allowed the

students to get closer to the main point of the paragraph with their summary (Brady, 1990; Rosenshine & Meister, 1994). I included my own version of the reciprocal teaching procedure prompt (Appendix B) and Brady's summarizing prompt in my implementation of reciprocal teaching.

Brady along with other researchers made recommendations about the use of the four strategies that also informed my research. In his discussion of future research goals, Brady suggested looking into the question of whether or not the "questioning and summarizing activities might be more important than the clarifying and predicting activities" (p. 103). Brady's experience with reciprocal teaching led him to state that "it was my sense that the questioning and summarizing activities were the source of increased processing" (p. 103). Brady did not offer much evidence to support this assertion, but he did explain that the predicting and clarifying strategies were more difficult to use while working with history texts. He stated that predicting from a chronological history text was difficult for students to do. He also explained the ideas or terms that students needed help clarifying were often too difficult for the students to determine themselves just from the context of the reading. Social studies texts are full of difficult and or new concepts, and clarifying was not the most effective strategy to use in the group setting. However, Brady did say that the process of students asking each other for help in clarifying seemed to build a sense of trust and efficacy among the groups as they worked.

Some of the research suggestions made by Brady were echoed by Rosenshine and Meister (1994) in their review of the 16 reciprocal teaching studies. Rosenshine and Meister suggested that in the future, "investigations might focus on the effects of teaching

individual strategies and combinations of strategies” (p. 520). In my study, I attempted to compare the impact of using the traditional, four-strategy reciprocal teaching model with adapted version of reciprocal teaching in which the two strategies of questioning and summarizing were taught. In fact, the creators of reciprocal teaching, Palincsar and Brown, anticipated this very question in their “natural history” of their reciprocal teaching work.

“The next question that can be raised about the reciprocal teaching method is whether the entire package of summarizing, questioning, clarifying, and predicting is necessary to effect the improvement or whether only some subset of the activities is sufficient.” (Brown and Palincsar, 1987, p. 108) As Brown and Palincsar reanalyzed their original study, they asserted “these four strategies actually consist of two important ones, summarizing and questioning, that occurred after each and every segment; and two lesser ones, clarifying and predicting, lesser because they occurred much less frequently” (p. 108). They explained that summarizing and questioning require students to get to the main idea of a passage and allow them to begin discussing that passage on their own. These are two critical elements of reciprocal teaching. But, would these two strategies alone be as powerful as the whole reciprocal teaching package of four strategies? Brown and Palincsar discussed some preliminary data in which they compared the four reciprocal teaching strategies with just doing questioning or just doing summarizing. In their data, which were based upon ten days of instruction, the four strategies were stronger as an intervention than either questioning or summarizing alone. However, Brown and Palincsar did not look at questioning and summarizing together as compared to the four strategy approach. In the two strategy group of my study, I attempted to test

the hypothesis that teaching only questioning and summarizing strategies could be as effective as teaching all four strategies of questioning, summarizing, clarifying and predicting.

The research by Lederer (1997) provided additional support and guidance for my study. Lederer worked with 128 students in fourth, fifth and sixth in rural New Mexico. He taught the reciprocal teaching strategies for the first 4 days of his study in a whole-class setting and then broke the students into their groups. The groups were changed each week, and all students took a weekly reading assessment instead of a daily assessment as Palincsar and Brown had done. All participants in his study experienced improvement in their reading comprehension ability as measured by the weekly assessments.

While Lederer followed a similar approach to Brown and Palincsar in terms of his reciprocal teaching strategies, he developed different reading assessments to measure student achievement, and he added a pilot study that seemed to be a helpful idea. Lederer implemented a pilot study so that he could refine his teaching skills with reciprocal teaching and improve his measurement tool. I incorporated this concept of a practice session into my study.

Lederer's reading comprehension assessment differed from those used by Brown and Palincsar and by Brady. In earlier studies, students received a daily reading comprehension assessment in which they read a passage and answered 10 comprehension questions about that passage. Lederer administered his reading assessment once each week during his four-week study. His assessment asked students to read a passage in the social studies textbook (one that the students had not yet read) and to write 3 questions

about the reading, answer 5 questions from the reading and write a brief summary of what they had read. This assessment attempted to get at the skills on which reciprocal teaching focused, especially questioning and summarizing. I modeled my weekly assessment on Lederer's approach although the format of my assessment differed.

Two other studies helped to situate my work in the field of reciprocal teaching research. One study dealt with a target population similar to the students with whom I worked. Alfassi (1998) used reciprocal teaching with high school students in remedial reading classes. She raised some interesting points about this unique population. Alfassi pointed out that, unlike previous studies, the students in her study, like the students I teach, "have a long history of reading difficulties....these students tended to lack motivation and self-confidence....This study therefore provides a more difficult setting to test the efficacy of the reciprocal teaching method..." (p. 314). Still, Alfassi found that reciprocal teaching provided positive results for her students similar to results found by other researchers. Students in this study who were trained in reciprocal teaching had showed greater improvement on the reading comprehension measures created by the researcher, when compared with students who did not experience reciprocal teaching training. These students did not show significant results on the standardized reading tests (Alfassi, 1998).

The review of reciprocal teaching research by Rosenshine and Meister (1994) offered many suggestions related to future research on reciprocal teaching. One suggestion I have already discussed was trying to determine if different strategies of the reciprocal teaching method were more powerful than others. This suggestion was built into the two strategy group in my study. Additionally, the authors of this review

recommended a more thorough explanation of how reciprocal teaching is implemented with students and a more clear discussion of improvement of student dialogue during reciprocal teaching. I attempted to address these issues by audio taping the students' discussion periodically during my study so that I could examine more closely the questions, summaries and discussions in which the students engaged.

This review of the literature on reciprocal teaching should make clear many of the goals and methods that I will be including as I pursue my own study. The fourth section of research will examine the gap between research and teaching as made evident by the paradox of the many successes of reciprocal teaching in research literature and the comparatively few examples of teachers actually using reciprocal teaching.

#### Bridging the Gap between Teacher and Researcher

The ongoing division between research based methods and the methods classroom teachers use appears to be alive and well in the case of reciprocal teaching. The existing research supports the efficacy of this teaching method, yet it is difficult to ascertain how many teachers are actually using reciprocal teaching in their classrooms. As a person who is a teacher and also an educational researcher, I am perplexed by this problem. I hope that my research will, at least in some small way, work to bridge the gap between the two sides, although research in this area suggests that many others will have to help build this bridge.

In her examination of the problematic connection between research and practice, Kennedy (1997) stated that Carl Kaestle's 1993 article, "The Awful Reputation of Educational Research" caps a "century-long tradition" of researchers' frustration at the

limited impact of their efforts. Kennedy used the data gathered from the division of the National Institute of Education, which was created to break down the barriers between the work of the researcher and the job of the classroom teacher. She organized this information into four hypotheses to explain the reasons that teachers frequently do not use the research-based ideas on teaching.

First, she explained that often the research is not persuasive or authoritative enough to convince teachers to try a new method. Second, many teachers do not see the research as relevant to their day-to-day world as a teacher. Third, the research ideas are not made easily accessible to teachers. Fourth, the educational system is at once unable to change and too quick to follow a fad.

Kennedy discussed these four stumbling blocks and noted that while many in the research camp and the practice camp feel “disillusionment” about the pervasive division, there may be some progress underway. She asserted that the earlier underlying beliefs by the research community that “research should provide generalizable statements because such generalizations would yield to what Kliebard (1993) calls ‘rules of action’” (Kennedy, 1997, p. 10) were beginning to shift. Rather than a need for “rules of action”, more and more research aims to “provide new and better understanding of the dynamics of teaching and learning” (p. 10). Kennedy concluded her discussion by noting that as expectations on both sides of the gap become more realistic, understanding that research will not provide a magic bullet to solve all educational problems, researchers and teachers may become more comfortable in the roles they can play together.

One research approach that has shown promise in attempting to align the goals of both researchers and practitioners can be seen in teacher research. This approach has

special significance for my study because I am the teacher and the researcher. Over the last 15 years, teacher research has become more examined and more accepted as a legitimate method of inquiry. Cochran-Smith and Lytle (1990) furthered this acceptance with their discussions about teacher research, which they define as “systematic, intentional inquiry by teachers” (p. 2).

Teacher research falls under a larger umbrella of action research which has been pursued in many fields other than education. Krathwohl (1998) explains action research as “research by practitioners to improve practice” (p. 600). This type of research has the potential to address the tension between academic research and practitioners who feel academic “ideas are impractical, unrealistic, and overly complex” (p. 601). This research allows the practitioner, like a teacher, to be engaged in research that many feel can be a very useful way to bring about changes in places like schools. This research “targets successive cycles of reflection, planning, action and evaluation on a given problem” (p. 601).

Cochran-Smith and Lytle (1990) and others have provided suggestions of issues that teacher researchers must be cognizant of while attempting to carry out this research. Krathwohl (1998) offered several tips for effective action research. Work with colleagues to lighten the burden and improve analysis and feedback. Take care to make observations and reflections part of the daily work of the research. Create an action strategy, put it in place and be ready to adjust the strategy as necessary. Understand that problems you examine will have complex solutions and be open to complex solutions. Keep a journal that will help you to record, remember and reflect on the experiences of the research so that when you share these experiences you can point to this as part of your

data (p. 610-611). These suggestions are reflected in the approach to teacher research in this study.

Although this concept of teacher research, or action research, pre-dates the 1990s with authors like John Dewey in 1904 discussing this idea and with teachers in the 1950s and 1960s beginning to examine their own practice in systematic ways, the proliferation of this type of research has been a relatively new phenomenon. A decade after their first article on the subject, Cochran-Smith and Lytle (1999) noted the development of three theoretical frameworks of teacher research. Teacher research as social inquiry is based on critical theory and is focused on bringing about change in society. Teacher research as ways of knowing within a community looks to the teacher to bring about change at the school. Teacher research as practical inquiry is where the work and reflections of the teacher are used to better understand teaching and learning in the classroom. While the authors discuss these three frameworks, they also highlight the fact that teacher research is extremely diverse in its methods and varied in its approaches. The growing teacher research “movement” that Cochran-Smith and Lytle describe offers hope for narrowing the gap between research and practice. As the authors explain, “The concept of teacher as researcher can interrupt traditional views about the relationships of knowledge and practice and the roles of teachers in educational research, blurring the boundaries between teachers and researchers, knowers and doers, and experts and novices” (Cochran-Smith & Lytle, 1999, p. 22).

On the other hand, teacher research presents a number of challenges that critics and practitioners have noted. Cochran-Smith and Lytle (1999) discussed three areas of critique that have arisen related to teacher research. First, the knowledge critique, asked

the question, what knowledge is created by teacher research or is any real knowledge created? The concern by critics lay in the idea of practical versus formal knowledge and how teachers studying their own practice can attain the same high standards to create formal knowledge. Second, the methods critique, suggested that the logistics of being a participant in and an observer of research is “excruciatingly difficult if not impossible” (Cochran-Smith & Lytle, 1999, p. 20). Third, the ends critique, wondered what the point of teacher research is and criticizes research that is focused on the small picture of a classroom rather than a larger picture of social change. In addition to these critiques, authors who have engaged in teacher research have offered suggestions.

In a series of articles and responses in Educational Researcher, Wong, Wilson and Baumann debated the pros and cons of teacher research. All three authors attempted to do research on their own practice. Wong began the discussion by asserting that the teacher as a researcher will be in constant conflict over what his or her primary function is in the classroom. He posed the question of whether or not his role is to observe the process or to change the student. The role of researcher would require one type of action while the role of teacher would require another (Wong, 1995). Wilson responded to Wong’s concerns by saying that “placing research in competition with teaching is both limited and limiting” (Wilson, 1995, p. 21). She explained that as a teacher and a researcher she has learned to see the same situation in different ways and that has helped improve her teaching and her research. Baumann, another teacher researcher, did not experience a conflict related to the role of the teacher researcher, but instead found himself constrained mostly by time and task. He discovered that the time pressures faced by teachers often overwhelmed his efforts to devote time to his research. He noted that

while his research did help his instruction, “there still was competition among various teaching and researching tasks. And my philosophical principle of the primacy of teaching and students meant that, when push came to shove, research tasks had to defer to teaching responsibilities” (Baumann, 1996, p. 31). Based on this ongoing discussion, there is no doubt of the challenge that exists in attempting to research my own teaching and my student’s learning. However, the potential strength of this research—to implement reciprocal teaching with my own students—outweighed the pitfalls that the research itself presented.

The pitfalls of teacher research like time, task and logistics had an impact on my study. Time’s crunch plays a consistent role in the life of a teacher. As a researcher, I tried to be more cognizant and protective of my expenditure of time. I set aside some time each day during my study to make notes about the day’s lesson immediately afterwards, with specific reference to actions and or progress I observed with my students. Protecting this time was critical to record accurately what happened and keeping track of it in my notes. Protecting this time from my students and staff members was also very difficult and I was not always successful at doing so. This time of reflection did help me play the contrasting roles of both the participant and the observer. Giving myself the space and time to turn my teacher hat off and my researcher hat on, went a long way to helping me to record this experience accurately. I will deal with some of the other potential pitfalls teacher research in my section on implementation and limitations.

In this literature review, I have attempted to place my study in line with other researchers who have examined reciprocal teaching as well as with those teachers who

have researched their own teaching. My research study puts reciprocal teaching, and adapted versions of reciprocal teaching, to the test with a challenging population who struggle as readers and students. My research study allows me, as a teacher, to try to implement the work of other researchers in my own classroom.

## Chapter 3: Research Methods

### Research Questions

- How will reciprocal teaching impact the ability of poor readers in my ninth grade U.S. History class to understand and discuss the concepts found in social studies textbooks?
- How will adapted reciprocal teaching procedures impact the ability of poor readers to understand and discuss the concepts found in social studies textbooks when compared to the results from the traditional reciprocal teaching approach?

### Setting and Participants

The study took place at a large suburban high school with a population of 3,200 outside of Washington, D.C. The target population at this high school was three ninth grade U.S. History classes with a combined total number of 50 participants. The students were divided as follows: the traditional group had 15 students, the whole class group had 17 students and the two strategy group had 18 students.

The students in these classes participated in a program at the high school called SPARC (Special Alternative Reading Classes). This program works with ninth and tenth grade students who read significantly below their grade level and who struggle to succeed academically in high school. Students are selected for the SPARC Program based upon the following criteria: recommendations from middle school teachers and counselors, standardized test scores in reading comprehension at the sixth grade level or below, and writing samples that display difficulty in communicating ideas clearly. All participants in the study, as part of their SPARC Program curriculum, were enrolled in a double period

of English/Reading to increase the amount of time they spend on their reading and writing deficiencies. Additionally, all participants in the study took a U.S. History class taught by the teacher researcher and comprised exclusively of other students in the SPARC Program.

Of the 50 participants in this study, there were 27 females and 23 males. The racial make up of the participants was: one white student, one Asian student, 23 Hispanic students and 25 African-American students. None of the students in the study were currently enrolled in English for speakers of other languages (ESOL). A few of the students had been in ESOL classes at earlier points in their schooling, however, most of the Asian and Hispanic students were born in the United States to parents who had moved here from other countries. Their ages ranged from 14 to 16 years of age. Most students tested at a reading level between the second grade level and the sixth grade level on the Gates-MacGinitie reading comprehension test.

The 50 students participating in this study were randomly drawn from the SPARC Program population of approximately 90 ninth graders. Students became eligible for this study by virtue of being randomly assigned to the U.S. History classes taught by the teacher researcher. Students were assigned to classes based on a computer program that schedules students at the high school. The computer program assigns students to class periods based upon what courses the student has selected or been assigned to, when those courses will fit into a student's schedule, and how to maintain a rough balance of the number of students in each class. The students in the SPARC Program are scheduled by the computer program in the same manner as the other 3000+ students at this high school. This random assignment helped to maintain the internal validity of the research study

because each student who was eligible for the SPARC Program had an equal chance to end up in the sample population to be studied. Therefore, to the degree the population of the study could be, it was a random sample of the entire SPARC Program population.

Students in each of the three classes who participated in the study shared similar characteristics of your typical SPARC student. The 15 students in the traditional group had the following pre-study grade level reading scores in comprehension: three at fifth grade, seven at fourth grade, two at third grade and three at second grade. The 17 students in the whole class group had the following pre-study grade level reading scores in comprehension: one at ninth grade, one at seventh grade, four at sixth grade, two at fifth grade, three at fourth grade, three at third grade and three at second grade. The 18 students in the two strategy group had the following pre-study grade level reading scores in comprehension: one at eleventh grade, one at tenth grade, one at ninth grade, one at eighth grade, three at sixth grade, two at fifth grade, five at fourth grade, and four at third grade. With the exception of a few outliers in the pre-study grade level reading scores, the internal validity of the study was not confounded by aptitude of one group being dramatically different from those of the other groups.

### Design of Study

I taught the reciprocal teaching procedures to three classes of ninth grade U.S. History students. This was an experimental case study involving three groups, my three U.S. History classes. The traditional group received training in the reciprocal teaching procedures as set out by Palincsar and Brown (1984) in their original research on this topic. These students practiced the strategies of predicting, questioning, clarifying and

summarizing while working with the teacher researcher in small groups. The whole class group received training in the four reciprocal teaching procedures, just like the traditional group; however, students in the whole class group did not work in small groups, as Palincsar and Brown had recommended, but through whole class instruction. The purpose of using whole group instruction with the whole class group was to determine if it would be as effective as small group instruction. If whole group reciprocal teaching instruction proved to be equally effective as small group instruction, I hypothesized that teachers might be more likely to use reciprocal teaching with whole classes than with small groups and reciprocal teaching might be utilized more often in classrooms. The two strategy group received training in an adapted version of reciprocal teaching. These students focused only on the strategies of questioning and summarizing. If these two strategies of reciprocal teaching showed effectiveness equal to the four strategy approach used by Palincsar and Brown, I hypothesized that teachers would be more likely to use an easier procedure where they could focus on two strategies rather than four.

I played the role of both the teacher and the researcher in this study. This type of research offers advantages and limitations that have been discussed earlier. Bogdan and Biklen (1998) recommend that a teacher researcher must first select a problem or issue that is important to the teacher researcher. Second, the teacher research must take careful notes to be able to track student actions, teacher actions, and any progress that might become evident. Third, once you have collected data, examine it closely for patterns of student or teacher actions that exist in the data. Fourth, use the data from your notes to help inform the actions you decide to take next, whether that be writing about the issue or discussing it with colleagues or your classes (p. 235).

