

READING STRATEGIES FOR MIDDLE SCHOOL STUDENTS
WITH LEARNING DISABILITIES

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The study examined the use of story mapping and teacher rejoinder questions to improve the reading comprehension of 11 seventh- and eighth-grade middle school students with specific learning disabilities in reading and writing. A three-group (Story-Mapping Group, Story-Mapping/Rejoinder Group, and Comparison Group) time series design examined the effects of story mapping and teacher rejoinder questions on reading comprehension performance. Because of low participant numbers, non-parametric analysis was used to evaluate student scores on curriculum-based measurements of literal, inferential, and evaluative comprehension questions. While no significant differences were found, student reports indicated that when using story maps with rejoinder questioning, they remembered more of the narrative story information, which demonstrated a possible educational benefit from the study. Additionally, implications for future research are presented.

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CHAPTER I

INTRODUCTION

Reading and the Law

In 2004, Congress reauthorized the Individuals with Disabilities Education Act (IDEA). IDEA 2004 required special education teachers to be highly qualified and to use scientifically based instruction to monitor student progress in all academic areas. The IDEA 2004 reauthorization was in alignment with the No Child Left Behind Act (NCLB; 2002). Among the salient elements of these initiatives was the requirement that within a decade all students would perform at a proficient level on state academic assessment tests (Simpson, LaCava, & Graner, 2004).

According to these federal laws, all students, including those with disabilities, must meet state standards in reading, among other academic areas. Although NCLB and IDEA 2004 raise the academic standards for all students (Conderman & Strobel, 2006; Prasse, 2006; Shippen, Houchins, Calhoon, Furlow, & Sartor, 2006), at-risk (including disabled) students continue to struggle with academic success throughout their school careers (Mastropieri, Scruggs, & Graetz, 2003), and much of this struggle centers around reading. Struggling readers represent a large portion of the number of student referrals to special education for identification because they have poor reading

skills (Bryan, Bay, Lopez-Reyna, & Donahue, 1991; Kauffman, 2004; Lloyd, Kauffman, Landrum, & Roe, 1991).

IDEA 2004 and NCLB spoke to the need for (a) all students to be successful readers and (b) teacher accountability for that task. Both acts promoted an increased focus on scientific, evidence-based reading instruction in the classroom for all students (Stewart, 2004). NCLB required schools to assess and report their reading results to the state and, in turn, states were required to aggregate their statewide assessment scores and report them to the public (Jones, 2006).

To meet the requirements of NCLB and IDEA 2004, reading research has focused on phonemic awareness and phonic interventions as possible panaceas for poor reading (Archer, Gleason, & Vachon, 2003; Conderman & Strobel, 2006; Sweet, 1997). This focus is based on the belief that the ability to decode words effectively would allow poor readers to become better readers. While decoding allows access to the printed word, the ultimate goal, however, is improved reading comprehension.

Decoding versus Reading Comprehension

Reading is a complex, language-based skill that consists of decoding and comprehension (Gough & Tunmer, 1986). While decoding is a word recognition process that transforms print into words (Catts & Kamhi, 1999), reading comprehension is the ability to process, evaluate, and integrate factual knowledge (Guastello, Beasley, & Sinatra, 2000). Good reading skills and poor reading skills are not the same (McNamara, 1997). Good reading skills can suppress or inhibit irrelevant information and can map information into an ongoing structure (Gernsbacher, 1990).

The student with poor reading skills struggles with suppressing irrelevant information (McNamara & McDaniel, 2004). Additionally, those with poor reading skills are less efficient at using their prior knowledge or background information to support understanding of the text (McNamara, 1997; McNamara & McDaniel, 2004). The difference in skill sets presents challenges to those students with poor reading skills as they try to decode words or understand the meanings embedded in the text (Guastello et al.).

Students with learning disabilities (LD) lack decoding (Guastello et al., 2000) and reading comprehension skills (Carnine, Silbert, & Kameenui, 1997). Students with learning disabilities also have a less well-developed story schema or knowledge structure, which leads to poor reading comprehension skills (Lerner, 1993; Montague, Maddux, & Dereshiwsy, 1990; Nodine, Barenbaum, & Newcomer, 1985). The story schema is the knowledge structure about a story that may include story elements such as the characters, setting, plot, and resolution (Beck & McKeown, 1981; Carnine & Kinder, 1985). The story elements become the framework for the knowledge structure or the developing schema.