Following the suggestions of Bogdan and Biklen (1998) related to teacher research, I chose a topic that has a direct link to my life as a teacher—the difficulties my students have with reading. I decided to study a strategy that has been used successfully to deal with this problem. I took daily notes at the end of each reciprocal teaching session to document my role as the researcher and the teacher as clearly as possible. In these notes, I tracked what I did as a teacher as well as my reflections on the progress my students made with reciprocal teaching. I included, as much as possible, their quotes and their reactions to reciprocal teaching so that I could go back and accurately recount our experiences. While teacher research presents certain inherent challenges like potential bias, I have attempted to make my role in the process obvious so that potential conflicts are evident and openly discussed.

Because I taught all three groups the different interventions, the method of instruction was not confounded with teacher ability or teacher characteristics. There was no control group in this study because I was more interested in comparing traditional reciprocal teaching with adapted versions. As discussed earlier in chapter one, the effectiveness of reciprocal teaching has been well tested by other researchers. In the original study by Palincsar and Brown, students who were trained in the reciprocal teaching strategies dramatically improved their ability to answer comprehension questions about passages they read. Students who averaged only 15% correct answers initially, moved to 85% correct answers after 20 days of reciprocal teaching training (Palincsar & Brown, 1984). The control groups in their original study only managed scores at just below 50% correct answers. The results of Palincsar and Brown's initial research suggest that reciprocal teaching works. My primary interest in this study was to

examine how the adaptations made to the reciprocal teaching procedures compared to the traditional approach, therefore it was more important for me to have groups that allowed me to test the adaptations than to have a control group.

The performance of the three groups was compared on several different measures including pre, post and during study assessments. Additionally, I collected data by tape recording and transcribing several of the reciprocal teaching sessions and by taking daily reflection notes at the end of each reciprocal teaching session.

### Implementation

The study lasted for twelve weeks from February 2003 to May 2003. Prior to the actual study, I conducted two practice sessions in January 2003 with students who were not in the subsequent study. These students were from the same target population of struggling readers because they were also drawn from the SPARC Program, but they were taught by another teacher and were not participants in the study. The purpose of this practice session was to help me to become more familiar and comfortable with using the reciprocal teaching procedures with students. I was able to clarify my instructions and better anticipate student misunderstandings that might occur during reciprocal teaching training so that the actual study would be more effective. During these practice sessions, I learned that it was important to keep reciprocal teaching sessions fairly short, about 20 minutes, and that students did enjoy talking about what they were reading. During the practice session one student commented, “I understand this stuff a lot better when you are here to help explain it. In class I don’t get it” (Notes from practice session 1/03).

When the study began, students in the traditional group and the whole class group learned and practiced all four of the reciprocal teaching strategies of predicting, clarifying, questioning and summarizing. Students in the two strategy group received training only in the reciprocal teaching strategies of questioning and summarizing. All three groups practiced the reciprocal teaching strategies as they read information in their U.S. History textbook.

The reciprocal teaching sessions took place during each class period of the 12-week study. Students in the three groups spent between 10 and 30 minutes practicing reciprocal teaching during their 90-minute class period. Students in the traditional and whole class groups met in 90-minute classes every other day, while students in the two strategy group met for 45 minutes each day. Students in the two strategy group practiced reciprocal teaching strategies every other day to match the reciprocal teaching work and practice time of students in the traditional and whole class groups.

All three groups began the reciprocal teaching study by learning the strategies of questioning, summarizing, clarifying and predicting (the traditional group and whole class group learned all four, the two strategy group only learned questioning and summarizing) in whole class settings during the first 5 sessions. Each of these sessions introduced one of the reciprocal teaching strategies and gave students an opportunity to see and hear the teacher model the strategy as well as an opportunity to practice the strategy themselves. In Appendix A, you can see the script that I used to introduce the reciprocal teaching procedure in general and subsequently each of the reciprocal teaching strategies of questioning, summarizing, clarifying and predicting. I adapted these scripts to meet the needs of my students from those used by Palincsar and Brown (1984), Brady

(1990) and Lederer (1997). During each of the first 5 sessions, I started by introducing the strategy and modeling the strategy for the whole class. Then we practiced the strategy as a whole class with the students volunteering to question, summarize, predict or clarify. Finally, the students practiced the new strategy in small groups or with partners. At the end of these five sessions, the students had been exposed to each strategy individually and during sessions four and five, we began to practice using all the strategies together following the reciprocal teaching process. All students got a copy of a handout (Appendix B) that reviewed the reciprocal teaching procedures to help them remember what to do as they began working on their own. By the end of the session 8, most students no longer needed or referred to this handout.

After this initial phase, students in the traditional group and the two strategy group worked in small teams of four or five students to read textbook passages and practice reciprocal teaching. Students in the whole class group continued to work as a whole class throughout the study in order to determine if reciprocal teaching could be as effective in whole group settings as it was in small group settings. As students began to work more independently, either in small teams or as a whole class, I gave the students role reminder strips (Appendix C). These were designed to help students remember the role they were to play and the responsibilities they had for their team or their class during the reciprocal teaching session. Students volunteered to take the different roles of reader/leader, questioner, clarifier, predictor and summarizer. Some roles were more sought after than others, but students were encouraged to try to play different roles during each reciprocal teaching session.

At the beginning of the study, I worked closely with each group while they learned and practiced the reciprocal teaching procedures. As students became more familiar with the reciprocal teaching procedures, I hoped they would need less of my input and that by the end of the study students would be able to run the session completely on their own. However, while students did become familiar with the reciprocal teaching procedure, my assistance was needed throughout the study to help the sessions run more effectively. I did allow students to take control of the process with mixed results depending upon the willingness of the students to engage productively in the process. During most of these sessions, I closely monitored the team or class and helped to insure student participation. Students in each of the three groups participated in 21 reciprocal teaching sessions over the course of the study.

### Data

I collected data from five sources to measure and assess the effectiveness of the reciprocal teaching procedures; a standardized comprehension assessment, pre and post social studies reading assessments, weekly social studies reading assessments, audio tapes of several sessions and my daily notes taken at the end of each reciprocal teaching session.

Students in each of the three groups took the Gates-MacGinitie standardized reading comprehension assessment before the study began in January 2003 (Form S) and after the study ended in June 2003 (Form T) to measure reading comprehension levels of the students before and after the reciprocal teaching intervention.

Students also took social studies reading comprehension assessments before and after the reciprocal teaching intervention. Students took a social studies reading comprehension pre-assessment that was created by the teacher researcher. On this pre-assessment students were asked to read a passage from a U.S. History textbook (not the book the students normally used in class), and then answer four questions developed by the teacher researcher and members of the dissertation committee and write a brief summary of the passage from memory (Appendix D). This pre-assessment contained two parts. On part one, students read a 200-word passage, answered the questions and wrote their summary. On part two, the teacher read the same passage to the students, after which, students answered the same four questions and wrote another summary. The purpose of the two parts of this pre-assessment was to try to determine the extent to which decoding issues might hinder the students' ability to accurately answer questions and summarize what they had read. Students were given the two different post-assessments at the end of the study. Each post-assessment also was in two parts. Both post-assessments followed the same format as the pre-assessment. The first post-assessment was identical to the pre-assessment that had been administered three months earlier. The second post-assessment related to a topic the students had been studying recently. The reason for administering two different post-assessments was to control for differences in readability level of the passage used in the pre-assessment and post-assessment. Because three months had past between the pre-assessment and the post-assessment few students recalled reading the same passage they had read earlier.

During the study, students were given a weekly social studies reading assessment (Appendix E), approximately once per week, to monitor their progress in the use of the

reciprocal teaching strategies. On the weekly assessments, students read a 200-word passage then they created two questions, answered their own questions, and wrote a brief summary of the passage. This weekly assessment was designed to mirror the work the students were doing with reciprocal teaching. Because students created questions and answered their own questions on the weekly social studies reading assessment, the scores on these assessments would not be affected by questions that differed in their degree of difficulty. This might have been the case if the questions had been written by the teacher researcher. The passages for the weekly assessments were adapted from a different textbook so the students were not familiar with these passages. The passages related to the general topic students were studying during that week, however the specifics of each passage were new to the students. For example, if the unit we were studying was the civil rights movement, the passage for the weekly assessment might be about the integration of Little Rock High School, a specific topic with which students were unfamiliar. Using passages that contained new information helped to control for student performance being unduly impacted by increased background knowledge.

The social studies pre-assessments, post-assessments and weekly social studies assessments were created by the teacher researcher in consultation with members of the dissertation committee. These assessments were read and scored by the teacher researcher using a scoring rubric. The rubric I used was adapted from Lederer's study (Appendix E) of reciprocal teaching with fourth, fifth and sixth grade social studies students (Lederer, 1997). The scoring rubric awarded points for three of the key elements that students learned during reciprocal teaching: asking questions, answering questions

and summarizing. On the weekly assessments students created two questions related to the reading, answered those questions and wrote a brief summary of the reading.

The questioning strategy was assessed on the scoring rubric where students received up to three points for the questions they created. Three points were awarded for higher-level questions that focused on the main idea of the reading, what did Malcolm X and Martin Luther King disagree about? Two points were awarded for lower-level questions that looked only at basic facts, like how many soldiers died in Vietnam? or when was the march on Washington? These questions addressed a specific issue but usually did not focus on the main idea of the reading. One point was awarded for questions that were vague and only tangentially related to the topic. Zero points were awarded when the student did not write a question or when the question made no sense, was not based on the reading or was unclear to the point that it showed the student clearly misunderstood the reading. The rubric was designed to reward those students who were able to employ the reciprocal teaching strategy of questioning more effectively.

Student answers to the questions they asked could receive up to two points on the scoring rubric. Two points were awarded when the answer to the question was thorough and clearly understandable. One point was awarded if the answer was only partially correct or if the answer did not fully address the question. Zero points were awarded if the student did not attempt an answer or if the answer was clearly incorrect. Again more accurate and thorough answers received more points.

Student summaries could receive up to three points on the scoring rubric. Three points were awarded to summaries that dealt with all the major points and key ideas of the reading. Two points were awarded to summaries that dealt with more than one of the

major points or key ideas. One point was awarded to summaries that addressed at least one idea of the reading, however, a mere restatement of the title was not awarded a point. Zero points were awarded when students did not offer a summary or when the title was restated or the summary missed the ideas of the reading completely.

The rubric was used differently for the pre and post assessments than it was for the weekly assessments. The pre and post-assessments did not ask students to create questions; therefore, students could not be scored on that section of the rubric. On the pre and post-assessments, students only received points for the accuracy of their answers and the thoroughness of their summaries. For this reason the pre and post-assessment scores ranged from zero to eleven, while the weekly assessments scores ranged from zero to thirteen. The scores on all the assessments were analyzed to determine if student reading comprehension ability improved during the reciprocal teaching intervention. The scores of the different groups were compared to determine if the adapted versions of reciprocal teaching were as effective as the traditional version.

### Quantitative Data

The independent variables used for this study were the three groups receiving different methods of reciprocal teaching instruction. The traditional group learned the traditional reciprocal teaching of the four strategies in small team settings. The whole class group learned the four reciprocal teaching strategies in a whole class setting. The two strategy group learned the adapted version of reciprocal teaching, only two strategies, still in the small team setting. The dependent variables were the scores on the pre and post Gates-MacGinitie comprehension test, the scores on the social studies pre and post-

assessments created by the teacher researcher and scores on the weekly social studies comprehension assessments created by the teacher researcher.

In order to answer the research questions for this study, I looked for improvement by the students in their reading comprehension as measured by the pre, post and weekly assessments administered during the study. So I first examined the descriptive statistics for all groups and for each group by examining the mean scores on the pre and post assessments and the weekly assessments. I also wanted to compare the means of the three different groups on the assessments to determine if the adaptations that I made to the reciprocal teaching methods led to results that differed from each other in a statistically significant way. The research questions required that I look at the descriptive statistics for each group on each assessment, as well as for all participants combined. Additionally, the research questions necessitated an analysis of variance be used to compare the three groups on the different assessments.

The research questions pointed to two hypotheses that would either be accepted or rejected based upon the descriptive statistics and the analysis of variance. The first research question hypothesized that there would be improvement in reading comprehension scores among all three groups. Based on earlier reciprocal teaching research, this result would more likely be seen in the assessments created by the teacher researcher than when the standardized assessment results were examined. As Alfassi (1998) found, “reciprocal teaching was significantly more effective than the control treatment when experimenter-developed comprehension tests were used” (p. 314). Such a result would suggest that reciprocal teaching did have an impact on ninth graders in social studies classes who were poor readers. The second research question hypothesized

that there should not be significant differences in the results of the three groups who practiced different versions of the reciprocal teaching strategies. If all three groups achieve similar positive results then it would be true that the adaptations of reciprocal teaching proved as effective as the traditional reciprocal teaching approaches. Therefore adaptations could be made to reciprocal teaching to make it easier for teachers to implement while maintaining its effectiveness as a strategy to improve reading comprehension.

Descriptive statistics were gathered on all groups. An analysis of variance was run to compare the results of the four strategy reciprocal teaching approach (the traditional group and whole class group) to the two strategy reciprocal teaching approach (the two strategy group). A second analysis of variance was run to compare four strategy reciprocal teaching in small groups (the traditional group) to four strategy reciprocal teaching as a whole class activity (the whole class group). A final analysis of variance was run to compare the impact of reciprocal teaching on higher scoring, medium scoring and lower scoring students based on the Gates-MacGinitie pre-test to determine if reciprocal teaching had different impacts for these different groups.

### Qualitative Data

In addition to the quantitative data discussed above, I attempted to examine the quality of questions, summaries and discussions that students participated in during the reciprocal teaching sessions. Reciprocal teaching is designed to engage students in dialogue about what they are reading. I tape recorded one session at the beginning of the

study, one session at the mid-point of the study and two sessions at the end of the study. Below I describe the procedures recorded during each of these four sessions.

During the first recorded reciprocal teaching session, session 4, students had been learning reciprocal teaching process and strategies for several sessions. At this point in the study, all three groups were still receiving training in reciprocal teaching as whole group instruction. During session 4, students were given the opportunity for guided practice with the teacher researcher and then with their classmates on the strategies that make up reciprocal teaching. The traditional group and the whole class group practiced the four strategies of reciprocal teaching, while the two strategy group used only questioning and summarizing. Session 4 began with review of the reciprocal teaching process. Students received a copy of reciprocal teaching guide on a green sheet piece of paper (Appendix B) to help them remember the process. The teacher researcher interjected frequently to model the strategies and offer examples of good predictions, questions, clarifications and summaries. During session 4, all students read from page 802 of social studies textbook related to the end of World War II in preparation for role-playing activity on President Truman's decision to drop the bomb. Session 4 shows how the reciprocal teaching process worked in a whole class setting. At this point in the study, students were not yet working in small teams; this should be kept in mind when interpreting the results from session 4 as compared to the other recorded reciprocal teaching sessions. The small team reciprocal teaching was captured in the later sessions.

During the second recorded reciprocal teaching session, session 11, students in the traditional group and the two strategy group worked in small teams of four or five students, while students in the whole class group worked as whole class. The students in

all three groups demonstrated a familiarity with reciprocal teaching process because they had been working with the same strategies in the same groups for several weeks. The teacher researcher explained to the class that they would be in charge of leading the reciprocal teaching process. The teacher researcher was still needed to help prompt and prod the students both on the reciprocal teaching process and on the substance of questions and summaries. During session 11, all students read from page 856 of social studies textbook related to African American struggles for voting rights.

During the first of the sessions recorded late in the reciprocal teaching study, session 19, students in all three groups worked in small teams of between four and seven students. The nature of the assignment on this day necessitated smaller teams even for the whole class group which usually worked as a whole class. The teacher researcher moved around from team to team, tape recording portions of each teams' discussion about the reading. I recorded between five to seven minutes of each discussion, but I did not record any one team discussion from start to finish. This should be kept in mind when comparing the results from session 19 to any of the other sessions. The teacher researcher offered assistance when teams struggled or when students requested clarification of a term. Students in the traditional group and the two strategy group were more accustomed to the small group setting than were the students in the whole class group. Students in the different teams read two different textbook sections related to the red scare and nuclear fears of the 1950s in preparation for a jig-saw cooperative learning activity.

During the final recorded reciprocal teaching session, session 21, the traditional group and the two strategy group again worked in small teams while the whole class

group worked as whole class. The teacher researcher still offered interjections to clarify unknown terms or to answer specific questions. Some teams still needed prompting and prodding to follow the process effectively, however most teams performed the process well. During session 21, all students read from page 823 of the social studies textbook related to the cold war issues of the Bay of Pigs invasion and the Berlin Wall.

At the end of the study, I transcribed these recorded sessions in order to do a comparative analysis of student questions, clarifications, predictions and summaries. The purpose of this analysis was to attempt to examine in more detail how reciprocal teaching impacted the ability of my students to use the four or two reciprocal teaching strategies they were practicing. While the quantitative data can help determine whether or not students are improving in their ability to comprehend what they are reading, this qualitative data allowed me to examine the quality of the predictions, clarifications, questions and summaries that students created during the reciprocal teaching sessions.

Using the tapes and the transcripts, I compared student predictions, clarifications, questions, summaries and discussions from session 4, session 11 and sessions 19 and 21 to determine if the questions, summaries and discussions changed or improved as students became more familiar with the reciprocal teaching strategies. I compared early, middle and late sessions within each of the three groups to look for changes over the course of the study and I compared the results between the three groups to determine if groups differed in their questions, summaries and discussions. Following qualitative research procedures described by Bogden and Biklin (1998), I created a system to code the transcriptions so I could make comparisons and look for trends, similarities and

growth in the ability of the students to ask questions, create summaries and discuss the information they read in their textbooks.

During my first reading of the transcripts, I read through each session by group to look for differences between the groups. For example, I read session 4 for all three groups. This allowed me to focus on any differences that might become obvious between the three groups. As I read, I highlighted in yellow any time the teacher researcher participated in any way, to clarify a point or to give directions or to refocus the group. This allowed me to track the amount of teacher participation through each session.

During my second reading of the transcripts, I read through each group by session. For example, I read all of the two strategy group transcripts starting with session 4, then session 11, then session 19 and finally session 21. This reading allowed me to focus on changes that developed as the group became more familiar with the reciprocal teaching procedure. As I engaged in this second reading, the coding system I would use became more and more apparent. I developed a coding system to help me analyze and compare the quality of and the use of the reciprocal teaching strategies of predicting, clarifying, questioning and summarizing. I coded each prediction, each clarifying question, each question and each summary offered during these recorded sessions. For the two strategy group, I coded questions and summaries only. I focused on these four areas because they are the key strategies of reciprocal teaching and because of recommendations from a review of reciprocal teaching research by Rosenshine and Meister (1994). Rosenshine and Meister suggested that future reciprocal teaching research analyze the dialogue and discussions that develop during reciprocal teaching. My taped sessions and the transcripts offered an opportunity for just such analysis. By

coding for and examining the quality of the predictions, clarifications, questions and summaries that students offered during reciprocal teaching, I was able to determine if strategy use and dialogue improved over the course of the study. This coding system allowed me to detect changes that occurred in the students' use of the reciprocal teaching strategies across the four sessions I recorded and transcribed. Below you will see the codes that I used for the reciprocal teaching strategies.

### **Predicting**

**P-** prediction merely restates subtitle, shows little thought or relation to topic

**P+** prediction goes beyond subtitle and draws a connection to past or future

### **Clarifying**

**NC** no clarifying question asked

**C** clarifying question asked, perhaps tangential to topic

**C+** good clarifying question, helped spark discussion or improve understanding

### **Questioning**

**LL** lower level question (date, place, person) not related to main idea

**MI** question relates to the main idea of the paragraph

**?+C** question may not relate to main idea but helps prompt discussion

### **Summarizing**

**WS** weak summary little or no relation to topic

**PS** partial summary may contain one idea from paragraph but misses key idea

**GSw** good summary of paragraph, comes word for word from the paragraph

**GS+** good summary stated in students own words

The above coding system developed during the reading of the transcripts.

Predictions fell into one of two categories P- meant that the prediction simply restated the subheading of the reading, showed little thought or was completely unrelated to the topic.

An example would be during a reading with the heading Japan fights on, the predictor

said, "I think this is about Japan fights on" (whole class group, session 4 transcript). P+

predictions showed some evidence that the student looked at the subheading and tried to make a connection to what the reading might be about. In a session with the subheading Voting rights, the students predicted, “ I think this is going to be about the president getting involved with stuff like the rights of people to vote” (traditional group, session 4 transcript).

Clarifications developed into a three-level category. Sometimes students quickly moved passed the clarification question, “Does anyone need anything clarified? No. OK” (whole class group, session 4 transcript). This received a NC coding. The C coding for clarifications usually related to questions that were straightforward and aimed at a something the student did not know. For example, during a reading about the space race of the 1960s a student asked, “What does NASA stand for?” (traditional group, session 19 transcript). While this question was not critical to understanding the reading it showed that the student was engaging in the reciprocal teaching process and asking questions in order to learn. Sometimes the clarifying question did not really relate to the topic of the paragraph, like during a reading on Cuba becoming communist when a student asked, “Is it true that Castro is a bad president?” (whole class group, session 21 transcript). This too would receive a C coding because it did show that the students were thinking and questioning while they were reading even if the answers were not always easy to find. The C+ coding was awarded to clarifying questions that sought a definition or an explanation that helped all students better understand the reading or sparked a discussion of an idea that was important for students to understand. For example in a reading about voting rights, a student asked, “what is a literacy test?” (traditional group, session 11

transcript). The subsequent discussion helped all students better understand the barriers to African Americans voting and the changes made by the Voting Rights Act.

During the questioning opportunities of reciprocal teaching, students often offered questions that were very basic or lower level. The LL coding represented questions of that nature. For example, during a reading about the battles in the Pacific during World War II, students asked questions like, “How many ships sunk?” or “When did the allies land on Okinawa?” (two strategy group, session 4 transcript). These questions helped to show that students were engaged in the reciprocal teaching process, however the goal of the questioning, as instructed during reciprocal teaching training, was for students to ask questions that got at the main idea of the paragraph or passage they were reading. The MI coding would go to a question from the same reading like, “Why did Japan refuse to surrender?” (traditional group, session 4 transcript). I developed a third code for questions that arose during discussions. The code ?+C related to questions that might not focus on the main idea but did push students further in their thought and discussion of a topic. For example, during a reading about the Berlin Wall a student asked, “Is the wall still there?” and then “What happened to it?” (traditional group, session 21 transcript). These questions sparked the groups interest in the topic and allowed the teacher researcher to give some additional information.

The coding of the summaries developed into four different categories. The weak summary code WS related to those summaries that missed the point of the reading or were completely unrelated to what had been read. For example during a reading related to World War II fighting in the Pacific a student offered this summary, “This paragraph is about that the Japanese crashed their planes into our ships” (whole class group, session 4

transcript). Often students would give a partial summary PS that focused on one aspect of the reading but missed some key elements. During the reading about Castro creating a communist Cuba, a student summarized by saying, “This passage tells us that in June 1959 Castro forced the dictator of Cuba to leave the country” (traditional group, session 21 transcript). This student had focused on the first part of the passage but failed to discuss communism and Cuba’s alliance with the Soviet Union. The other two summary categories both showed that the student gave a good summary of the information that had been read, yet often this summary would be word for word from the text. The GSw category stood for good summary, but word for word. During the reading on voting rights a student summarized that, “This paragraph tells us that in the summer of 1964 African Americans launched a campaign to register black voters” (traditional group, session 11 transcript). This summary, while accurate, was taken as a direct quote from the textbook. The code GS+ related to summaries that captured the important information and were offered in the students’ own words. For example after a reading on the red scare a student said, “OK this paragraph tells us that during the 1950s the United States and the Soviet Union had bad feelings [and] that spies for the communists were coming to the U.S” (two strategy group, session 19 transcript).

The codes described above helped to analyze the changes in the students’ use of reciprocal teaching strategies over the course of the study. These transcripts and codes also allowed a comparison of the three groups to determine if there was a difference in how students used the strategy based upon their group.

A final piece of qualitative data that I collected took the form of my daily notes from the reciprocal teaching sessions. As suggested by authors who have studied

qualitative research, Krathwohl (1998) and Bogdan and Biklen (1998), I kept careful notes of my thoughts and reflections about the reciprocal teaching sessions. I quoted student reactions when possible in my notes. I compiled these notes at the end of my teaching day, just after I had completed a reciprocal teaching session. In this daily planner, I included the plan for each reciprocal teaching session and when the session was over I added my reflections and thoughts about how the session had gone. I wrote my plans in blue or red ink and included the activities students would complete, the groups they were to work in and the pages that students would read. I wrote my daily reflection notes in green ink so that they would stand out from my planning notes. In my daily reflection notes I included descriptions of how the students performed, any insightful quotes from students that I could remember and suggestions to myself on how to make the reciprocal teaching sessions more effective in the future. Here are some examples of the type of notes I included.

February 12, "Reciprocal teaching worked better at the beginning of the period when students were more attentive." February 27, "20 to 25 minutes of reciprocal teaching worked better than more than 25 minutes. Students were able to maintain their focus on the task." March 7, "I still had to work hard to keep students focused during the whole group practice. It is sometimes difficult to distinguish between the questioning role and the clarifying role. This is causing some confusion for students." March 11, "One challenge is to find good activities for other groups to work on while I am doing reciprocal teaching with one small group." March 17, "It is difficult for some students to focus on reciprocal teaching practice while other students are engaged in different activities. Some students seem distracted." March 21, "Students still struggling to ask

good main idea questions and to give good summaries.” March 24, in the whole class group, “Whole group worked OK. Got through more paragraphs of practice. Still hard to keep all students focused and engaged in reciprocal teaching.” March 27, “Students seem to enjoy reciprocal teaching activities. The summarizing role is the ‘hardest’, while the predicting and clarifying roles are viewed as “easy” and students want to play these roles.” April 4, “Interesting that in the two strategy group, students are asking clarifying questions even though there is no clarifier role.” April 9, the two strategy group, “Students not engaging in process unless I am there. Difficult to monitor progress in four different groups.” April 25, “I had a group to model reciprocal teaching session in front of the whole class before groups went on to their reciprocal teaching groups. This seemed to work well because students got to see what reciprocal teaching should look like. Groups were more focused during this session.” May 1, “A big advantage for the whole class group is time. I can get through reciprocal teaching practice much more quickly than in the small group settings. Big question for whole class setting is whether or not all students are participating and gaining as much from the experience. May 2, “It is still very difficult to get the groups to engage in good discussions about what they are reading unless I am standing right over them. If I am not around they will go through the motions and complete the task without much effort or focus.”

Because I played the role of both the teacher and the researcher, these daily reflection notes enabled me to better remember and more clearly analyze the experiences of reciprocal teaching. The daily reflection notes allowed me to retrace and recreate the reciprocal teaching process as I went back to examine both the quantitative and the qualitative data. These notes help me to make connections between my different data

sources. The reflection notes allowed me to draw conclusions, not based on vague recollections that could be influenced by other data collected, but conclusions based on actual data collected at the time of the reciprocal teaching activities.

### Limitations

While this study provided an opportunity for some very interesting teaching and learning, there are limitations that must be recognized. Limitations are inherent in any study where the teacher acts as the researcher. Critics of this type of research suggest that, “understanding events when one is a participant in them is excruciatingly difficult if not impossible” (Cochran-Smith & Lytle, 1999, p. 20). While teacher research has gained acceptance over the last decade, it still presents many challenges. As the teacher researcher, I have attempted to make the elements of this study as transparent as possible in order to avoid the pitfalls of this research. I describe my teaching strategies with each of the three groups in detail and include examples of my lessons, worksheets and questions. Additionally, the use of audiotape gave an opportunity to go back and listen to my own teaching with my classes. As discussed earlier, the daily reflection notes played an important role in allowing me to recreate the reciprocal teaching process with data collected during that process that was fresh and untainted by subsequent results I would find. However, the pressures of time that plague teachers under normal circumstances were exacerbated as I attempted to systematically study my own teaching and my students’ learning.

Questions of internal validity arise when one seeks to test the effectiveness of different teaching strategies and implement an experimental design. This is especially

true as I am the teacher of the strategies and the researcher trying to make sense of any differences in performance that result from the different methods used. I attempted to ensure the internal validity of the study through the research design, however, this issue remained in the forefront of my thoughts as I researched and certainly in the thoughts of those who reviewed my research.

Another potentially confounding variable results from the fact that all of these students are enrolled in a Reading/English class where they work on improving their reading abilities. While neither of the Reading/English teachers used the reciprocal teaching methods, I feel it is important to disclose this fact at the outset.

Other limitations of this study lie in the population being used in the research. I studied three classes of students in one school. There were 50 students involved in this research study. Any results, positive or negative, must be viewed with the size of the sample in mind. Additionally, the students with whom I worked are weaker than the typical students who have been studied using reciprocal teaching methods in earlier research. Earlier research focused on students who read about two grades below grade level. Most of the students in this study read three or more grades below grade level.

## **Chapter 4: Results**

In an effort to better understand the impact of reciprocal teaching on the ninth grade students in my U.S. History class, I assessed the performance of my students on several measures of reading comprehension ability. These measures included standardized and teacher researcher created assessments to determine if the students became more effective at understanding what they read, after practicing and using the reciprocal teaching strategies. Additionally, I analyzed taped transcripts from several reciprocal teaching sessions to gain insights into how my students used or did not use the reciprocal teaching strategies of predicting, clarifying, questioning and summarizing. All of the results, which are designed to address my research questions, are presented in this chapter.

### Research Questions

- How will reciprocal teaching impact the ability of poor readers in my ninth grade U.S. History class to understand and discuss the concepts found in social studies textbooks?
- How will adapted reciprocal teaching procedures impact the ability of poor readers to understand and discuss the concepts found in social studies textbooks when compared to the results from the traditional reciprocal teaching approach?

### Quantitative Results—Descriptive Statistics—All Groups

The hypothesis implicit in the first research question, that reciprocal teaching would help poor readers was confirmed by the analysis of descriptive statistics from the research study. Descriptive statistics were examined for each of the three reciprocal

teaching groups and for all participants in order to examine the mean scores on the all of the dependent variables and to compare the mean scores across the three groups. Table 1 presents the descriptive statistics for each group in the study, as well as for all groups, on all the assessments. Figure 1 offers a visual display of these results. The mean score for all students on the Gates-MacGinitie standardized reading comprehension assessment changed from 5.1 (fifth grade, first month) to 5.4 (fifth grade, fourth month). This shows slightly over three months growth in slightly less than three months. The mean score for all students on the social studies pre and post-assessments changed from 5.3 points out of a possible 11 points to 7.2 points out of a possible 11 points. This represents a change from 48% correct answers and summaries to 61% correct answers and summaries. The mean score of 7.9 on the second reading comprehension post-assessment shows a change to 72% correct answers and summaries. The results on the weekly social studies reading comprehension assessments show a general slope upward from a mean score of 6.7 points out of a possible 13 points to 8.9 points out of a possible 13 points, with a high score of 9.2 in week six. The results represent a growth from 51% correct questions, answers and summaries to 68% correct questions, answers and summaries, with a best weekly percentage (week six) of 71% correct questions, answers and summaries.

Two points on the study design and the reported results will help to clarify some issues. First, when designing this study, I included pre and post listening tests that were administered immediately following the pre and post reading tests. The listening tests were included to determine if the decoding skills of students was a barrier to their comprehension of the assessment passages. The underlying assumption was that if

Table 1

**Mean and Standard Deviation for each group and all groups on:**

- Gates-MacGinitie pre and post comprehension test scores
- Social studies pre, post and post 1 comprehension assessment scores
- Weekly social studies comprehension assessment scores

<u>Assessment</u>	<u>Traditional</u>		<u>Whole Class</u>		<u>Two Strategy</u>		<u>All Groups</u>	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Gates pre-test Grade level scores Range—1.0 to 11.9	4.10	.93	5.02	2.00	5.92	2.43	5.07	2.04
Gates post-test Grade level scores Range—1.0 to 11.9	5.54	1.31	5.23	1.43	5.48	1.64	5.41	1.45
Social Studies pre-test Range—0 to 11	6.13	1.95	4.41	1.83	5.56	2.52	5.34	2.21
Social Studies post-test Range—0 to 11	7.33	1.54	6.76	2.48	7.56	2.14	7.22	2.10
Social Studies post-test1 Range—0 to 11	7.40	2.58	8.18	1.70	7.94	2.43	7.86	2.24
Weekly Social Studies Assessments Range—0 to 13								
Week 1	7.27	2.43	6.53	2.57	6.44	3.03	6.72	2.68
Week 2	8.07	1.48	7.00	2.42	8.56	2.43	7.90	2.23
Week 3	9.27	1.83	7.18	2.78	8.28	1.70	8.20	2.28
Week 4	7.60	1.35	6.29	2.73	7.44	2.47	7.10	2.33
Week 5	8.87	1.50	8.41	1.22	7.89	1.71	8.36	1.52
Week 6	9.87	1.12	8.94	1.95	8.94	1.98	9.22	1.77
Week 7	8.67	2.05	7.35	2.82	8.44	1.88	8.14	2.32
Week 8	8.60	2.16	8.71	1.53	9.22	1.62	8.86	1.76

Figure 1

Descriptive Statistics from All Groups

Figure 1a—Gates-MacGinitie pre and post assessment

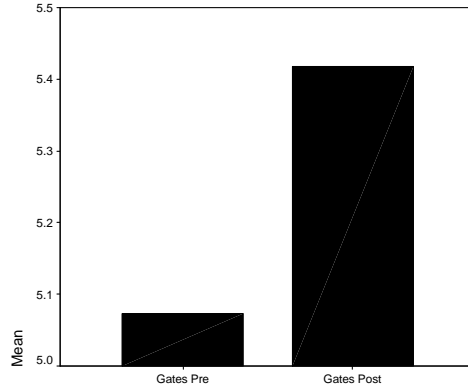


Figure 1b—Social Studies pre and post assessments

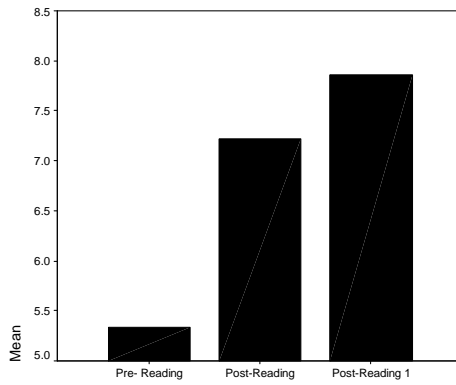
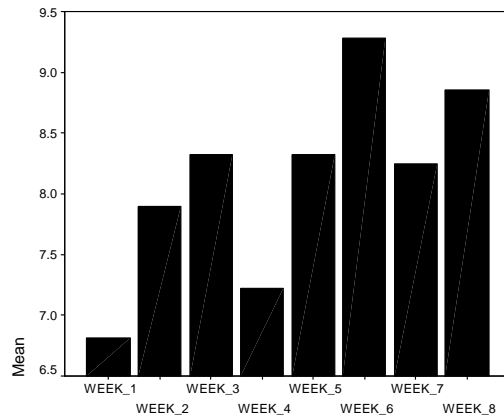


Figure 1c—Weekly Social Studies Assessments



students were struggling with decoding they would perform better when the passage was read aloud than they would when they had to read on their own. As it turned out, student performance was not dramatically better, and in fact was sometimes worse, on the listening passages as compared the reading passages. Therefore, I do not include or discuss the pre and post listening results.

Secondly, the weekly reading assessments in social studies show overall improvement for each group. These weekly assessments had the following grade level readability on the Flesch-Kincaid grade level equivalency scale; week 1=9.0, week 2=9.6, week 3=8.7, week 4=9.3, week 5=11.1, week 6=8.3, week 7=8.7, and week 8= 8.1. All three groups showed overall growth in their reading scores over the course of the study. However, in the assessments for week 4 and week 7 all three groups showed similar declines. This decline did not seem to relate to the grade level equivalency of these passages as they were in the same range, 9.3 and 8.7 respectively, as the grade level equivalencies for the other weeks. Conversely all three groups improved on the assessment from week 5 that was the most difficult, based on grade level equivalency of 11.1. To better understand the results on the weekly social studies assessments, I looked more closely at the texts used in the assessment to find an explanation for the ups and downs in the students scores.

To analyze these texts more closely, I turned to the work Chambliss and Calfee (1998) where they discuss text structure, background knowledge of the reader, and interest of the reader in the text as critical factors that influence comprehension, especially in expository texts like social studies. While the grade level equivalency scores discussed above are important, the additional factors raised by Chambliss and

Calfee provide insights to help explain how students perform when trying to comprehend what they read. According to the authors, expository writing found in textbooks contains different levels of sophistication in the rhetorical patterns used to present information. These patterns or structures can be designed to inform about a topic or to argue a point or to explain a concept. All of the texts used in my study fell into the rhetorical category of informing. Chambliss and Calfee divide this category into two subcategories where one might inform by using description or by using sequence. In each subcategory there are more and less effective methods of describing or sequencing. For example, using lists of information to describe is a less effective structure for comprehension when compared with description that follows a hierarchy or topical net (Chambliss & Calfee, p. 32).