Information processing is influenced by the activation of relevant background knowledge (Blanton, 1998). *Schema* is the mental framework that summarizes and organizes information during processing (Anderson & Pearson, 1984). Graesser and Nakamura (1982) described schema as providing the framework that guides the reader's understanding of inferences, expectations, and interpretations of text. Schema is the mental structure that represents an understanding of the world through previous

experiences and prior knowledge. *Schemata* (the plural of schema) are the learner's mental maps or a cluster of related facts or instances (McGilly, 1994).

Poor readers using narrative stories organized by story elements (i.e., characters, setting, problem, solution) and graphed in a story-mapping format (Appendix A) demonstrate better reading comprehension skills. For instance, knowledge of text structure is shown to expand storage and retrieval of story information and to increase reading comprehension in elementary school children (Taylor & Samuels, 1983). In addition, text organized through story mapping of story grammar with text structure and teacher rejoinder questions can improve reading comprehension (Dimino, Gersten, Carnine, & Blake 1990; Mandler & Johnson, 1977; Schumaker et al., 2006; Stein & Trabasso, 1982; Thorndyke, 1977). Teacher rejoinder questions are those that require students to respond with more than a *yes* or *no* answer.

Theoretical Framework--Schema Theory

Schema theory serves as a guideline for understanding reading comprehension and the basis of inferential reasoning. Prior knowledge provides data for readers to function within their own schemata and then organize new information into the existing schemata, thereby incorporating information efficiently into the brain (McCormick, 1992). Language and its contextual interpretation is an example of schema theory as it relates to some integrated and coherent event or activity. A schema or knowledge structure interrelates knowledge and experiences about a given topic or idea (Richgels, 1982). While prior knowledge or background experiences influence the

shape and content of new ideas, schema theory provides a useful framework for reshaping that knowledge.

The constructs of schema are described as a knowledge structure or framework conceptualized as mental structures used to organize knowledge in the memory (Allison & Allison, 1993; Anderson, Spiro, & Montague, 1977; Richgels, 1982; Schallert, 1982). Mental structures have served as templates for organizing conceptual order or complexity of ideas, isolated the pieces of information linked together to produce more coherent wholes, and incorporated nonobvious patterns into reliable sequences in the brain (Allison & Allison).

The dynamic, constructive nature of schema use is important in the role of schemata in learning. Schema serves as the organizer for input. Without schema or the organization of memory knowledge into mental structures, the understanding of new experiences would be unclear (Anderson et al., 1977). When schema is present, it is meaningfully organized, available for addition to new experiences, and able to be developed to include more variables and specifics about similar events (Anderson et al.). As new information collects, the schemata change, reorganize, and rebuild the original concept. This process enables the brain's continuous restructuring of concepts and ideas to make sense.

Inferences are the natural organization of ideas and changing events that later integrate the story elements that predict, compare and contrast, or make sense of the story grammar and text structure occurring in text (Richgels, 1982). The degree of inferences readers produce is central to the comprehension of text (Anderson et al., 1977; Rumelhart & McClelland, 1981). Poor readers have the most difficulty in the

area of inference making (Bradsford, Stein, Nye, & Perfetto, 1982; Davey & Macready, 1985; Holmes, 1987; Wilson, 1979). Furthermore, poor readers may have limited reasoning abilities, lack prior knowledge or background experiences for story content, or possess a faulty prior knowledge that causes them to invent inaccurate answers (Richards & Anderson, 2003).

Reading comprehension research relies on schema theory. Schema theory proposes the activation of mental mappings or schemata, which in turn guides the ability to organize information and make inferences. Inferences made through faulty schemata organization are indicative of an underdeveloped understanding of text structure as it relates to stories. Students with LD struggle with inferences because they have less well-developed story schemata that may interfere with their ability to effectively interact with the text and make necessary story connections (Lerner, 1993; Montague et al., 1990; Nodine et al., 1985).

Story Maps and Schema Theory

Schema theory explains that the integration of story elements is explicitly taught through story grammar elements (Gardill & Jitendra, 1999; Gersten, Fuchs, Williams, & Baker, 2001; Pearson, 1985). Story grammar or text structure found in narrative stories describes characters encountering a problem, looking for a solution, and eventually solving the dilemma (Mandler & Johnson, 1977; Stein & Trabasso, 1982; Thorndyke, 1977). Story grammar that is organized into a story map provides important information about the characters, events, and setting of a story (Beck & McKeown, 1981). The emphasis on story structure in story maps helps students

organize schemata into useful ideas, reflect on the concepts or facts within a passage, and generate questions about the text (Reutzel, 1985). Story-mapping instruction ties both story grammar and text structure together when teachers use rejoinder statements and questioning strategies to promote stimulation of prior knowledge, schemata reorganization, and inferential thinking (Davis & McPherson, 1989).

Story maps aid in the development of more complete and memorable situation models described in all content area texts (Iding, 2000). Research in content learning curriculum supports the need for story maps of text structure to increase students' prior knowledge (Iding, 2000; Jitendra, DiPipi, & Perron-Jones, 2002; Martorella, 1990). The body of research on the use of story mapping to augment reading comprehension of students continues to increase (Boulineau, Fore, Hagen-Burke, & Burke, 2004; Idol, 1987; Idol & Croll, 1987; Pearson, 1982; Sorrell, 1990; Vallecorsa & deBettencourt, 1997). Continued research on class discussion is needed that includes the use of teacher questioning strategies. Research in the area of teacher rejoinder statements that support student ideas, as well as promote integration of prior knowledge with current knowledge into story maps, is essential for students at middle school level.

Teacher Questioning Strategies and Schema Theory

The use of questioning strategies relating to elements of text structure is an effective technique to teach LD students how to organize and remember important information in a story (Pearson, 1985). In addition, the shaping of story information activates the schemata that organize the relationship between old events and the new events. Activation of schemata leads to a deeper understanding of story or text content

(Gardill & Jitendra, 1999). Schemata-based questioning strategies emphasize conceptual understanding (Jitendra & Xin, 1997; Xin & Jitendra, 1999). In turn, conceptual understanding builds prior knowledge capacity. In addition, class read-alouds are conducive to building topical knowledge about a specific subject and often stimulate student prior knowledge (Hoffman, Roser, & Battle, 1993).

Teachers often model how to reason, make assumptions, use think-aloud questioning strategies, and draw conclusions while reading narrative stories in class (Hansen, 1981; Hansen & Pearson, 1983; Mantione & Smead, 2003). Teacher questioning strategies increase a student's potential to predict, self-question, infer, summarize, and correct faulty conclusions in his or her reading comprehension as information is organized into schemata (Dole, Duffy, Roehler, & Pearson, 1991; Pressley & Afflebach, 1995). The schema of prior knowledge influences the significance of meaning to new ideas and questions. In addition, students benefit from teacher questioning strategies as they consider the distinctly different views and thought processes of their peers (Richards & Anderson, 2003). Teachers who redirect students to locate the correct answer or rethink the question connection increase a student's ability to expand his or her prior knowledge base (Dewitz & Dewitz, 2003). Poor readers, however, over-rely on their prior knowledge as a coping strategy, and that reliance can lead to inaccurate answers (Dewitz & Dewitz).

Schema theory will provide the framework for this study. Research suggests that poor reading comprehension skills in students with LD result from less well-developed story schema (Lerner, 1993; Montague et al., 1990; Nodine et al., 1985). By developing schema or a knowledge base, the student's prior knowledge or background

experiences increase his or her ability to construct meaning from text. This is the framework for the schema theory. The need for text structure, story grammar, and the use of teacher rejoinder questioning as the developing tools for story schema may be the key to better reading comprehension.

Purpose of Study

Students with LD continue to struggle with comprehending text despite the emphasis on the alphabetic principle that includes phonics and phonics-related activities as a means of enhancing word-level decoding and reading (Adams, 1990; Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; Torgesen, Morgan, & Davis, 1992). Moreover, students with LD who can read at the word level (i.e., decode) and even comprehend text adequately may still struggle with the skills necessary to acquire knowledge from the text (Klingner & Vaughn, 1996; Torgesen et al., 1999). Although teachers use many reading strategies for comprehension of text, continued research related to reading comprehension strategies is needed that emphasizes inferential, evaluative, and summative areas of reading comprehension.

The purpose of this study was to explore the combined use of story maps and teacher rejoinder questions to influence (a) literal, (b) inferential, and (c) evaluative reading comprehension for middle school students with learning disabilities. In this study, literal questions will include finding the facts and a sequenced retell of the narrative story (Applegate, Quinn, & Applegate, 2002). Inferential comprehension will explore comparing and contrasting information (McCormick, 1992) and making predictions (Cooper, Chard, & Kiger, 2006). Evaluative comprehension covers the

assessment of characters, events, and situations (Facione, 2006) in comparison to the student's prior knowledge and background experiences (Day & Park, 2005).

Research Questions

The study addressed the following two research questions:

1. Do story maps significantly influence literal, inferential, and evaluative comprehension of students who have learning disabilities?
1. Do story maps in conjunction with teacher rejoinder questions significantly increase student ability to answer literal, inferential, and evaluative questions more often than students who use only story maps?

CHAPTER II

LITERATURE REVIEW

In the 1960s, the reading reform movement was a public response to discontent over the reading inadequacies of students who were exiting public schools.