I analyzed the eight weekly social studies texts (all of which were taken from the same textbook) on the basis of their structure, the background knowledge the student would have about the topic and the interest the students might bring to the topic. For example, the first weekly assessment on the D-Day invasion contained a sequence structure that followed chronologically from one event to the next. The student's background knowledge of this topic was fairly low, yet their interest was in the moderate range because most had at least heard of D-Day before. After analyzing each of the eight text passages similarly, I discovered some interesting information that might help to explain the ups and downs of the students' performance on the weekly social studies assessments. In week four and week seven, the two weeks where student scores decreased, a loose or weak text structure had a greater impact on student comprehension than did the students' background knowledge or the students' interest in the topic.

The text reading for week four dealt with two individuals, Martin Luther King and Malcolm X, about whom students have background knowledge and a higher level of interest. However, week four scores were the lowest in the study. One explanation for this low score could be the text structure of the week four reading. This reading (Appendix E, Weekly Assessment 4) was a description of the differences between Dr. King and Malcolm X that read like a laundry list of information. The first paragraph gave general information about how some people were growing frustrated with the non-violent approach. The second paragraph discussed Dr. King. The third and fourth paragraphs again related to frustrations about how long it was taking for changes to occur. The fifth paragraph discussed Malcolm X. This reading was problematic because it lacked structure, which could have led to the drop off in student performance in week four. One can see a similar lack in structure in week seven (Appendix E) in which student performance showed another decline.

Contrast the week four or week seven results with those from week six. The topic for week six was an introduction to the cold war where the students in this study, born in 1989, would have little background knowledge and, at outset, only moderate interest. However, week six showed the highest scores of the study. Again, the text structure of the week six reading provides some answers. Week six (Appendix E) had a description structure, like week four, where the differences between the ideas of democracy and the ideas of communism were discussed. However, instead of being a list of the differences, the structure was more of a topical net where the two systems were compared on a variety of topics like their goals, beliefs and actions. The first paragraph introduced differences between the United States and the Soviet Union. The second paragraph explained

communism in the Soviet Union. The third paragraph discussed democracy in the United States. The fourth paragraph explained U.S. fears about communism.

A similar topical net structure can be seen in week five on the Black Panthers (Appendix E). Each paragraph in this reading begins with the topic—the Black Panthers yet discussing different aspects. The first paragraph is an introduction, the second paragraph discusses demands, the third paragraph explains their disagreement with the non-violent movement. This structure was probably easier for students to follow which helped their scores on the week five assessment.

Based on this analysis of the texts from the weekly social studies assessments, the importance of the structure of the text should not be overlooked when examining the differences in the weekly results.

#### Descriptive Statistics—Traditional Group

Continuing the examination of the results of the study, Table 1 also presents the descriptive statistics for the traditional group. These results are displayed in Figure 2. Figure 2 displays the results from all three groups, traditional, two strategy and whole class. The traditional group learned all four reciprocal teaching strategies in the traditional small team setting. The mean score for students in the traditional group on the Gates-MacGinitie standardized reading comprehension assessment changed from 4.1 (fourth grade, first month) to 5.5 (fifth grade, fifth month). This shows one year and four months growth in slightly less than three months.

Figure 2

Comparing Traditional, Whole Class and Two Strategy Groups

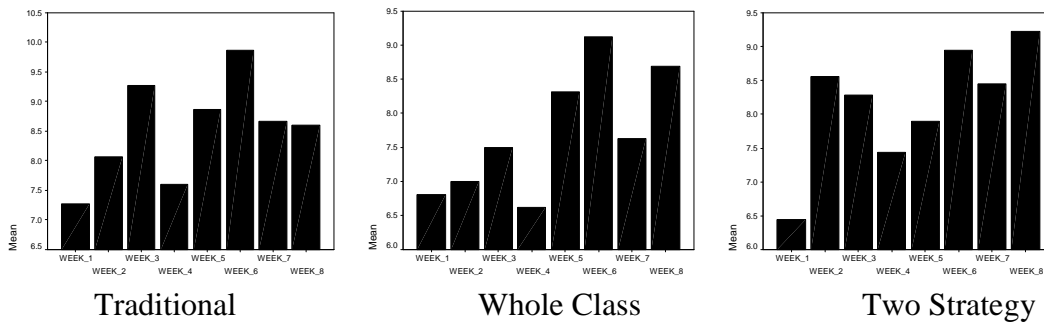
Figure 2a—Gates-MacGinitie Pre and Post



Figure 2b—Social Studies pre and post assessments



Figure 2c—Weekly Social Studies Assessments



The mean score for students in the traditional group on the teacher researcher created pre and post-assessments changed from 6.1 points out of a possible 11 points to 7.3 points out of a possible 11 points. This represents a change from 56% correct answers and summaries to 66% correct answers and summaries. The mean score of 7.4 on the second reading comprehension post-assessment shows a change to 67% correct answers and summaries.

The results on the weekly social studies reading comprehension assessments show a general slope upward from a mean score of 7.3 points out of a possible 13 points to 8.6 points out of a possible 13 points, with a high score of 9.9 in week six. The results represent a growth from 56% correct questions, answers and summaries to 69% correct questions, answers and summaries, with the best weekly (week six) percentage of 76% correct questions, answers and summaries.

#### Descriptive Statistics—Whole Class Group

The descriptive statistics for the whole class group can also be found on Table 1 and the results are also displayed in Figure 2. The whole class group learned all four reciprocal teaching strategies in a whole class instruction setting. The mean score for students in the whole class group on the Gates-MacGinitie standardized reading comprehension assessment changed from 5.0 (beginning fifth grade) to 5.2 (fifth grade, second month). This shows 2 months of growth in slightly less than three months. The mean score for students in the whole class group on the teacher researcher created pre and post-assessments changed from 4.4 points out of a possible 11 points to 6.8 points out of a possible 11 points. This represents a change from 40% correct answers and summaries to 62% correct answers and summaries. The mean score of 8.2 on the second

reading comprehension post-assessment shows a change to 75% correct answers and summaries. The results on the weekly social studies reading comprehension assessments shows a general slope upward from a mean score of 6.5 points out of a possible 13 points to 8.7 points out of a possible 13 points, with a high score of 8.9 in week six. The results represent a growth from 50% correct questions, answers and summaries to 67% correct questions, answers and summaries, with the best weekly (week six) percentage of 69% correct questions, answers and summaries.

Comparing the descriptive statistics for the traditional and the whole class groups displays that the traditional group shows dramatic improvement in the Gates-MacGinitie reading comprehension scores. The whole class group shows more dramatic growth in the scores on the social studies pre and post assessments. Both groups show similar results on the weekly social studies comprehension assessments.

#### Descriptive Statistics—Two Strategy Group

The descriptive statistics for the two strategy group can also be found on Table 1 and Figure 2 presents results for the two strategy group. The two strategy group learned only two of the reciprocal teaching strategies in the traditional small team setting. The mean score for students in the two strategy group on the Gates-MacGinitie standardized reading comprehension assessment changed from 5.9 (fifth grade, ninth month) to 5.5 (fifth grade, fifth month). This shows a decrease in slightly less than three months. While the two strategy group shows the only decrease it is probably explained by the unusually high pre-test scores by a few students. These same students were unable to repeat this high performance in the Gates-MacGinitie post-test, suggesting that the initial scores were anomalies. The mean score for students in the two strategy group on

the teacher researcher created pre and post-assessments changed from 5.6 points out of a possible 11 points to 7.6 points out of a possible 11 points. This represents a change from 51% correct answers and summaries to 69% correct answers and summaries. The mean score of 7.9 on the second reading comprehension post-assessment shows a change to 72% correct answers and summaries. The results on the weekly social studies reading comprehension assessments shows a general slope upward from a mean score of 6.4 points out of a possible 13 points to 9.2 points out of a possible 13 points, which was the highest score in week eight. The results represent a growth from 49% correct questions, answers and summaries to 71% correct questions, answers and summaries.

Comparing the results for the two strategy group with the traditional and whole class shows that, unlike the traditional group's growth on the Gates-MacGinitie, the two strategy group experienced a decline in score. Like the whole class group, the two strategy group showed dramatic growth on the social studies pre and post assessment. The two strategy group showed even more pronounced improvement on the weekly social studies assessment than did the other groups.

The descriptive statistics presented in Table 1, as well as the corresponding Figure 1 and Figure 2, testify to the effectiveness of reciprocal teaching in helping to improve the reading comprehension of poor readers on almost all the measures of this study. These results help to answer the first research question, that reciprocal teaching did have a positive impact for poor readers in my ninth grade U.S. history classes whether measured by a standardized reading test or by assessments prepared by the teacher researcher.

### ANOVA Results—Two strategies vs. Four strategies

The second research question hypothesized that adaptations could be made to reciprocal teaching while maintaining the positive impact on the ability of students to understand concepts found in social studies textbooks. The first adaptation I examined was whether teaching only the two strategies of questioning and summarizing of reciprocal teaching would be as effective as the traditional four-strategy approach of predicting, clarifying, questioning and summarizing. To evaluate this adaptation I conducted an analysis of variance comparing the between subjects factors of the two strategy approach used by the two strategy group and the four strategy approaches used with the traditional group and the whole class group on the within subjects measures of pre and post Gates-MacGinitie reading tests, pre and post social studies assessments and weekly social studies assessments.

The three comparisons indicated no statistically significant difference in results in the between subjects tests based on the two or four strategy reciprocal teaching approach. All groups showed similar achievement on the three measures regardless of whether they learned the four strategies, predicting, clarifying, questioning and summarizing, of the traditional approach to reciprocal teaching or the two strategies, questioning and summarizing, of the adapted approach to reciprocal teaching. Below I present the specific results from the analysis of variance tests on each of the three measures.

The between subjects effect,  $F(1, 48)=2.780$ ,  $p=.102$  on the Gates-MacGinitie reading comprehension tests showed no significant difference in the two approaches. While the within subjects effect on the Gates-MacGinitie,  $F(1, 48)=.402$ ,  $p=.52$ , was not statistically significant, the interaction of the two groups on the pre and post test of the

Gates-MacGinitie,  $F(1,48) = 4.89$ ,  $p < .05$ , was statistically significant as depicted in Figure 3a. I believe this is explained by the anomalously high scores of a few students in the two strategy group on the Gates-MacGinitie pre-test. The students did not maintain these same high scores on the post-test.

On the social studies pre and post assessments, neither the between subjects effect  $F(1, 48) = .419$ ,  $p > .05$  nor the interaction between the four strategy groups and the two strategy group,  $F(2, 48) = .161$ ,  $p < .05$  showed significant differences. However, the difference between the social studies pre and post assessments for the two groups were statistically significant,  $F(1,48) = 28.34$ ,  $p < .001$  as can be seen in Figure 3b.

Similarly, for the weekly social studies assessments the between subjects effect,  $F(1,47) = .017$ ,  $p > .05$  and the interaction,  $F(1, 47) = 1.404$ ,  $p > .05$  showed no significant difference in the two approaches to reciprocal teaching. However, the within subject differences among the weekly assessments for the two groups were statistically significant,  $F(1,47) = 9.39$ ,  $p < .001$  as depicted in Figure 3c. This analysis differs from the analysis for the Gates-MacGinitie and the social studies pres and post assessments because it takes into account eight scores and analyzes all of the ups and downs in the scores. It is not surprising that the within subjects effect is statistically significant.

Figure 3

ANOVA Results—Two strategy vs. Four strategy

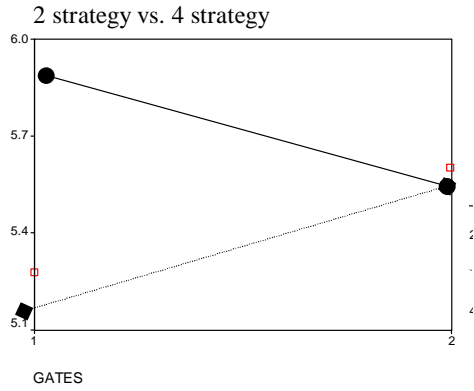


Figure 3a—Gates-MacGinitie pre and post tests

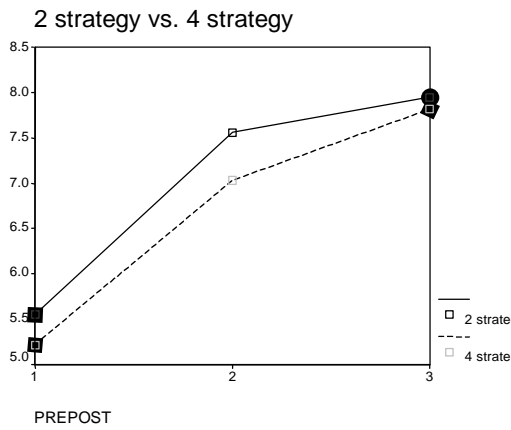


Figure 3b—Social Studies pre, post and post 1

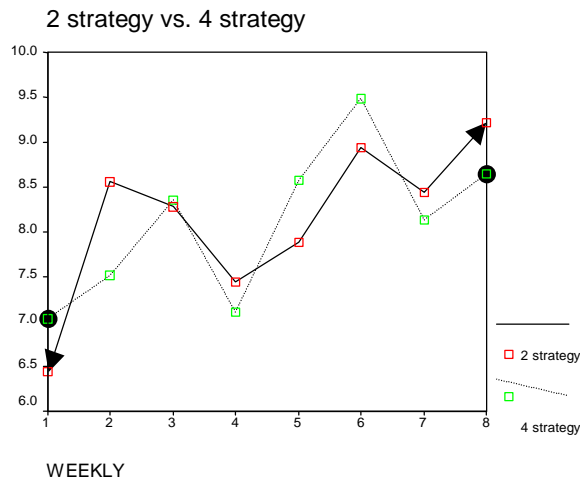


Figure 3c—Weekly social studies assessments

Overall, these results suggest that an adapted version of reciprocal teaching involving the two strategies of questioning and summarizing can have an impact equally positive for students as the traditional four strategy approach to reciprocal teaching.

#### ANOVA Results—Whole class vs. Small group (traditional)

Continuing to pursue my second research question, where I hypothesized that adaptations could be made to reciprocal teaching while maintaining the positive impact on the ability of students to understand concepts found in social studies textbooks, I examined whether a whole class approach to reciprocal teaching would be as effective as the traditional small group approach to reciprocal teaching. To evaluate this adaptation, I conducted an analysis of variance comparing the between subjects factors of the small group approach used in the traditional group with the whole class approach used in the whole class group on the same three repeated measures. In other words, in this analysis I looked only at students who had learned the four strategies of predicting, clarifying, questioning and summarizing to compare the impact of whether they were in small groups or in a whole class setting.

On the test of between subject effects two of the comparisons showed no significant difference, while the third showed a significant difference. The results of all the comparisons continued to offer support to the hypothesis that reciprocal teaching, even when adapted, helps improve student achievement on the measures in this study. Below I present the results of the analysis of variance test on each of the three measures.

On the Gates-MacGinitie comprehension test, the between subjects effect  $F(1, 30)=.491, p>.05$  showed no significant difference, while the within subjects effect  $F(1,$

30)=7.87,  $p < .01$  was statistically significant. The interaction between the traditional (small team) group and the whole class group,  $F(1,30)=4.42$ ,  $p < .05$  was also statistically significant. All students improved. However, the traditional (small team) group improved more than the whole class group as depicted in Figure 4a.

On the social studies pre and post measure, the between subjects effect,  $F(1, 30)=.823$ ,  $p > .05$  did not show a significant difference while the within subjects effect,  $F(1, 30)=20.18$ ,  $p < .001$ , and the interaction,  $F(1,30)=4.72$ ,  $p < .05$ , did show significant differences. These results show the opposite of the Gates-MacGinitie results above. On the Gates-MacGinitie, the traditional (small team) group showed more dramatic improvement. On the social studies pre and post assessment, again, all students improved, but students in the whole class group saw greater improvement than those in the traditional (small teams) group as can be seen on Figure 4b.

The only between subjects effect,  $F(1, 29)=4.274$ ,  $p < .05$ , that showed a significant difference was on the social studies weekly assessment. The traditional (small team) group scored consistently higher than did the whole class group on all the weekly assessments with the exception of the last one. While the traditional group, for the most part, had higher scores, the whole class group showed more improvement from week one to week eight. The within subject effect for the weekly assessment,  $F(1,29)=6.79$ ,  $p < .05$ , was statistically significant as demonstrated in Figure 4c. Again, due to the nature of the study and the eight weekly assessments, a statistically significant result on the within

Figure 4

ANOVA Results—Whole Class vs. Small Group (traditional)

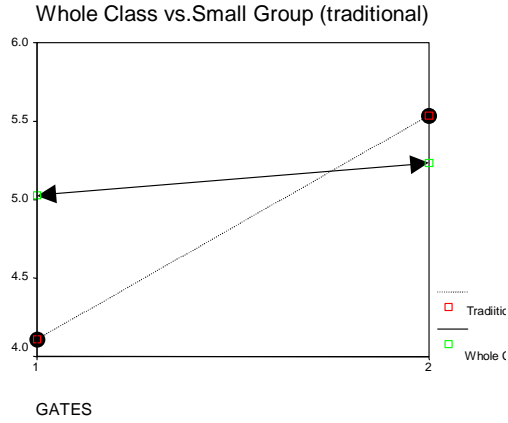


Figure 4a—Gates-MacGinitie pre and post

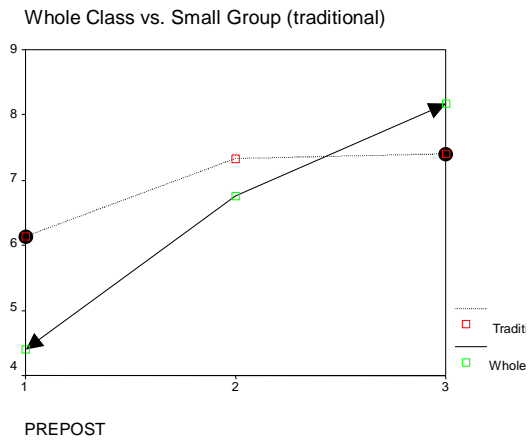


Figure 4b—Social Studies pre, post and post 1

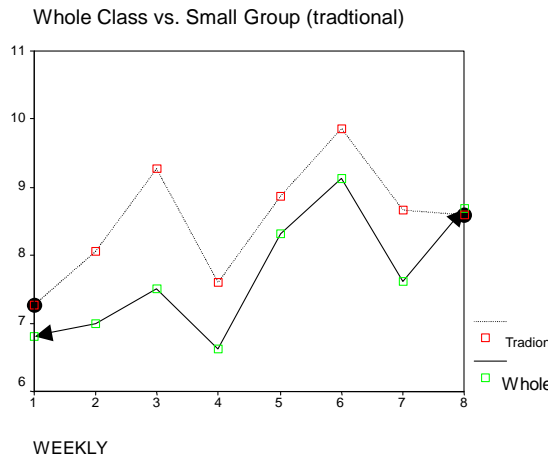


Figure 4c—Weekly social studies assessments

subject measure is not surprising. The interaction  $F(1, 29)=.703, p>.05$  did not show a significant difference.

Overall, these results suggest that an adapted version of reciprocal teaching involving a whole class approach can have an impact equally positive for students as the traditional small team approach to reciprocal teaching.

#### ANOVA Results—Reciprocal Teaching performance High, Medium and Low

After examining the results and based on the work of Brady (1990), I wanted to know whether reciprocal teaching had a different impact for students who had lower or higher reading skills as determined by their scores on the standardized reading comprehension assessment. I divided the student scores into three groups, high, medium and low, based on their comprehension score on the Gates-MacGinitie pre-test. Students scoring at grade level two or three were placed in the low group. Students scoring at grade level four or five were placed in the medium group. Students reading at grade level six or above were placed in the high group. To evaluate the impact of reciprocal teaching on students of different reading levels, I conducted an analysis of variance comparing the between subjects factors of high, medium and low on the within subjects measures of the pre and post Gates-MacGinitie reading tests, pre and post social studies assessments and weekly social studies assessment.

On the test of between subject effects the first comparison showed a significant difference, while the other two showed no significant difference. The results of all the comparisons supported the hypothesis that reciprocal teaching would help to raise

achievement for students of all levels, but the results below show particularly positive improvement for students who were in the low and medium categories.

The statistically significant results came from the Gates-MacGinitie pre and post tests where the between subjects effect  $F(2, 47)=33.646, p<.001$ . The interaction,  $F(2,47)=18.448, p<.05$ , was also statistically significant. As evident in Figure 5a, this interaction results from the decline in scores showed by the high group and the increase for the medium and low group. This is again consistent with some of the anomalously high scores discussed earlier and evident in the descriptive statistics from the two strategy group in Figure 2. However, this interaction also results from the improvement evident in the low and medium scores.

The results of the other comparisons show that all three groups improve, but that there is no significant difference for high, medium or low groups. On the social studies pre and post assessments the between subjects effect,  $F(2, 47)=2.905, p>.05$ , are not statistically significant nor is the interaction,  $F(2, 47)=.315, p>.05$ . However, the within subjects effect,  $F(1,47)=30.47, p<.001$ , is statistically significant. It is interesting to note on Figure 5b that all three groups show improvement and on this measure the high group shows the most improvement.

Similarly, on the social studies weekly assessments the between subjects effect,  $F(2, 46)=.845, p>.05$  and the interaction,  $F(2, 46)=.798, p>.05$ , do not show significant difference for the three groups. Also similarly, the within subjects effect,  $F(1,46)=8.937, p<.001$ , is statistically significant. Another interesting point evident from Figure 5c is that the more dramatic improvement comes from the low and medium groups. In fact, on

Figure 5

ANOVA Results—Performance of high, medium and low groups

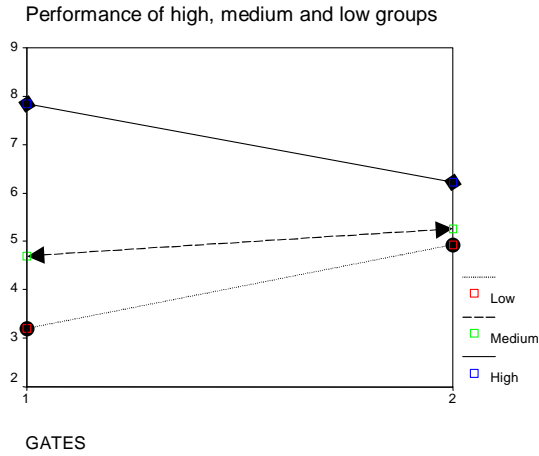


Figure 5a—Gates-MacGinitie pre and post

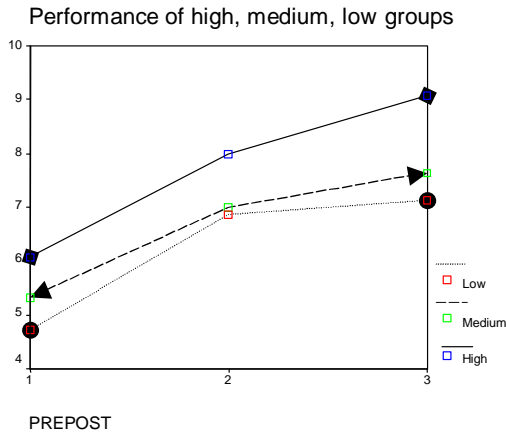


Figure 5b—Social Studies pre, post and post 1

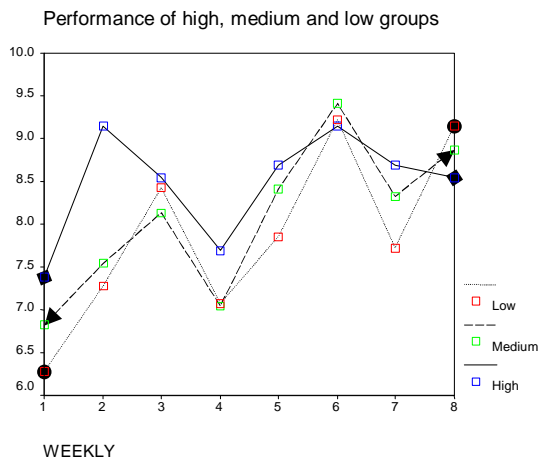


Figure 5c—Weekly social studies assessments

the week eight assessment the high and the low groups have flip-flopped with the low group outscoring both the high and the medium on the final week of the study.

Overall, these results support the idea that reciprocal teaching, in either traditional or adapted forms will help students improve their reading. Additionally, the benefits from reciprocal teaching may be more immediate for the student who shows initially the lowest reading performance.

### Qualitative Results

After reading, coding and analyzing the transcripts from the four reciprocal teaching sessions that I recorded, I quantified and qualified the strategy use in tables that contain the information by group gathered during each of the four sessions. The first column lists the number of times the strategy was used. The second column breaks down the count based on the different qualitative codes for each strategy. The third column shows the percentage for each coding category.

While reading these charts note that the number of times a strategy was used will differ dramatically because of the nature of the study. The whole class group experienced reciprocal teaching in a whole class setting and will have fewer numbers of strategies used when compared to the traditional group and the two strategy group where the total includes the number from three of four different groups. The exception to this is session 4 where, because it fell early in the study all groups were still being instructed as a whole class. One final note, in session 19 all groups (even the whole class group) worked in smaller teams due to the nature of the reading assignment for this class.

Because of these discrepancies in strategy usage numbers, it is important to focus on the percentage column of the table when trying to make comparisons among the groups.

Table 2

**Qualitative Results from the traditional group:**

**Session 4**

<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
2 predictions	1=P and 1=P+	50% P- and 50% P+
4 clarifications	1=NC and 1=C, 2=C+	25% NC and 75% C or C+
5 questions	2=LL and 3=MI	40% LL and 60% MI
3 summaries	2=WS and 1=GS+	67% WS and 33% GS

**Session 11**

<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
3 predictions	1=P and 2=P+	33% P- and 67% P+
14 clarifications	5=C and 4=C, 5=C+	36% NC and 64% C or C+
6 questions	2=LL and 4=MI	33% LL and 67% MI
11 summaries	3=WS, 3=PS and 3=GSw, 2=GS+	55% WS or PS and 45% GS

**Session 19**

<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
0 predictions		
5 clarifications	2=NC and 1=C, 2=C+	40% NC and 60% C or C+
4 questions	1=LL and 3=MI	25% LL and 75% MI
3 summaries	2=PS and 1=GS+	67% PS and 33% GS

**Session 21**

<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
5 predictions	3=P and 2=P+	60% P- and 40% P+
12 clarifications	3=NC and 3=C, 6=C+	25% NC and 75% C or C+
9 questions	4=LL and 5=MI	45% LL and 55% MI
9 summaries	1=WS, 4=PS and 2=GSw, 2=GS+	55% WS or PS and 45% GS

**Coding Key**

<b>Predicting</b>	P- prediction merely restates		P+ prediction goes beyond
<b>Clarifying</b>	NC no clarifying question	C clarifying question tangential	C+ goodclarifying question
<b>Questioning</b>	LL lower level question	MI main idea question	?+C question helps discussion
<b>Summarizing</b>	WS weak summary		GSw good summary, word for word
	PS partial summary		GS+ good summary student words

Students in the traditional group did not show dramatic improvement in their use of the prediction strategy during the study. By the end of the study, students still primarily repeated the subheading to predict what was coming in the text or, as in session 19, students did not use the predicting strategy. The use of clarifying questions remained a strong element of the reciprocal teaching process throughout the study. Between 60% and 75% of the time students used clarifying questions that helped define or explain a key concept in the reading. Students in the traditional group used main idea questions well throughout the study. The students maintained a higher percentage of main idea to lower level questions throughout the study, ranging between 55% and 75% main idea questions. The ability of students in the traditional group to offer good summaries moved up and down between 33% and 45% good summaries. The number of summaries coded as weak decreased during the study. This shows some improvement in the ability of the students to summarize what they read. There seems to be no correlation between higher percentage of main idea questions and more good summaries offered by students.

The qualitative results from the traditional group show a mixed bag of outcomes. There is overall improvement in strategy use for questioning and summarizing, however, the progress is uneven. I will turn to a comparison of the results for each group after we examine the other two groups qualitative outcomes.

Table 3

**Qualitative Results from the whole class group:**

**Session 4**

<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
2 predictions	1=P and 1=P+	50% P- and 50% P+
6 clarifications	4=C, 2=C+	0% NC and 100% C or C+
2 questions	1=LL and 1=MI	50 % LL and 50% MI
7 summaries	3=WS and 3=GSw, 1=GS+	43% WS and 57 % GS

**Session 11**

<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
1 prediction	1=P	100% P-
10 clarifications	2=NC and 3=C, 5=C+	20 %NC and 80% C or C+
5 questions	3=LL and 2=MI	60 % LL and 40% MI
6 summaries	2=WS, 2=PS and 2=GS+	67% WS or PS and 33% GS

**Session 19**

<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
1 prediction	1=P	100% P-
7 clarifications	2=NC and 3=C, 2=C+	29% NC and 71% C or C+
5 questions	3=LL and 2=MI	60% LL and 40 % MI
2 summaries	1=WS, 1=PS	100% WS or PS

**Session 21**

<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
2 predictions	2=P	100% P-
6 clarifications	4=C, 2=C+	100% C or C+
3 questions	3=MI	100% MI
4 summaries	2=PS and 1=GSw, 1=GS+	50% PS and 50% GS

**Coding Key**

<b>Predicting</b>	<b>P-</b> prediction merely restates	<b>P+</b> prediction goes beyond
<b>Clarifying</b>	<b>NC</b> no clarifying question	<b>C</b> clarifying question tangential
<b>Questioning</b>	<b>LL</b> lower level question	<b>MI</b> main idea question
<b>Summarizing</b>	<b>WS</b> weak summary	<b>C+</b> good clarifying question
	<b>PS</b> partial summary	<b>?+C</b> question helps discussion
		<b>GSw</b> good summary, word for word
		<b>GS+</b> good summary student words

The students in the whole class group did not use the strategy of predicting very well. Almost 100% of these predictions were a simple restatement of a subheading or they were not related to the topic students read. The students in the whole class group

followed the reciprocal teaching process and used the clarifying questions effectively. They used the clarifying questions almost 90% of the time to add to discussion or to better understand what they were reading. The whole class group students used higher percentages of main idea questions early in the study and by the last session 100% of their questions related to the main idea of the paragraphs they read. In the strategy of summarizing, the whole class group results were mixed. The percentage of good summaries started high at 57% and then dropped to 33% then to 0% and ended at 50%. It is difficult to make a claim about the ability of students in the whole class group to offer good summaries.

Again the results for the whole class group were somewhat mixed. Students in this group improved in some strategy uses like clarifying and questioning, yet not in the other strategies of predicting and summarizing. A comparison of the three groups will follow the results from the two strategy group.

Table 4

**Qualitative Results from the two strategy group:**

<b>Session 4</b>		
<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
7 questions	6=LL and 1=MI	86% LL and 14% MI
9 summaries	4=WS, 2=PS and 3=GS+	67% WS or PS and 33% GS
<b>Session 11</b>		
<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
11 questions	6=LL and 5=MI	55%LL and 45% MI
15 summaries	6=WS, 3=PS and 6=GS	60% WS or PS and 40% GS
<b>Session 19</b>		
<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
8 questions	4=LL and 4=MI	50% LL and 50% MI
7 summaries	1=WS and 2=GSw, 4=GS+	14% WS and 86% GS
<b>Session 21</b>		
<u>Strategy Usage</u>	<u>Code</u>	<u>Percentage</u>
14 questions	7=LL and 7=MI	50% LL and 50% MI
12 summaries	4=PS and 3=GSw and 5=GS+	25% PS and 75% GS
<u>Coding Key</u>		
<b>Predicting</b>	<b>P-</b> prediction merely restates	<b>P+</b> prediction goes beyond
<b>Clarifying</b>	<b>NC</b> no clarifying question	<b>C</b> clarifying question tangential
<b>Questioning</b>	<b>LL</b> lower level question	<b>MI</b> main idea question
<b>Summarizing</b>	<b>WS</b> weak summary	<b>?+C</b> question helps discussion
	<b>PS</b> partial summary	<b>GSw</b> good summary, word for word
		<b>GS+</b> good summary student words

Students in the two strategy group showed a steady progression using more main idea questions as the study proceeded. The percentage of main idea questions started at 14% and grew to 50%. Likewise the two strategy group students offered more good summaries in later sessions as compared to earlier sessions. The percentage of good summaries began at 33% and by the end of the study was at 75%. The two strategy group students improved in their application of reciprocal teaching strategy of questioning by asking more main idea questions as they read. The two strategy group

students offered better summaries more often by the end of reciprocal teaching sessions as well.

Unlike the other two groups, the two strategy group showed a more even progression of improvement in the two strategies of questioning and summarizing. These different results may come from the fact that students in this group focused their attention on only two strategies rather than the four of the traditional and whole class groups.

The qualitative data from the transcripts also allowed for a comparison among the three reciprocal teaching groups. While this cannot be described as a scientific comparison, it provided some interesting results that showed differences in the use of the reciprocal teaching strategies among the three groups.

In the strategy of making predictions, neither the traditional group nor the whole class group had much success with making effective predictions. During the course of the recorded sessions there were 16 predictions made by students in both groups, only five of those predictions were coded as P+ or thoughtful predictions that expanded beyond a re-statement of the subheading. Nearly 70% of the predictions made by students in both groups were coded P- or not effective.

The traditional group and the whole class group used the clarifying strategy effectively. The groups used the clarifying questions consistently at rates above 70% of the time. The whole class group, which worked as a whole class, showed an even stronger and consistent use of clarifying questions at 100% in session 4, 80% in session 11, 71% in session 19 and 100% in session 21. Students in the two strategy group were not trained in the use of the predicting and clarifying strategy so they have no results to compare in these first two categories.

The results from the strategy of questioning showed some interesting comparisons among the groups. Students in traditional group and the whole class group, groups that were trained in all four reciprocal teaching strategies, began the study asking a higher percentage of main idea questions than did students in the two strategy group. The traditional group and the whole class group began with main idea percentages at 60% and 50% respectively and that percentage rose as high as 75 % and 100%. Students in the two strategy group began with a main idea question percentage at 14% and by the end of the study increased to 50% main idea questions. One possible explanation is that the two strategy group students were not trained to ask clarifying questions, as were the traditional group and the whole class group. The clarifying question might have helped to focus students in the traditional and whole class groups on main idea questions more than did the two strategy group.

The results from the strategy of summarizing also showed differences among the three groups. Students in the whole class and two strategy groups offered better summaries when they asked more main idea questions. While there was no even relation between the percentage of main idea questions to percentage of good summaries, in general there was a trend of better summaries when students asked more main idea questions. For the whole class group, when main idea questions reached 50%, the percentage of good summaries was at 57% in sessions 4 and 50% and in session 21. Session 19 did not hold this trend as students asked 40% main idea questions and offered no good summaries. For the two strategy group, when main idea questions reached 50% the percentage of good summaries was 86% in session 19 and 75% in session 21. This was not true for students in the traditional group. In each session, students in the

traditional group were above 55% with main idea questions, yet the good summary percentage ranged from 33% to 45% with no correlation.

Overall the growth of effective strategy use was greater in the two strategy group than it was in either the traditional group or the whole class group. This finding supports the hypothesis implicit in the second research question for this study. It could be argued that when students are asked to learn and practice two strategies instead of four strategies they are able to better focus on the two strategies and therefore employ these strategies more effectively.

A final area of comparison among the three groups related to the amount of teacher involvement as measured by highlighting the teacher researchers comments and questions during the four different recorded sessions of reciprocal teaching. One goal of reciprocal teaching is for the students to take control of the process and lead the discussion. The results from the recorded reciprocal teaching sessions suggest that students were clearly understanding and playing the roles of reader/leader, predictor, clarifier, questioner and summarizer. From the highlighting of the teacher input from the transcripts, one can see that the students needed few reminders about how to carry out the reciprocal teaching process. Most of the input from the teacher researcher related to clarifying questions that students asked and that other students were unable to answer. This makes sense for social studies textbooks where the texts assume that the students possess a great deal of background knowledge. Students asked questions like, “what is a ballot box?” or “what is the CIA?” or “who is Krushchev?” These are issues that most ninth grade students would have no way of knowing and therefore could only seek the answers from the teacher researcher.

The teacher input from the transcripts also showed, however, that students were not adept, after 21 sessions, at leading a discussion or of having a true dialogue about what they were reading. Even in the last session, session 21, the teacher researcher had to prompt discussion with questions that the students did not come up with on their own. For example, across all three groups the teacher researcher pushed the discussion related to the Berlin Wall by asking, “People were escaping from East Berlin to West Berlin, why do you think they were doing that?” (All Groups session 21 transcripts). The students would then discuss and suggest reasons, but often only with prompting by the teacher researcher.

## **Chapter 5: Discussion of Results**

The results from this study suggest that reciprocal teaching helped my ninth grade students improve their ability to ask questions, answer questions and offer summaries about passages they read in social studies textbooks. Students also showed improvement in their comprehension on the standardized comprehension assessment. Additionally, students who learned and practiced adapted versions of reciprocal teaching, different from those outlined by Palincsar and Brown, experienced positive gains in their reading comprehension scores equal to those students who learned and practiced the traditional reciprocal teaching approach.

These results as well as their implications for classroom teachers and for future research will be discussed in this chapter.