Additionally, the public voiced major concerns about struggling or unskilled readers as the largest problem schools faced. The government provided monetary incentives for schoolwide reform to increase the effectiveness of low achievers, while the search for what made *good readers* increased among researchers. A school system where all students would read before leaving school was in high demand by the citizens and the government. Both were looking for accountability from teachers, administrators, and school systems in general.

The following literature review has three sections: (a) history of reading reform, (b) decoding and comprehension, and (c) strategies and solutions for poor readers.

History of Reading Reform

During the 1970s, the public demanded teacher accountability for the success of students. In response to this demand, decoding and comprehension strategies for reading were developed. Researchers addressed several aspects of understanding print, such as fact-finding, making inferences, and strategy development, to better evaluate

and understand text. Story mapping, story grammar, teacher questioning, student feedback, and critical thinking were a few of the possible solutions to the dilemma.

Reading instruction and research has developed over time. The first large-scale effort in research took place with Chall and her team of assistants in the 1960s (Chall, 1967). Chall reported the findings of her four-year study in the highly publicized book, *Learning to Read: The Great Debate*. Her research included (a) thorough deconstruction of beginning reading instructional materials, (b) evaluation of materials through author and editor interviews, (c) observations of students using specific reading materials, and (d) comparison of test score reports from children who were taught reading with different methodologies. This research brought to light the need for better instructional materials and teaching methodologies.

In the 1970s, more demands for teacher accountability became important, along with an interest in behavioral objectives, criterion-referenced tests, and mastery learning. Additionally, basal reader companies had a financial interest in marketing and selling their books to schools. Basal manuals, workbooks, and ditto masters proclaimed to contain effective sub-skills to teach reading (Durkin, 1987). Few teachers, however, used the manuals, workbooks, and ditto masters as suggested by the manufacturers (Durkin).

By the 1980s, schools were most interested in obtaining adequate test scores on achievement tests. Research suggested that instruction emerged from the assessment materials in basal manuals and that few teachers actually created lesson plans for reading based on student needs and weakness (Duffy & McIntyre, 1980; Durkin, 1984). To teach children how to read, most teachers chose what they would and would

not use from the basal texts. The choices teachers made in basal instruction often did not follow the basal manual guidelines, thereby leading to inconsistencies and limited guarantees for student success (Durkin, 1978-1979).

In the late 1990s, the Comprehensive School Reform Demonstration Program Act (CSRDP) of 1998 (CSRDP; 2000) provided monetary incentives for schools to adopt schoolwide reform models with proven effectiveness for low achievers (Skindrud & Gersten, 2006). The CSRDP stressed schoolwide management of instruction by using progress-monitoring systems, cooperative learning groups, and flexible groupings across classrooms. The reform program restructured schooling but left the selection of reading curricula to the teachers.

Americans recognized the importance of becoming a *good reader* in 2001 when Congress enacted NCLB. This act required teachers to use an empirical knowledge base provided through professional development in selecting the core reading curricula for the school (Skindrud & Gersten, 2006). Although mandated by NCLB, no research has demonstrated that teachers across America in fact use empirical knowledge from professional development to guide their reading instruction.

Decoding and Comprehension

History of Reading Instruction

While the decoding of words identifies individual words (Durkin, 1978-1979), reading comprehension involves a more sophisticated brain function that incorporates abstractions and reasoning, especially when answering inferential, summative, or evaluative-type questions about the text. Increases in reading comprehension can be

achieved by developing reading fluency in nonfluent readers (Armbruster, Lehr, & Osborn, 2001; Hamilton & Shinn, 2003; Kuhn & Stahl, 2003; Mercer, Campbell, Miller, Mercer, & Lane, 2000). For instance, increasing the vocabulary students know and understand leads to increases in oral reading fluency and reading comprehension (Deno, Mirkin, & Chiang, 1982; Fuchs, Fuchs, & Maxwell, 1988; Hickman, Pollard-Durodola, & Vaughn, 2004; Jenkins & Jewell, 1993). Furthermore, reading rates are shown to advance as the ability to decode increases (Fuchs, Deno, & Mirkin, 1984; Germann & Tindal, 1985; Marston & Magnusson, 1985).

Class observations of reading comprehension in content areas in 1970 gave rise to discussions on effectively teaching subjects such as science, social studies, and even English (Durkin, 1987). Research indicated that comprehension instruction did not occur in the content areas of grades three through six, as students were limited in their ability to find meaning from their reading (Ivey & Broaddus, 2001). In the years that followed, higher standards were set for new teachers (Cochran-Smith, 2001). In this regard, teachers needed to function as reflective practitioners, work collaboratively in learning communities, and demonstrate teaching that led to higher student achievement. As a result of both higher expectations and the reauthorization of the Higher Education Act of 1998, reading comprehension skills and strategies became a greater part of the pedagogy of teaching programs. For instance, reading and language arts methods courses were taken simultaneously with student practical experiences in many teacher education institutions across the United States (Lefever-Davis & Heller, 2003). In addition, college students majoring in teaching/education were required to work on college campuses in theoretical practice and in schools with practical

experiences in reading and writing prior to their student teaching experience (Lefever-Davis & Heller).

Reading comprehension is described as the interactive process by which readers use decoding, context clues, prior knowledge, vocabulary, language, and executive control strategies to understand print (Howell, Fox, & Morehead, 1993). Reading comprehension strategies use cognitive procedures that enlist background knowledge, recognize the demands of the assignment or task, require goal setting, and emphasize attention to detail (Tierney & Cunningham, 1984). Comprehension also requires self-questioning, reflection, evaluation, prediction of text content, and comparisons or contrasts of text features (Tierney & Cunningham).

The National Reading Panel report described five important reading skill areas: (a) phonemic awareness, (b) phonics, (c) vocabulary instruction, (d) text comprehension strategies, and (e) reading fluency (National Reading Panel, 2000). The report also indicated that text comprehension strategies utilize the integration of phonemic awareness, fluency, and text-reading skills.

Good readers use a variety of strategies to understand difficult reading passages (Kletzien, 1991). These strategies include (a) rereading preceding text, (b) reading subsequent texts, (c) recognizing text structure, (d) using prior knowledge, (e) using the main idea, (f) making inferences about the text, and (g) focusing on vocabulary meanings. By contrast, poor readers struggle with understanding the meaning of what they read even if they are able to decode competently (Kletzien). In this regard, Kletzien's study demonstrates that children who have poor reading skills have

difficulty when combining several prior-knowledge cues to form comprehensive generalizations about a story when responding to inferential comprehension questions.

Literal Comprehension

Literal comprehension requires that students recall what they have read from the text (Applegate, Quinn, & Applegate, 2002). Students use the skill of locating information from the text to answer literal comprehension questions, as well as their own rote memory skills. Literal recall limits student opportunities to discuss ideas related to the text. Literal comprehension does not use prior knowledge or contextual clues to formulate an answer but instead relies on recall of the printed materials. Literal reading strategies include (a) word recognition, (b) vocabulary meaning, (c) finding important information in the text, and (d) identification of setting, characters, problems, key events, and outcomes as presented in the text.

Inferential Comprehension

The making of inferences is described as central to the overall process of comprehension (Anderson & Pearson, 1984) and acts as the glue that cements the construction of meaning (Suh & Trabasso, 1993). The process of making inferences includes the creation of assumptions, development of predictions, and the derivation of conclusions based upon given information in text or illustrations. The inferential process requires readers to engage automatically in complex thinking while encoding and processing text information (Long, Seely, Oppy, & Golding, 1996). Thus, increasing student potential to make inferences may increase reading assessment scores.

In nearly every quality children's picture book, readers must infer information from text and pictures (Richards & Anderson, 2003). Young students, however, do not spontaneously generate inferences (Richards & Anderson). While young students may be able to deduce information from one segment of the text, they often fail to integrate implied information in other parts of the story or in storybook illustrations (Richards & Anderson).

Inferential strategies include judging, concluding, or reasoning from some given information that may predict what will happen next in the text. A predicting strategy includes all reasons a student believes specific events will determine what will happen in the future. A predicting strategy helps students read between the lines and determine inferential information not directly stated in the text. Prediction strategies set a purpose for reading and increase student engagement in the text (Cooper, Chard, & Kiger, 2006).

Because of an inability to focus on critical concepts in text, poor readers are unable to understand context with embedded information (McCormick, 1992). As a result, poor readers make erroneous responses to inferential comprehension questions and struggle with the identification of logical or semantic relationships from text propositions (McCormick). Readers make differing degrees of emphasis on the encoding of propositions directly from the text versus their own mental model construction of what the text might mean. The construction is dependent on task characteristics and the nature of the text (McNamara & Kintsch, 1996). Poor readers tend to ignore gaps or fail to make inferences necessary to fill in the gaps between clauses, sentences, and paragraphs they do not understand (McNamara & O'Reilly,

2002). Many studies indicate that proficient readers generate inferences that repair the conceptual gaps between sentences, clauses, and paragraphs (Garnham, Oakhill, & Johnson-Laird, 1982; Long, Oppy, & Seely, 1997; Magliano & Millis, 2003; Magliano, Wiemer-Hastings, Millis, Munoz, & McNamara, 2002; Oakhill, 1984; Oakhill & Yuill, 1996; Oakhill, Yuill, & Donaldson, 1990; Yuill, Oakhill, & Parkin, 1989). Poor readers, however, are unable to use these same strategies to make sense of content on similar reading requests as do proficient readers.