### Research Questions

- How will reciprocal teaching impact the ability of poor readers in my ninth grade U.S. History class to understand and discuss the concepts found in social studies textbooks?
- How will adapted reciprocal teaching procedures impact the ability of poor readers to understand and discuss the concepts found in social studies textbooks when compared to the results from the traditional reciprocal teaching approach?

### Discussion of Quantitative Results

#### Examining Descriptive Statistics for All Groups

The descriptive statistics taken from the results of the Gates-MacGinitie reading comprehension pre and post tests, the social studies reading comprehension pre and post-

assessments and the weekly social studies reading comprehension assessments paint an intriguing picture of the impact of reciprocal teaching on ninth graders in social studies classes who are poor readers. Looking first at the results for all students in the study (Table 1 and Figure 1), we see little growth in standardized reading comprehension pre and post-test. This finding follows what other researchers found—over a short time period, little change can be expected on standardized tests (Alfassi, 1998, Rosenshine & Meister, 1994). Various reasons account for limited growth or decline; the relatively short length of the study, the uneven engagement and focus of students on standardized tests, the students get tired of answering the questions, some students have anomalously high scores in the pre-test.

This could be the case with the two strategy group where a few students scored at the ninth, tenth and eleventh grade on the pre-test and yet on the post-test no one scored above the eighth grade level. The two strategy group appears to have lost ground based on the Gates-MacGinitie reading comprehension test. However, the two strategy group showed larger gains on the social studies pre and post assessments as well as the weekly social studies assessments.

Additionally, it is hard to account for the dramatic rise in scores for the traditional group as compared to the whole class group and the two strategy group. One could argue that students who learned and practiced the traditional approach showed far better success than the other two groups. However, when you look beyond the standardized results and do not see similar growth in the social studies comprehension assessments that argument loses strength.

Overall the students in the study did improve in their ability to answer questions correctly about what they read in social studies passages and to summarize more clearly what they read. The evidence of this can be seen in the results for all groups in Table 1 where the improvement in the social studies specific pre and post-assessments shows that before the reciprocal teaching intervention began students on average got 5.3 points or 48% of the answers and summaries correct, whereas after learning the reciprocal teaching strategies they got between 7.2 and 7.9 points or between 65% and 72% of the answers and summaries correct. Additionally, Table 1 shows that on the weekly social studies assessments, student scores went up on average from 6.7 points or 51% correct answers, questions and summaries in the first weekly assessment to 8.9 points with a high score of 9.2 points or to between 68% and 71% correct questions, answers and summaries in the final weekly assessment.

All of the results above confirm the hypothesis implicit in the first research question, that reciprocal teaching benefits students who are poor readers. The results suggest that ninth grade social studies students who are poor readers performed better at answering questions and summarizing after learning and practicing reciprocal teaching strategies. They were able to answer more questions correctly and were able to offer more effective summaries of the information they read on their own from social studies textbooks. This is a promising result for social studies teachers and for other teachers who work with students who struggle to comprehend what they read.

Some might suggest that arriving at such a conclusion is problematic because this study had no control group against which to compare the results. As discussed previously, the decision not to include a control group was made by the teacher

researcher in consultation with the dissertation committee. Because reciprocal teaching has been around for 20 years and has been the subject of a number of research projects, it did not seem necessary to use a control group to re-prove the effectiveness of the strategy. The original research done by Palincsar and Brown (1984) showed improvement against a control group. Students engaged in reciprocal teaching strategies moved from 15% to almost 80% correct answers on assessments while students in control groups moved from 35% to less than 50% correct answers on the assessments (Palincsar and Brown, 1984, p. 145). Lysenchuk, Pressley and Vye (1990) found similar improvement in their reciprocal teaching treatment group when compared to a control group. In their study, the control group practiced reading and test taking but did not practice the reciprocal teaching strategies. The control group reading comprehension score improved little while the reciprocal teaching group saw greater gains.

These facts led me to focus my research more on the changes that could be made to reciprocal teaching, rather than measuring the success of the strategy against a control group. This study was designed to compare traditional reciprocal teaching to adapted versions of reciprocal teaching such as whole class versus small group and two strategy versus four strategy approaches to reciprocal teaching.

#### Comparing the Descriptive Statistics for Each Group

A comparison of the descriptive statistics of the three groups on the different assessments offers a mixed picture (See Table 1 and Figure 2). The traditional group showed dramatic growth on the Gates-MacGinitie test considering the short length of the study. In Table 1 and Figure 2, you can see over a year's growth from fourth grade, first month to fifth grade, fifth month, which is extraordinary improvement in twelve weeks.

The other two groups did not experience substantial growth and in fact the two strategy group (Table 1 and Figure 2) experienced a decline in scores. One might conclude that the traditional reciprocal teaching approach led to such outstanding improvement, however, the other assessments in this study do not show similar growth for this group.

The students in the whole class and two strategy groups show more dramatic growth on the social studies reading assessments created by the researcher than do the students in the traditional group. On the social studies pre and post assessments, the traditional group shows improvement of 10 percentage points from 56% to 66% while the whole class group shows improvement of 22 percentage points from 40% to 62% and the two strategy group shows improvement of 18 percentage points from 51% to 69%. On the weekly social studies reading comprehension assessments, the traditional group improves from 56% in the first weekly assessment to 66% in the eighth weekly assessment. Meanwhile the whole class group improves from 50% in the first weekly assessment to 67% in the eighth weekly assessment. The two strategy group improved the most from 49% in the first weekly assessment to 71% in the eighth weekly assessment.

All of the results above support the hypothesis implicit in the second research question, that even with adaptations, reciprocal teaching can show beneficial results for students who are poor readers. Both the whole class group and the two strategy group, which used adapted approaches to reciprocal teaching, still maintained improved student performance (sometimes higher than the traditional group) on the assessments of reading comprehension in social studies. The two strategy group used the two strategies of questioning and summarizing instead of four strategies used by the traditional group and

the whole class group. The whole class group used reciprocal teaching with the whole class instead of with small groups. All three groups experienced improved student performance on the social studies pre and post and the weekly social studies assessments and the whole class group and the two strategy group evidenced gains equal to the traditional approach to reciprocal teaching used by the traditional group. These results suggest that teachers may be able to use easier or more manageable strategies and still expect to see positive results for their students. This issue will need to be researched further in order to confirm these findings. These results were supported by the analysis of variance tests used to compare the three groups.

#### Examining ANOVA Results for Reciprocal Teaching Adaptations

To determine if the adapted versions of reciprocal teaching were as effective as the traditional approach, I ran analysis of variance tests to compare the results of the different groups. I compared the traditional reciprocal teaching group and the whole class group, both of which use the four strategies of predicting, clarifying, questioning and summarizing to a two strategy approach, using only questioning and summarizing. The ANOVA showed no significant difference in the results of the traditional group and the whole class group which used the traditional reciprocal teaching approach and the two strategy group which used only the two strategies. While all groups showed improvement on the social studies pre and post test and the social studies weekly tests (Figure 3b and 3c), the improvement was similar across the different approaches. The adapted version of reciprocal teaching, using two strategies, proved to be as effective as the traditional version. Poor readers in this study improved their ability to understand

what they read in social studies textbooks by being exposed to two new strategies and four new strategies.

This result may have important implications for teachers interested in helping their students become more effective readers in the social studies and other content areas. While the research on reciprocal teaching has 20 years of data supporting its effectiveness at helping students improve their comprehension and comprehension monitoring strategies, the reciprocal teaching approach has gone underutilized in real classrooms. The reasons for the underutilization are unclear, however, if the reason relates to the cumbersome nature of the four strategy approach, the results of this research study suggest that reciprocal teaching can be adapted to make it more user friendly for the student and the teacher. By allowing students and teachers to focus on two strategies instead of four, this adaptation may encourage more teachers to use reciprocal teaching. This will be particularly helpful to teachers working with students who are reading below their grade level because the two strategy approach will be easier to implement and easier for students to remember and practice. Based upon the results in this study, teachers and students can expect gains similar to those achieved by using all four reciprocal teaching strategies.

A second adaptation to reciprocal teaching studied in this research compared reciprocal teaching instruction in small group settings with reciprocal teaching instruction in a whole class setting. An analysis of variance compared the results of the traditional group, small group instruction and the whole class group, whole class instruction. The ANOVA on the different measures showed mixed results (Figure 4). The results on the Gates-MacGinitie pre and post tests as well as the social studies pre and post tests

showed no significant difference, while the results on the social studies weekly tests showed a significant difference. On this measure, the traditional group had consistently higher scores, yet the whole class group showed more improvement from week one to week eight. Overall, both groups showed improvement on the Gates-MacGinitie pre and post test, the social studies pre and post test and the weekly social studies tests (Figure 4a). The improvement was similar across the two different approaches except on the Gates-MacGinitie where the traditional group showed more dramatic improvement.

The adapted version of reciprocal teaching, using whole class instruction, seemed to be as effective as the traditional version of small group instruction. Poor readers in this study improved their ability to understand what they read in social studies textbooks by being exposed to reciprocal teaching strategies whether they were in small group setting or in a whole class setting.

Again, this represents an important result for teachers interested in helping their students improve their ability to better understand what they read. This provides the option for teachers to use these effective reciprocal teaching strategies with an entire class. If the barrier to using reciprocal teaching was that organizing and implementing small group instruction was too time consuming or too difficult, then this research suggests that barrier no longer need exist. Students will benefit from learning these strategies in either small group or whole class settings.

The final analysis of variance examined the impact of reciprocal teaching on students of high, medium or low initial reading scores as measured by the Gates-MacGinitie comprehension test. In this study the terms high, medium and low are relative as the high category grouped students at grade six and above, the medium

category grouped students at grade four or grade five and the low category grouped students at grade two or grade three. The resulting ANOVA showed a significant difference on the Gates-MacGinitie measure but not on the social studies pre and post test or on the social studies weekly tests (Figure 5). The significant difference on the Gates-MacGinitie could be somewhat misleading due to a few anomalously high pre-test scores in the two strategy group discussed earlier. The high group (Figure 5a) on the Gates-MacGinitie test decreased while the medium and low groups increased. On the whole these ANOVA results show all three groups, low, medium and high, making improvements during the course of the study. This suggests that reciprocal teaching will have a similar impact on students of different levels of reading proficiency.

This result supports and expands the research on reciprocal teaching. While reciprocal teaching has been shown to be effective in different settings and with different age groups, the students in this study were, on the whole, reading at a lower level than students studied previously. Most of the work by Palincsar and Brown (1984) on reciprocal teaching was done with students who read at least two grades below their grade level. In my study, the students considered in the “high” group were reading two to three grades below the ninth grade level and we went further down from their to the “low” group where students who were reading six to seven grades below the ninth grade level. The fact that reciprocal teaching showed a positive impact with even these very low reading level students speaks to the strength of this as a strategy to help struggling readers.

## Discussion of Qualitative Results

The recorded reciprocal teaching sessions, the written transcripts of those sessions and the teacher researcher's notes provided valuable information and feedback about reciprocal teaching for this study. These sources of data allowed the teacher as the researcher to gain better insights into what was happening during the study and how the students were engaging in the reciprocal teaching process.

It became clear from early in the study, by session 8, that the students were learning to follow and implement the reciprocal teaching procedures. Both in the small teams (the traditional and two strategy groups) and as a whole class in the whole class group, students needed far less input from the teacher on how to go about the process as the study progressed. After a few sessions, the students did not have to refer to the reciprocal teaching prompt (Appendix B) or to the reciprocal teaching roles (Appendix C). While they had not yet mastered all of the strategies, they understood how to conduct a reciprocal teaching session and, for the most part, seemed to enjoy doing it. As one student said after session 8, "I like this. Why did you wait so long in the year to start doing it?"

The qualitative data I collected helped me to see how students did or did not use the reciprocal teaching strategies effectively. One such example was the strategy of predicting. An earlier reciprocal teaching researcher, Brady (1990), suggested that "it was my sense that the questioning and summarizing activities were the source of increased processing" (p. 103). Brady did not offer much evidence to support this assertion, but he did explain that the predicting and clarifying strategies were more difficult to use while working with history texts. He believed that predicting from a

chronological history text was difficult for students to do. For the students in my study, the predicting strategy appeared to have very little value. The predictions became more of an afterthought that some teams, when I was not monitoring them, would skip. Even when students did engage in making predictions based on the subheading, these predictions were often mere restatements of the subheading and not very helpful to student understanding of the text to be read. Almost 70% of the predictions made by students in the recorded sessions fell into this category. This finding adds some data to Brady's (1990) assertion that the strategy of predicting did not seem to be very effective in the social studies. As a strategy to improve reading comprehension, predicting helps to focus student thought on the topic they will read about by requiring that the student actively formulate a hypothesis concerning what the text will be about. Either because of limited background knowledge or because of a lack of confidence in being able to make a prediction about what course history might take, students in my study did not embrace the predicting strategy as they did the other reciprocal teaching strategies.

While I hypothesized that the role of clarifying might not be as important as questioning and summarizing, again following a research direction suggested by Brady (1990), clarifying turned out to have a mixed effect for the students' attempts to better understand what they read. In some ways the clarifying questions appeared to help the students make sense of what they were reading and also to create a discussion in the traditional group and the whole class group and often developed naturally in the two strategy group. While the quantitative data did not show a dramatic difference when clarifying was not used, the qualitative data suggested that the clarifying role was very helpful to the reciprocal teaching discussion. The clarifying question was especially

helpful for students reading social studies textbooks because these texts expect the student to possess a great deal of information that many students do not possess. The lack of background knowledge, particularly in students who struggle with reading and with school in general, wreaks havoc on their ability to read and understand social studies textbooks. Because reciprocal teaching requires that students ask questions to clarify things in the reading that they do not understand, it helped to create a safe space for the student to admit that he or she did not know something. This encouragement to ask questions is very healthy to the learning process for all students. It turned out to be, in my view, one of the most beneficial aspects of reciprocal teaching.

In addition to the positive impact of the clarifying strategy, I found some difficulties with the clarifying question in social studies. The major problem with clarifying lay in the fact that often no one in the reciprocal teaching group, with the exception of the teacher, could answer the question. As I coded the transcriptions from the study, I found that my input was most often needed to help clarify concepts or questions that the students had no way to answer. In my study, this tended to lead to a group dynamic that was still dominated by the teacher as the source of knowledge. Ideally in a reciprocal teaching setting the students would feel empowered to find the answer to questions that the group could not answer. This was difficult for students to do because their questions often were not answered in the text, but relied on background knowledge that these students did not possess. Therefore, it was my experience with reciprocal teaching that the role of the teacher was still very much integral to the learning that was to take place. The critical role of the teacher in reciprocal teaching is not

problematic, however, it is an important consideration that teachers must be aware of if they plan to implement reciprocal teaching procedures in the classroom.

Another point on the clarifying question is that it was often difficult to distinguish between a clarifying question and a question. While this is not a major problem, it did lead to some confusion among the groups as they tried to follow the reciprocal teaching procedure. Clearly further research is needed to examine and delineate the role of the clarifier and questioner so that we can better understand how each role is leading to improved comprehension.

The questioning strategy proved to be a very interesting part of the reciprocal teaching process. While being instructed on questioning strategy students were reminded of the questioning words like who, what, when, where, why and how and they were encouraged to focus on questions that aimed at the main idea of the paragraph or passage they had read. The idea behind the focus on the main idea question was that if students could identify the main idea of a reading through a question they would have an easier time coming up with a summary of that reading. Students in this study struggled with finding the main idea of paragraphs in order to ask main idea questions early on in the study. This was especially true for students in the two strategy group, who asked very few main idea questions during the early sessions of the study, only 14% main idea questions were recorded in session 4. Students in the traditional and whole class groups tended to ask more main idea questions from earlier in the study. This could be due to the role of the clarifying questions in those groups. The clarifying question, which was part of the process for the traditional and whole class group, but not for the two strategy group, helped students to focus on more basic or lower level information (when, how

many, where) as something to be clarified. This allowed them to reserve more critical information for the main idea question. Still, finding the main idea remained a difficult task for all groups.

In my daily reflection notes on reciprocal teaching, which I composed after each class, the second most common entry was “students still having trouble finding the main idea.” This was true for both the questioning role and the summarizing role that I will discuss below. Students in all groups, but especially the two strategy group, improved in their ability to ask main idea questions as the study proceeded. By sessions 19 and 21, 50% of the questions asked by the two strategy group related to the main idea of the reading. For the two strategy group more main idea questions turned into more good summaries, however this was not true for all three groups. There was some relation of main idea questions and good summaries for the whole class group, but there was little connection for the traditional group.

The summarizing strategy proved to be the most difficult one for students in all three groups. When students would choose roles, either in small teams or as a whole class, the summarizer role was the least coveted. This makes sense because developing a good summary of a reading is the most advanced skill of the four reciprocal teaching strategies. Creating such a summary, using their own words, often proved very challenging for the students in this study. Students relied heavily on the text to help them create questions and summaries. Many questions, answers and especially summaries were taken word for word from text. Students did not trust their own ability to come up with the words to summarize what they had read so they attempted to find a topic sentence or important sentence in the text to use as their summary. As the study

progressed and students became more comfortable, this did shift slightly so that more students were offering summaries in their own words. While reviewing the transcripts, I concluded that the word for word summary was not necessarily a negative. By going back to the text to look for a topic sentence or important sentence, students were forced to re-read to find meaning. This process helped them better understand what the reading was about which is the whole purpose reciprocal teaching. I felt that it was important to distinguish between word for word summaries and student created summaries in my coding, however, I believe both types of summaries demonstrate that the student can do that critical skill of finding the main idea and summarizing.

Overall, results of the qualitative aspects of this study show a potentially interesting development for teachers. The two strategy group showed the most consistent positive progress on the use of the questioning and summarizing strategies. It could be argued that the group that only had to focus on two strategies was able to make better gains on those two, because they did not have to learn the four strategies that the traditional and whole class groups. This focus on two strategies lends support to the hypothesis that an easier approach to reciprocal teaching can be helpful to the gains of the students.

More research is needed to better explain how each of the reciprocal teaching strategies, predicting, clarifying, questioning and summarizing, impact students' understanding of what they read. Because in this research in social studies predicting seemed to play a relatively minor role, it will be important to examine whether or not a three strategy approach, which would include clarifying, questioning and summarizing, might be more beneficial in social studies.

## A Teacher's Thoughts on Reciprocal Teaching

The comments above relate to specific results about the four strategies that make up reciprocal teaching. In the section that follows, I will discuss more generally impressions and ideas that have resulted from this teacher research, based on the use of reciprocal teaching. These will appear both as suggestions for teachers who might consider using reciprocal teaching and potential areas for further research on reciprocal teaching.