Several reasons may explain why poor readers have difficulty in reading comprehension (McCormick, 1992). First, poor readers do not combine the conceptual framework of information from background or prior knowledge with new information correctly. Second, poor readers often respond quickly, thereby failing to allow sufficient time for accurate activation of prior knowledge (McNamara, 1997; McNamara & McDaniel, 2004). Because of an inability to collate information to build on an existing knowledge base, poor readers lack the necessary strategies to draw inferences (Tierney & Pearson, 1983). Poor readers are reported to lack flexibility in emphasizing either background information or written cues for varied inference requirements (Tierney & Pearson).

Written responses to comprehension questions are another challenging area for poor readers in that poor readers struggle with deciphering questions (McCormick, 1992). Poor readers often have difficulty identifying key words and understanding the meaning of words in questions (Tierney & Pearson, 1994). Additionally, poor readers dismiss key vocabulary terms in questions (Fisher, 1981; Tierney & Pearson).

Evaluative Comprehension

Evaluating literature requires readers to use prior knowledge and experiences for a complete understanding about some aspect of the text (Day & Park, 2005). Literary evaluation involves an assessment of character perceptions, experiences, situations, and beliefs or opinions in text (Facione, 2006). Through an evaluation of the literature, readers judge the author's credibility, compare strengths or weaknesses in their interpretations of the text, and determine the credibility of a source of information (Facione).

Students need strategies to develop skills for engagement in critical thinking at an evaluative level. In summarizing text, the reader identifies, integrates, and evaluates essential elements. In an expository-type story, the main ideas serve as the primary focus. By contrast, in narrative text, the story elements of character, setting, problems, and outcome serve as the primary focus. Evaluating or making judgments about reading may be the most difficult task for readers because evaluation requires critical analysis and opinion from readers about the characters and their response to certain situations, as well as the validity or accuracy of the content of the story (Cooper, et al., 2006).

A final area of concern for poor readers may be the type of text. Narrative texts are easier than expository texts to recall, read, and comprehend in terms of structure (Long, Golding, & Graesser, 1992). It is critical to teach reading comprehension skills and strategies to poor readers in order to build confidence when responding to reading comprehension questions (McNamara & O'Reilly, 2002).

The Use of Story Grammar and Rejoinder Questioning as Strategies and Solutions for Poor Readers

Story grammar includes the words that describe the characters, the setting, the time of the story, the plot or problem, and the solution. Story grammar is best described as the parts of the narrative story. Story maps are a visual tool that link concepts from story grammar within a passage in a graphic format for readers (Reutzel, 1985). The story map fosters comprehension through the identification of important information about characters, plot, setting, and time sequence of events (Beck & McKeown, 1981). The use of story mapping and its connection to narrative text increases the understanding of complex text for poor readers by categorizing information into specific text structures (Kintsch, 2004). In addition, when tied to teacher questions, story maps can further improve reading comprehension.

The story-mapping format stabilizes ideas of the narrative story that are produced from thought or discussion and helps readers generate questions about the content of the material. Story maps enhance both pre-reading (Davis, 1994) and post-reading (Reutzel, 1985) instruction, promote inferential thinking, and increase higher-level cognitive tasks for improved reading comprehension (Davis & McPherson, 1989). When taught with precise instruction, the use of story maps results in positive outcomes on reading comprehension skills for all students with and without learning disabilities (Baughman & Bergeron, 1993; Davis, 1994; Dimino, Gersten, Carnine, & Blake 1990; Gurney, Gertsen, Dimino, & Carnine, 1990; Idol, 1987; Idol & Croll, 1987; Newby, Caldwell, & Recht, 1989).

Specific Inferential Strategies--Story Maps

Reading comprehension improves when there is a focus on pre-reading activities, such as developing background knowledge on the specific subject or theme, teaching complex vocabulary, and establishing a clear purpose for reading (Stoner, Shinn, & Walker, 1991). These pre-reading activities are more valuable than focusing on post-reading follow-up activities (Stoner et al.). Furthermore, the structuring of ideas through networking, story mapping, flowcharting, rhetorical structures, and structured overviews provides a diagrammatic image of text ideas, known as a *brain web*, structured in a patterned sequence (Anderson, 1977; Barron, 1969; Dansereau, 1979; Earle, 1969; Geva, 1980; Jiang & Grabe, 2007; Meyer, 1975).

Story maps, a type of graphic organizer, involve the use of concept maps or organizational charts. Story maps are an excellent means for demonstrating relationships between ideas, concepts, facts, prior knowledge, and other information specific to a content area (Minskoff & Allsopp, 2003). Furthermore, story maps are an effective tool to improve learning for students with disabilities by improving text processing and assisting in developing comprehension skills for readers (Bos & Vaughn, 2002).

Story maps help students tap into prior knowledge, cultivate active student participation, and foster an understanding of conceptual relationships (Kirylo & Millet, 2000). When using story maps, readers are better able to understand metaphors, compare and contrast story elements, develop time-related words (i.e., *first*, *last*, *next*, *finally*), make predictions, and then synthesize, summarize, and evaluate new information (Boulineau, Fore, Hagan-Burke, & Burke, 2004; Idoll & Croll, 1987;

Vallecorsa & deBettencourt, 1997). Organizing and classifying information establishes how well information will be grasped and remembered (Kirylo & Millet). Confusion among readers often occurs when they are unfamiliar with the plot beneath the written work. Thus, activating prior knowledge is critical to the success of obtaining meaning from the text. In this regard, readers must be able to draw from their background knowledge to bridge the gap between what they know and what they learn from the text (Dochy, Segers, & Buehl, 1999; Tierney & Pearson, 1981). Mapping this information onto a story map organizes student thoughts in a way that students can return to the map and find information.

Construction of story maps occurs in a variety of formats that represent a hierarchical relationship among concepts in relation to other concepts (Vacca & Vacca, 1999). When using a story map, the display should be concise, coherent, and coordinated to represent information in a sequential and linear fashion (Mayer, Bove, Bryman, Mars, & Tapangco, 1996).

Research demonstrates that effective story maps are generated when teacher and student participate together in the activity of organizing words, ideas, and concepts to make meaningful patterns and connections for the reader (Flood & Lapp, 1988; Heimlich & PiKelman, 1986). Class discussions of story materials become more meaningful for students when questions posed by the teacher elicit prior knowledge and background information for the story map. Furthermore, sharing and listening are critical elements in bringing individual ideas to a new set of thoughts and obtaining meaning from text (Jenson, 1998; Pinnell, 1984). Story maps validate what readers think about concepts, ideas, and words (Millet, 2000).

Teacher Questions and Reading Comprehension

Teacher questioning strategies that follow a specific format called rejoinder-questioning produce a feedback loop for readers and increase critical thinking in understanding text. Appropriate teacher-led questioning, with the inclusion of story grammar elements of plot, character, setting, and time sequence, increases the ability to comprehend text (Carnine & Kinder, 1985). In this regard, readers who were (a) asked to answer questions about story grammar elements in narrative stories read during instruction and (b) provided with corrective feedback for incorrect answers from their teachers became more proficient at comprehension of text (Faggella-Luby, Schumaker, & Deshler, 2007; Swanson, 1999). The studies reported proficiency through reading comprehension strategies that demonstrated knowledge of story components and literary terms for narrative and expository stories (Faggella-Luby et al.).

In order to elicit the key components of story maps, it is important for teachers to ask questions that encourage students to think beyond the standard literal answer application of information (*yes* and *no* answers) and pry for the meanings beyond the facts in print. When teachers ask questions of students in instructional settings, there is a different intent than when students are involved in conversational questions (Hunkins, 1989). In instructional settings, questions are used as specific tools for stimulating the mental activity of students to a higher level of thinking (Hunkins). Questions in the educational setting provoke students to think about specific situations and comment on their perspectives. By comparison, conversational questions among students are used to evoke interest, maintain a discussion, or serve as practice for

verbal interactions (Allington, 1993; Hunkins). Verbal interactions in a social context do not require preconceived ideas of a right or wrong response.

Information taught to evaluate student understanding and application of specific information must align with teacher questioning strategies. Teachers must gather information about specific topics and formulate story questions. When teachers phrase questions appropriately and allow time for delivery of responses, students can answer with less impulsivity. Allowing time for student delivery of responses to questions posed by teachers stimulates reflection of the question and provokes thinking by all students.

Teacher questions should be developed and considered carefully in light of educational goals (Hunkins, 1989). Teacher questions are the primary means of assessing students' reading comprehension (Raphael & McKinney, 1983). Despite being a highly used strategy by most teachers (Carlson, 1991), research indicates that the relationship between teacher questioning and student achievement is inconsistent (Carlson).