As a teacher, the most significant result of this study for me is that I will continue to use reciprocal teaching with my social studies students. I made that decision before I analyzed the data or listened to the recordings of the reciprocal teaching sessions. I found many positives in this strategy that I believe will help my students become better readers, thinkers and students. I also discovered several problems that I have not resolved related to using reciprocal teaching of which teachers, who might want to try this strategy, should be made aware.

The results of this study suggest that reciprocal teaching can be used effectively both in small group and in whole class settings. This offers the teacher flexibility in how and when to use reciprocal teaching and there are advantages and disadvantages in both settings.

The advantages of the small group setting are many. The small group setting, used in the traditional group and the two strategy group in this study, was more effective way to get all students engaged in the reciprocal teaching process. Each student had a role to play and each student was more attentive to the reading. The small group provided an opportunity for all students to participate in a discussion about the reading.

Students tended to be more comfortable asking and attempting to answer questions in the small group setting. Teenagers, of middle school and high school age, enjoy working with their peers and often will respond better to prodding and coaching from their classmates than they will from the teacher.

And sometimes they do not. The small group setting does have several drawbacks. Depending upon the maturity level of the students in your class, small groups can be very difficult to manage. In my reciprocal teaching daily notes, the most common notation was, “still difficult to keep all groups focused without me standing on top of them.” By session 10, I was trying to give students the opportunity to work more on their own without my constant supervision. This effort met with varying degrees of success depending mostly on the students’ willingness to buy into the process. Some groups would work very effectively, while others would do very little until I was standing right next to them. With several groups working at one time in the same classroom, some students found it difficult to hear and focus on what their group was trying to discuss.

When I did set up small group sessions where I could monitor each group, I had to develop other activities for the other groups to be doing when they were not working with me. This process worked fairly well, but it was time consuming and a little chaotic. Students who need more structure may struggle with this arrangement as well. One must consider how to address these issues when pursuing reciprocal teaching in a small group setting.

Reciprocal teaching works as whole class instruction and there are certain advantages to pursuing this setting. Working with the whole class at one time can be a more efficient way to proceed. It usually takes less time to complete a reciprocal

teaching discussion. This format also allows the teacher to monitor what everyone in the class is doing. It was my experience with the whole class group in my study, that the discussion we had as a whole class were often more interesting and broader than the small group discussions. This, I believe, was due to the fact that with a whole class you have many more ideas, minds and voices sharing in and contributing to a single discussion. If you have a great discussion in a small group reciprocal teaching session, there is no guarantee that each group will have that same discussion, however, in a whole class setting all students get the benefit of all discussions.

That assumes that you can engage a whole class in a discussion. I found that in the whole class group, many students played their usual role of sitting back and not really paying attention. The drawbacks associated with whole class instruction relate primarily to engaging all students. With a whole class, not every student will have a specific role to play and many will tune out. Students in the whole class group did not know the reciprocal teaching process as well as students in the traditional and two strategy groups. This became evident in session 19 when I had the whole class group also working in smaller groups, reading articles about the cold war. The transcript from session 19 show that the performance of students in the whole class group fell off considerably when they had to work on their own. They asked fewer clarification questions and offered weaker summaries than they did when they worked as a whole class. The whole class setting must be constructed in a way to deal with these concerns if it is to be effective.

So which reciprocal teaching approach—traditional, whole class or two strategy should a teacher interested in using this procedure follow? As with much in education, it depends on many factors. There are advantages and disadvantages to each of the three

approaches studied. However, the results of this study suggest that students will benefit from exposure to any of the three approaches. The whole class and two strategy approaches can be implemented more easily than the traditional approach. My recommendation would be to begin using reciprocal teaching as a whole class activity. Once students are familiar with the procedures, it will be easier to move to small groups for variety and to insure that students are really using and understanding the strategies that make up reciprocal teaching.

Anyone planning to use reciprocal teaching strategies must consider the timing and frequency of this type of instruction. In this study, I used reciprocal teaching for 10 to 30 minutes during almost every class session for over two months. While this helped to ensure that my students knew the process well, by the end of the study even students who enjoyed reciprocal teaching were getting tired of it. It is important to use the strategy frequently enough that the students know it and can do it, but not to use it so frequently that it becomes rote and stale. I would recommend once per week for about 20 minutes, unless you are discussing a longer article. For my ninth grade students, once I went beyond about 20 minutes, I lost the attention of most involved.

Another consideration for reciprocal teaching users will be what to read. For this study, I intentionally decided to use the history textbook assigned to my classes for most of the readings. I made this decision because part of my research objective was to see if this strategy could be easily implemented, meaning that teachers do not have to go out and find or create the materials to use for reciprocal teaching. I believe the results of the study suggest that almost any textbook can be effectively used for reciprocal teaching.

However, when I use this strategy in the future, I plan to supplement the textbook readings with others that might lead to more discussion or debate among my students.

One difficulty with reciprocal teaching that I will still need to improve upon is the ability of my students to engage in “real” discussions about what they are reading. The students in my study showed that they could follow the reciprocal teaching process—predict, clarify, question and summarize. The reciprocal teaching sessions lacked real dialogue or discussion. During the study, when I tried to get my students to develop an in-depth discussion on a topic on their own, the results were not very good. My reflection notes from April 4, “the real difficulty is getting kids to own the reciprocal teaching process and to engage in a real discussion.” One of the goals of reciprocal teaching is for students to engage in this type of discussion. Ideally, reciprocal teaching would be used as a springboard to improve the ability of students to read and comprehend, but also as to help students develop the ability to engage a more natural discussion of whatever topic was assigned. The students in my study did not reach this secondary goal. Perhaps if my students use reciprocal teaching for an entire year, they will be comfortable with the roles by mid-year and by second semester may be ready for meaningful discussions. This is an area of reciprocal teaching that needs more research and explanation as to how to create “real” dialogue and discussion that engages students.

The good news about my experience with reciprocal teaching revolves around how my students reacted to it and what I learned by using this strategy. On the whole, the students enjoyed using reciprocal teaching methods. The students with whom I work do not offer praise to teachers or teaching strategies easily. They have spent nine years perfecting the art of disliking school and the activities in which teachers force them to

participate. Their usual response to my introduction of a new activity or explanation of their next task is a series of groans, if not expletives. Their response to reciprocal teaching was an uncharacteristically quick move to their groups and a general positive disposition. Not all of my students held this view, but it was held by the majority, which was no small achievement.

As a social studies teacher, using reciprocal teaching helped me learn more about how my students read, how they do not read, what they know and what they do not know than any other teaching strategy I have ever used. After teaching for 12 years, I know that students have a difficult time understanding what they read in social studies, but by sitting with them as they struggled through the textbook I gained a better understanding of the difficulties they face. Some examples will help make this clear. As we prepared to read a section about the atomic bomb, a student made a prediction related to the Jews and the holocaust because he was looking at the picture on the same page we were reading and did not realize it was related to a different topic. When we read about the fall of the island of Okinawa to the United States during World War II, a student asked, “how does an island fall?” not understanding this as a reference to an American victory. When we were reading about cold war tensions between the United States and the Soviet Union, a student asked, “what’s a Krushchev?” not understanding he was a person not a thing.

Without reciprocal teaching, I would not have been there to hear these critical misunderstandings and would not have gained further insight into the troubles my students face when they read from the history textbook. Reciprocal teaching allowed me to make teachable moments out of what would have otherwise been misunderstanding and frustration.

## A Teacher Researcher's Thoughts on Teacher Research

In addition to examining the effectiveness of reciprocal teaching with my own students who are struggling readers, one goal of this study was to experience teacher research with an eye toward how to bridge the gap between research and teaching. Part of the premise of this study was the idea that, if reciprocal teaching is such a great strategy, why are more teachers not using it? By pursuing this question as a teacher and a researcher simultaneously, I hoped to be able to offer some insights into both the teacher research process and the divide between research recommended practices and the practice of real classroom teachers. I offer the following thoughts on these topics.

Researching my own teaching required me to be much more thoughtful, attentive and aware of what it is that I do as a teacher. This, in and of itself, led me to deeper understandings about my teaching and my students' learning. Teacher research forced me to be the kind of teacher that I would like to be all the time. I made myself take the time to carefully plan my lessons and, more importantly, to carefully assess the effectiveness of those lessons before moving on to the next day. The continued rush of a teacher's life at school rarely allows for careful reflection on what we have just completed. The bell will ring again soon. It waits for no one. Therefore the focus for teachers by necessity is upon the class that comes next, rather than upon the class we have just taught. Engaging in teacher research forced me to stop and consider the class that just ended--- How did that go? What worked? What do I need to change? Did they get it? How do I know? Taking the time to reflect on my teaching helped me to recount my experience with reciprocal teaching in the pages of this dissertation, but it also made me a more effective teacher in the classroom.

While researching my own teaching provided the fantastic benefit of reflection and improvement, it did not come without costs, namely time. Too little time is the reality that most teachers deal with and teacher research adds another layer to that problem. During my research study, I had to make decisions about what to do with the limited resource of time. Certain duties that I would normally have were delayed or not done. I was able to sustain this situation over the course of a three-month study, however I am not certain I could do so for much longer. In my mind, the benefits of teacher research outweighed any items that I overlooked. If teacher research can be short term, yet frequent it may offer an excellent method for teacher improvement and professional development.

Whether this research will help bridge the gap between educational research and teacher practice will depend largely on forces beyond the control of this teacher researcher. However, I do know that there are at least ten more people in my school beginning to use reciprocal teaching this year as the result of discussions that have emanated from this research. This is one example, on a very small scale, of the potential that teacher research has to help bridge the research and practice gap. As more teachers begin to study their teaching in “systematic and intentional” ways, their teaching partners, teams and other colleagues will begin to benefit from their discoveries (Cochran-Smith & Lytle, 1990, p.2). The gap between research-based teaching strategies and classroom practices will be bridged, not by more big studies, but by one teacher researcher project at a time.

## Appendix A

### Script for Reciprocal Teaching Introduction and Training

*Adapted from scripts from Palincsar and Brown (1984), Brady (1990), Lederer (1997)*

#### Introduction

(Teacher/Researcher) As I have said all year, our goal in the SPARC Program is to help you improve as a reader and a writer. During this marking period, we will be learning and practicing specific strategies that are designed to help us meet that goal here in your U.S. History class. The strategies that we will learn will help you to understand what you read better and to help make you aware of when you are not understanding what you read. The process we will use to learn these strategies is called...

RECIPROCAL TEACHING.

I think most of you are going to enjoy this process because it involves many things you like to do. First, you will get to work in groups and talk to your classmates, which you all like to do. Second, several of you have asked me, "Can I teach the class?". Well, reciprocal teaching will give you the opportunity to teach your classmates. During our reciprocal teaching activities we will take turns playing the role of teacher and student. Sometimes I will be the teacher and you the student, sometimes you will be the teacher and I will be the student, sometimes your classmates will be the teacher you and I will be the students.

The strategies that we will learn and practice to help us better understand what we read are: ***predicting\****, ***clarifying\****, ***questioning and summarizing***. (\*predicting and clarifying will be deleted for The two strategy group) We will practice these strategies as we read information that we are studying in U.S. History from our textbook. Each week I will give you a check up to see how well you are using these strategies.

We will begin learning to use these strategies over the next couple of days as a whole class. After we have practiced that for a little bit, we will start working in small groups so that we get more practice using these strategies. In the next few weeks you will all become comfortable using these strategies and hopefully you will become a better reader, not only in U.S. History, but in all your classes.

So let's get started!!

## Questioning

Questions play an important role in our lives in school and in the real world. A lot of what you do in school deals with answering questions.

Who can give me some examples of how questions are used in school?

(reading assignments, tests, teachers ask, find out information)

What about when you need or want more information? Let's practice asking questions—say you want to go to see \_\_\_\_\_, what do you need to find out?

One of the strategies we will be practicing over the next few weeks is how to ASK GOOD QUESTIONS when we are reading information about U.S. History.

**We will really focus on asking questions about information that is important in the reading and not about information that is unimportant or trivial.**

What do you think are some of the reasons we will want to learn to ask questions as we are reading?

(test ourselves, focus on important information, predict what teacher might ask on a test)

Let's start by remembering what our "questioning" words are—what words do you usually see at the beginning of a question? (the W words)

Who, what, when, where, why, how

We will practice questioning by reading a sentence from the text book and asking specific kind of question—who, what, when, where, why, how.

Ask a question based on this sentence—

"The efforts to promote peace failed in Japan, Italy and Germany."

--Where did the peace efforts fail?

### Whole Class Practice Session—20 minutes

Teacher and students will read through text sections together to practice asking question using the "W" question words. Initially, they will stop at the end of each sentence. After students are comfortable with the questioning concept, the teacher will ask someone to ask a question after each paragraph. The teacher will begin to encourage questions that focus on the main idea of each paragraph.

Teacher will place a short paragraph on the overhead. Following the paragraph there will be 3 questions. Teacher will ask students to select the question they believe would be the best "main idea question". Students and teacher continue to practice this strategy.

### Group Practice Session—15 minutes

Once the class has practiced, the teacher will divide the class into groups of 4 or 5 students, who will take turns asking a question as they read further in the textbook.

## Summarizing

Another important skill in helping you to understand what you read is your ability to summarize what you have read. Someone explain to me what a summary is?

**A summary is one or two sentences that tells the most important ideas of a section.**

When you are asked to summarize, you must be able to look at what you have read and choose the most important information. You must be able to select the main idea. Many times you will be able to find a topic sentence in a paragraph (sometimes at the beginning) that will help you figure out the main idea.

Also you must leave out information that is NOT important or information that is repeated.

### Whole Class Practice Session—20 minutes

We are going to practice summarizing first by choosing the main idea of the following paragraphs.

Teacher and students read through paragraphs in text or on overhead and discuss what is the main idea. They first look for a topic sentence to guide them and then they leave out unimportant information.

“Even more threatening were events in Europe. Weakened by strikes and riots after World War I, Italy fell under the influence of a dictator named Benito Mussolini. A dictator is a person with complete control of a government.”

Students will choose the main idea of the paragraphs as they read. Teacher and students will discuss their choices.

Teacher will continue to remind students of the process—identify a topic sentence, leave out unimportant information, leave out repeated information.

### Group Practice Session—15 minutes

Once the class has practiced, the teacher will divide the class into groups of 4 or 5 students, who will take turns choosing the main idea of the paragraphs.

After some practice with the main idea students will practice writing a one or two sentence summary of the final paragraphs they read.

Students should start all summaries with this sentence “This paragraph tells us that...”

## **Clarifying**

If you read something and you do not understand what you are reading, what do you do?  
(ask questions)

**Clarifying means knowing when we do not know something and asking questions to find out about it.**

This happens a lot when you are reading for social studies classes or science classes because there you are learning about new ideas and some of them are very confusing. In history you are learning about things that happened a long time ago and that may not make much sense to you now.

It is really important to ask questions to clarify what you do not understand when you are reading.

### **Whole Class Practice Session—10 minutes**

Students and teacher will read through paragraphs on overhead or in textbook and take turns identifying things that are confusing and asking questions about those things.

### **Groups Practice Session—10 minutes**

Once the class has practiced, the teacher will divide the class into groups of 4 or 5 students, who will take turns asking questions about things they do not understand in their textbook.

## Predicting

What does it mean to make a prediction about the weather?

Weather forecasters make predictions about what the weather will be. Sports watchers make predictions about how their teams will do.

**Predicting something means using clues about something to suggest what might happen in the future.**

When we are reading, it can be helpful to make predictions about what will happen next so that you keep yourself engaged in what you are reading. You can read ahead and check your predictions.

When reading a history textbook, it can be a good idea to try to make predictions based on the headings or subheadings that you find in the textbook. Let's see how this works.

### Whole Class Practice Session—10 minutes

Read the heading—"Efforts to keep the peace"—what do you think this section will be about?

How about "The Rise of Dictators"?

Teacher and students continue to practice making predictions.

You can also make predictions based upon what you read.

"The agreement forced the Czech government to surrender the Sudetenland to Germany. In return, Hitler promised to make no more territorial demands on Europe."

Make a prediction based on this—Hitler will make no more demands or Hitler will make more demands.

### Group Practice Session—10 minutes

Once the class has practiced, the teacher will divide the class into groups of 4 or 5 students, who will take turns making predictions as they read further in the textbook.

## **Appendix B**

### Reciprocal Teaching Procedural Prompts for Students

The traditional group and whole class group--*Copy for Student Groups*

#### **Reciprocal Teaching—How it Works**

While you are practicing and learning how to do Reciprocal Teaching—keep this sheet nearby so you remember how it works!!

Step 1—Group members meet and assign roles:

**Reader/Leader   Predictor   Questioner   Clarifier   Summarizer**

Step 2—**Reader/Leader** reads section title,  
**Predictor** makes prediction about what section will be about

Step 3—**Reader/Leader** reads 1<sup>st</sup> paragraph

Step 4—**Clarifier** asks group if there was anything they did not understand

Step 5—**Questioner** asks group a question(s) about the paragraph

Step 6—**Summarizer** states a brief summary of paragraph

Step 7—**Predictor** makes a prediction about what may happen next in the text

Step 8—**Reader/Leader** moves to next paragraph and repeats steps 3 -7

Step 9—**Process continues** until group has completed the section

### Reciprocal Teaching—How it Works

While you are practicing and learning how to do Reciprocal Teaching—keep this sheet nearby so you remember how it works!!

Step 1—Group members meet and assign roles:

**Reader/Leader   Questioner1   Summarizer1   Questioner2   Summarizer2**

Step 2—**Reader/Leader** reads section title and 1<sup>st</sup> paragraph

Step 3—**Questioner1** asks group a question about the paragraph

Step 4—**Questioner2** asks group a question about the paragraph

Step 5—**Summarizer1** and **Summarizer2** take turns giving a brief summary of every other paragraph

Step 6—**Reader/Leader** moves to next paragraph and repeats steps 2 -5

Step 7—**Process continues** until group has completed the section

## Appendix C

### Reciprocal Teaching Roles for Students

The traditional group and whole class group—*Copy for Students*

#### Roles for Reciprocal Teaching

##### Reader/Leader

Your job is to keep your group focused and organized  
and to read aloud each paragraph to your group.

##### Predictor

Your job is to make predictions (educated guesses) about what a  
reading section might be about or what might happen next.  
Remember—focus on the clues about what is next

##### Clarifier

Your job is to ask if anyone in your group had a question  
about or did not understand something that they read.  
Remember—focus on what confused you

##### Questioner

Your job is to come up with a question to ask your group  
about the paragraph that you read. Think of a question that a teacher might  
ask about the paragraph.  
Remember—who, what, when, where, why, how

##### Summarizer

Your job is to pick out the main ideas of each paragraph and  
summarize the paragraph for your group.  
“This paragraph tells us that...”  
Remember—focus on topic sentence, drop the unnecessary

Roles for Reciprocal Teaching

<u>Reader/Leader</u>
Your job is to keep your group focused and organized and to read aloud each paragraph to your group.

<u>Questioner1</u>
Your job is to come up with a question to ask your group about the paragraph that you read. Think of a question that a teacher might ask about the paragraph. Remember—who, what, when, where, why, how

<u>Questioner2</u>
Your job is to come up with a question to ask your group about the paragraph that you read. Think of a question that a teacher might ask about the paragraph. Remember—who, what, when, where, why, how

<u>Summarizer1</u>
Your job is to pick out the main ideas of each paragraph and summarize the paragraph for your group. “This paragraph tells us that...” Remember—focus on topic sentence, drop the unnecessary

<u>Summarizer2</u>
Your job is to pick out the main ideas of each paragraph and summarize the paragraph for your group. “This paragraph tells us that...” Remember—focus on topic sentence, drop the unnecessary

## Appendix D

### Pre-Assessment and Post-Assessment---Social Studies Comprehension Assessment

#### Directions

1. **Read** the following passage.
2. After you have finished reading, turn your paper over and complete the assignment. The assignment will ask you to **answer 4 questions** about what you have read and ask you to **write a short summary** of what you have read.

#### The Fighting Forces

During World War II, about 1 million African Americans signed up to fight or were drafted to fight for the United States. Compared to earlier wars, there was some improvement in the conditions for African American soldiers. However, they were still kept in segregated or all-black units and they often were treated with disrespect by white soldiers and officers.

A number of African Americans became pilots in the air force. The most famous and most highly decorated African American flying unit was the 99<sup>th</sup> Pursuit Squadron under the leadership of Colonel Benjamin O. Davis, Jr. These pilots were called the “Tuskegee Airmen” because they trained at Tuskegee, Alabama.

During World War II, approximately 400,000 Hispanic Americans fought for the United States. One of the most famous Hispanic units was the 88<sup>th</sup> unit made up of mostly Mexican Americans. This unit was known as the “Blue Devils”. During the war, seventeen Hispanic Americans earned the country's highest honor called the Congressional Medal of Honor.

One of the most interesting minority groups involved in World War II was the Navajo Code Talkers, who served in the battles being fought on the islands in the Pacific Ocean during the war. These “code talkers” sent secret messages based on the Navajo (an Native American Indian tribe) language. This Navajo language proved to be a code that was impossible for the Japanese to decode. For example, when the “code talkers” used the Navajo words for “chicken hawk” they meant a dive-bomber plane, “hummingbird” was a fighter-plane and “iron fish” was a submarine. These Native Americans fighting for the United States were instrumental in helping the U.S. win some of the most important battles in the Pacific.

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**Pre-Assessment and Post-Assessment---Social Studies Comprehension Assessment**

Based on the information you just read, please do the following:

➤ **Answer the following questions about the passage that you read:**

1. What were the 3 different racial groups discussed in the passage?
  
  
  
  
  
  
  
  
  
  
2. According to the passage, was the treatment of African Americans better or worse during World War II?
  
  
  
  
  
  
  
  
  
  
3. Why do you think that this passage mentions that “seventeen Hispanic Americans earned ...the Congressional Medal of Honor.”?
  
  
  
  
  
  
  
  
  
  
4. How did the Navajo “code talkers” help the U.S. in the war in the Pacific?

➤ **Write a brief summary about the passage you read:**

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## Post-Assessment 1--Social Studies Comprehension Assessment

### Directions

1. **Read** the following passage.
2. After you have finished reading, turn in your paper and complete the assignment. The assignment will ask you to **answer 4 questions** about what you have read and ask you to **write a short summary** of what you have read.

### Conflict at Home over the War in Vietnam

As American soldiers struggled in Vietnam, large numbers of Americans back at home began to turn against the war. Television news reports brought the images of the war right into people's homes. Many reporters were allowed to go with the soldiers into battle. Americans at home watched the television reports and saw the death and destruction caused by the war. As the war continued for several years without a victory and as the death toll for American soldiers continued rise, the news reports became discouraging about the chances for the U.S. to win the war in Vietnam.

Many Americans came to believe that the Vietnam War was a terrible mistake. Some people claimed that fighting a war in a far away country was not worth the cost of American lives and money. Other Americans argued that it was wrong for American soldiers to be killing people in a poor Asian country that was on the other side of the world.

Americans who wanted to stop the war were called **doves**, because the dove is often used as a symbol for peace. People were doves for a wide variety of reasons. Some, like Martin Luther King Jr., were pacifists, which meant that they were opposed to all wars. Others were not worried about the "domino theory" and did not think that Vietnam was important to American interests. Still others claimed that because many of the people of Vietnam wanted a communist government, they should have the right to have one even if the U.S. did not like communism.

Americans who believed that the war must be fought until it was won were known as **hawks**. The hawks believed that the U.S. needed to send more soldiers so that we could win the war. They thought it would make the U.S. look like weak cowards to leave Vietnam before winning the war.

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**Post-Assessment 1---Social Studies Comprehension Assessment**

Based on the information you just read, please do the following:

➤ **Answer the following questions about the passage that you read:**

1. What 2 names were used to describe people called who were for or against the war in Vietnam?
  
2. How did television and news coverage influence how people felt about the war in Vietnam?
  
3. Why did many Americans believe the war in Vietnam was a mistake?
  
4. Why did the hawks believe the U.S. should continue to fight in the war in Vietnam?

➤ **Write a brief summary about the passage you read:**

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## Appendix E

### Weekly Social Studies Comprehension Assessment #1

#### Directions

1. **Read** the following passage. After you have finished reading, turn your paper in and complete the assignment your teacher gives you.
2. The assignment will ask you to **create 2 questions** about what you have read, answer the **2 questions** about what you have read and **write a short summary** of what you have read.

#### D-Day Invasion

By early 1944, the Allies (U.S., Britain, Russia) were pushing the German and Japanese armies back and they were winning the war. However, many deadly battles still had to be fought and many lives would still be lost before World War II was over. One of the most important battles of World War II would be fought on June 6<sup>th</sup>, 1944 and it was known as D-Day.

To defeat Germany and end the war in Europe the Allies had to invade France, which had been controlled by Germany since 1940. For more than six months, the armies of the Allies prepared to invade France. General Dwight Eisenhower of the U.S. Army planned this invasion.

The Germans knew this invasion was coming. They placed land mines (bombs that exploded when stepped on) and barbed wire all along the beaches of France where they expected the Allies to invade. The Allies bombed Germany and France to prepare the way for their attack.

The D-Day Invasion began on June 6<sup>th</sup>, 1944 when the Allies started their invasion of France. Over 170,000 soldiers crossed the English Channel from Britain to storm the beaches of Normandy in France. These soldiers faced German gunfire, bombs, mines and barbed wire as they attempted to take France back from the Germans. The D-Day invasion was the largest land and sea attack in history. Within a few weeks of the first attack, the Allies had placed hundreds of thousands of soldiers, weapons and tanks in France.

One reason the D-Day attack was successful was because the Allies had tricked the Germans and Hitler. The Germans thought that the Allies would attack at a different location in France and Hitler had sent his best soldiers and defenses to this location. With this important victory on D-Day, the Allies prepared to push the Germans back to Germany and end World War II.

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## Weekly Social Studies Comprehension Assessment

Based on the information you just read, please do the following:

- **Create 2 questions about the passage that you read and answer those questions:**

1. Question

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1. Answer

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2. Question

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2. Answer

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- **Write a brief summary about the passage you read:**

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## Weekly Social Studies Comprehension Assessment #2

### Directions

1. **Read** the following passage. After you have finished reading, turn your paper in and complete the assignment your teacher gives you.
2. The assignment will ask you to **create 2 questions** about what you have read, answer the **2 questions** about what you have read and **write a short summary** of what you have read.

### Problems at Little Rock

The Supreme Court ordered all schools to desegregate (end the separation of the races) as soon as possible. In many places, schools desegregated with only a few problems. However, in some places, political leaders and other citizens did not want to see blacks and whites go to the same schools and they tried to stop desegregation.

In 1957, a court in Little Rock, Arkansas, decided to desegregate (or integrate) Central High School, which was an all white school. The Governor of Arkansas, Mr. Faubus did not want schools to be desegregated. He sent the soldiers to stop the black students from going to the all-white Central High School. On the second day of school in 1957, nine African American students went to the school. Crowds yelled ugly names at the teenagers. When the students tried to enter the Central High School, the National Guard soldiers did not let them go into the school.

The desegregation of Central High School became a national news story. Photographs of crowds yelling at the nine African American students appeared in newspapers across the country.

President Eisenhower was upset by the news from Little Rock. He sent United States soldiers to Little Rock to protect the Little Rock Nine when they started school in late September. With the help of the soldiers Central High School was desegregated. However, for several weeks, armed soldiers had to take the African American students to class because some white students kicked, shoved and cursed at the African American students.

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## Weekly Social Studies Comprehension Assessment #3

### Directions

1. **Read** the following passage. After you have finished reading, turn your paper in and complete the assignment your teacher gives you.
2. The assignment will ask you to **create 2 questions** about what you have read, answer the **2 questions** about what you have read and **write a short summary** of what you have read.

### Action for Voting Rights

The summer of 1964 became known as Freedom Summer. Earlier in that year the Civil Rights Act had become a law. This new law protected the rights of all citizens to vote. As soon as the Civil Rights Act became a law, many college students headed to the South and they worked all through the summer of 1964 to help African Americans in the South sign up to vote. Some of the whites who lived in the South did not like these college students and they tried to stop them from helping African Americans sign up to vote.

In July, three of these college students disappeared. Two of the young men, Andrew Goodman and Michael Schwerner, were white and James Chaney was an African American. The three young men had been arrested for speeding in the southern state of Mississippi. They were put in jail one evening and no one ever saw them alive again. The F.B.I. searched for these men for a month and finally found their dead bodies in August. Chaney had been beaten, and all three men were shot to death.

The murders of these three young men shocked America. Many could not believe these horrible actions could be taken by people opposed to, or against, equal rights for African Americans. African Americans were even more determined to use the power of the vote.

Throughout Freedom Summer, the KKK attacked the civil rights workers who were trying to sign up African Americans to vote. By the end of the summer, more than 35 African American churches had been burned and more than 30 houses were destroyed by people who did not want to see African Americans get the right to vote. However, by the end of the summer of 1964, more than 170,000 African Americans had signed up to vote.

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## Weekly Social Studies Comprehension Assessment #4

### Directions

1. **Read** the following passage. After you have finished reading, turn your paper in and complete the assignment your teacher gives you.
2. The assignment will ask you to **create 2 questions** about what you have read, answer the **2 questions** about what you have read and **write a short summary** of what you have read.

### Angry Voices for Change

By 1964, the civil rights movement had brought many changes to American society. However, many African Americans thought the changes had come too slowly. Some leaders of the civil rights movement were looking for a new way to gain equality and fair treatment. They felt that the nonviolent approach was no longer the answer.

Dr. Martin Luther King Jr. was one of the most respected men in the world. His plans for nonviolent, or peaceful, protest had helped African Americans gain more rights. However, not all African Americans agreed with Dr. King.

For many African Americans, gaining fair treatment was taking too long. Many young leaders in the fight for equality were angry. Some believed that African Americans would be better off living separately from whites.

Many African Americans in the North felt that white society would never treat them fairly. They were angry about white landlords in African American neighborhoods who owned buildings that were not kept well and still charged high rents. They were also angry with white store owners who charged high prices in African American neighborhoods. These African Americans spoke out against white city officials who ignored their problems. They also demanded that white police officers begin to treat them fairly.

One person who spoke out against the slow progress of the civil rights movement was Malcolm X. As a young man, Malcolm X joined the Black Muslims. The Black Muslims believed African Americans and white Americans should live separately. Malcolm X became a symbol for African Americans who did not want to follow Dr. King's nonviolent and slow approach to gaining civil rights.

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## Weekly Social Studies Comprehension Assessment #5

### Directions

1. **Read** the following passage. After you have finished reading, turn your paper in and complete the assignment your teacher gives you.
2. The assignment will ask you to **create 2 questions** about what you have read, answer the **2 questions** about what you have read and **write a short summary** of what you have read.

### The Black Panthers

A group called the Black Panther political party was formed in Oakland, California, in 1966. This political party worked to improve the rights and opportunities of all African Americans. The members of the Black Panther party believed in black pride and black power. People who supported the ideas of black power hoped to win political and economic power for African Americans.

The Black Panther party drew up a list of demands it hoped to achieve for African Americans. They wanted more and better jobs for African Americans and better housing in African American neighborhoods. The Black Panthers also demanded better education and an end to cruel treatment by the police. Also, the Black Panthers demanded that African Americans who were on trial be judged by an African American jury.

The Black Panthers did not necessarily agree with the nonviolent protests that Dr. King and other civil rights groups tried to follow. The Black Panthers said that white violence must be answered by black violence. This led to battles in many cities between the Black Panthers and the police. Black Panthers tried to make sure that African Americans who were being arrested were being treated fairly. They would observe these arrests with their guns displayed to make sure the police did not abuse the people being arrested. Some civil rights leaders felt that the Black Panthers and the ideas of black power would hurt the cause of equality for African Americans.

In addition to their views on black power and resistance to police, members of the Black Panther party started programs to help in poor, inner-city African American communities. They began day-care programs for children of working parents and they offered breakfast to school-age African American children.

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## Weekly Social Studies Comprehension Assessment #6

### Directions

1. **Read** the following passage. After you have finished reading, turn your paper in and complete the assignment your teacher gives you.
2. The assignment will ask you to **create 2 questions** about what you have read, answer the **2 questions** about what you have read and **write a short summary** of what you have read.

### The Cold War: Democracy Against Communism

A few months after the end of World War II, a new kind of war began. It became known as the Cold War. A cold war is a sharp conflict between countries without having an actual war where armies fight. A cold war is fought mostly with angry words and threats. The Cold War was a struggle for power between communist and non-communist countries. The Soviet Union (Russia) was a communist country. The United States was a democratic country. During the Cold War, the United States and the Soviet Union did not get along very well.

The two countries (United States and Soviet Union) did not agree on the same system of government or the same type of economy. The Soviet Union was a communist country. One of the goals of a communist country is to make sure all its people were provided with the basics of life—a home, a job, health care and education. Communism promotes the equality of all people. To achieve this goal, however, communist countries do not always support the freedom of all the individuals in a country. The people who live in communist countries often do not have the freedom to do what they want to do.

The United States was a democratic country. One of the goals of a democratic country is to make sure that people have the freedom to do what they want to do. Therefore, the U.S. did not like how the communist countries took this freedom away from people. The United States did not want to see more countries become communist because we were worried about people losing their freedom.

In 1945, the United States felt that the Soviet Union (Russia) was trying to spread communism throughout the world. The Soviet Union felt that the United States was trying to take control of other countries. Neither country trusted the other and the Cold War between the United States and the Soviet Union lasted from 1945-1991.

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## Weekly Social Studies Comprehension Assessment #7

### Directions

1. **Read** the following passage. After you have finished reading, turn your paper in and complete the assignment your teacher gives you.
2. The assignment will ask you to **create 2 questions** about what you have read, answer the **2 questions** about what you have read and **write a short summary** of what you have read.

### The Korean War

The U.S. was able to contain communism in Europe after World War II. Containment, or stopping the spread of communism, also worked in parts of Asia. However, in the small country of Korea, the U.S. had to fight a war to stop communism.

Korea is a country on the east coast of Asia. From 1910 to 1945, Korea was under the control of Japan. After World War II, Korea was divided into two parts. Communist soldiers controlled North Korea and American soldiers controlled South Korea. Neither the U.S. or the Soviet Union could agree on a plan to put the two parts of Korea back together. Both the U.S. and the Soviet Union had become superpowers, and neither wanted give up part of Korea and allow the other to become more powerful.

In June 1950, North Korean soldiers attacked South Korea. Their plan was to unite Korea under a Communist government. Americans were angry about the attack. President Truman immediately sent U.S. soldiers to Korea to fight against the communist soldiers of North Korea. The newly formed United Nations also sent troops.

American soldiers made up 90% of the fighting force. Suddenly, the Korean War became an American war. However, President Truman never asked Congress to declare war. The fighting in Korea was called a police action to stop communism.

The Korean War lasted until 1953. Neither side was able to win a victory. Finally, the two sides agreed to end the fighting and set up a demilitarized zone between North and South Korea. No weapons or military forces are allowed inside this zone and communist North Korea and democratic South Korea are still divided to this day.

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## Weekly Social Studies Comprehension Assessment #8

### Directions

1. **Read** the following passage. After you have finished reading, turn your paper in and complete the assignment your teacher gives you.
2. The assignment will ask you to **create 2 questions** about what you have read, answer the **2 questions** about what you have read and **write a short summary** of what you have read.

### Background of the Vietnam War

During the Cold War in the 1950's, the U.S. tried to stop the spread of communism. By the 1960's, the U.S. would face a bigger challenge in Vietnam. The United States did not want to become too involved; however, the U.S. leaders wanted to stop the spread of communism in Vietnam.

Before the 1950's, few Americans had ever heard of Vietnam. The U.S. had very little contact with this small country in Southeast Asia that was more than 10,000 miles away.

Vietnam had been controlled by France for many years. In 1954, the people of Vietnam fought a war to gain independence from France. The man who led Vietnam to win their freedom was named Ho Chi Minh. Ho Chi Minh was also a communist.

Vietnam, like Korea, became a divided country. North Vietnam became a communist country and was led by Ho Chi Minh. South Vietnam was non-communist and was supported by the United States. The U.S. worried that Ho Chi Minh and the communists in North Vietnam would try to take over all of Vietnam. If Vietnam became a communist country, they might try to take over other countries around them in Southeast Asia. The U.S. feared that one nation after another would fall under communist control, like a row of dominoes. The U.S. called this the domino theory.

The United States saw Ho Chi Minh's communist government as a threat to all of Asia. Therefore, in the late 1950's and early 1960's, the U.S. began sending soldiers and military advisers to help South Vietnam fight against the communists in North Vietnam.

## Appendix F

Scoring Rubric for Weekly Reading Assessments (adapted from Lederer, 1997)

### Answering Questions

0	Answer clearly incorrect or no response
1	Answer partially correct
2	Answer clearly correct

### Creating Questions

0	Question makes no sense Question not based on reading Question unclear to point of misunderstanding Question not related to topic or inaccurate No Question
1	Question is vague but about the general topic
2	Question addresses a specific detail in the reading, yet is not about the main idea of the passage
3	Question relates to the main idea of the passage or a key concept in the passage

### Summary

0	Summary makes no sense or is unrelated to passage Summary simply restates title No response
1	Summary contains one main idea or key point, the general topic should not be counted as an idea
2	Summary contains more than one main idea or key point
3	Summary contains all main ideas and key points

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