Comprehension strategy instruction enhances reading comprehension in novice readers (Stahl, 2004). Instructional techniques used by teachers are the keys to the acquisition of comprehension strategies (Stahl). Strategies such as the development of story elements, question-answer relationships, and reciprocal teaching are successful for increasing reading comprehension in the primary grades in students without disabilities (Baughman & Bergeron, 1993; Mandler & Johnson, 1977; Morrow, 1984a, b; Stein & Glenn, 1979). Several studies indicate that students in all grades benefit from instruction in question-answer relationships, but below-average readers do not

have the background knowledge to answer questions based on prior knowledge or experience and therefore have less success with the question-answer relationships instruction (Ezell, Hunsicker, Quinque, & Randolph, 1996; Ezell, Kohler, Jarzynka, & Strain, 1992; Raphael, 1984).

Teacher-led questioning acts as the model for critical thinking (Hunkins, 1989; Stahl, 2004). Students with learning disabilities often lack confidence, opportunities to talk about their thinking, and the strategies to develop background knowledge or stimulate their prior knowledge about a subject area (Stahl). Teaching students how to take a critical stance in their questions relating to text is the first step in generating a powerful knowledge base of questioning strategies (Hunkins).

Because questioning is a natural human behavior, it is imperative that students develop an inquisitive demeanor. Young children use questioning strategies in response to puzzling statements. Young children repeatedly use *why* questions to reflect their inquisitive natures and attempt to resolve such statements (Hunkins, 1989). Although the inquisitive nature of young children leads to questioning, they require guidance to think critically as they become school-aged students. Instructional direction will help students raise questions of significance and formulate ideas that with maturity lead to critical thinking and analysis (Hunkins).

Feedback and Critical Thinking in Reading Comprehension

Teacher-led questioning influences student thought (Hunkins, 1989). Factual questions lead students to recall specific story facts (Hunkins). Simple recall or fact-finding expands as students use their prior knowledge to process questions. Knowledge

about the topic allows retrieval and expansion of prior knowledge (Kintsch, 1988; McNamara & McDaniel, 2004). Thus, teachers must develop questioning strategies that expand the least complex thinking skills of fact retrieval or story recall, known as literal comprehension, to help students develop their cognitive capacity.

When teachers ask questions that evaluate information, as in looking for a cause of some event, students contemplate the variety of relationships involved in the event and think more critically before giving a response (Williams, Brown, Silverstein, & deCani, 1994). Questions asked at a higher cognitive level by the teacher (infer, evaluate, compare and contrast information, predict, analyze, and synthesize) permit students to process information at a greater cognitive depth (Gersten, Fuchs, Williams, & Baker, 2001).

Past research shows that teachers rarely help children learn how to use text to answer questions correctly during class discussions or written requests, thereby leaving the incorrect answer undirected and unanswered (MacGinitie, 1984). When students respond incorrectly to a teacher-led question, teachers comment that the answer was not the answer they were looking for or move the question to the next student. Frequently, teachers will not encourage the student to make a connection between the text and questions. Because of their own lack of reading instruction, teachers often miss that crucial moment of possible redirection or window of opportunity to enhance student learning.

In order to evaluate text, readers must possess the skills to read critically. The process of critical reading requires readers to make judgments about the way characters respond to story situations and about the validity and accuracy of story content

(Cooper, et al., 2006). Critical thinking skills include the ability to interpret, analyze, evaluate, infer, explain, and self-regulate (Facione, 2006). Each of these skills is complex and requires the use of prior knowledge and complex reasoning. Teacher-led questions that encourage students to give global or comprehensive judgments about some aspect of text demonstrate critical thinking (Day & Park, 2005). To accurately respond to evaluation-type questions, readers need to literally understand text and draw from prior knowledge or personal experiences related to text topics and issues (Williams, et al., 1994). Furthermore, critical thinking requires readers to understand the world and the relationships between their own ideas and those presented by the author (McLaughlin & DeVoogd, 2004). Critical readers critique, analyze, and evaluate informational sources such as text, media, lyrics, and hypertext with meaningful questions (McLaughlin & DeVoogd, 2003). Students who engage in critical thinking become open-minded, active, strategic readers who are able to critically analyze and evaluate text from multiple perspectives (McLaughlin & DeVoogd, 2003).

Summary

The literature review identified the history of challenges and achievements in the area of teaching word decoding and reading comprehension. This review explicated the path of poor readers and their struggle to make sense of text and semantic relationships. Teaching strategies presented support the organization of schemata through graphic organizers. In this regard, teaching story grammar through story mapping, a specific type of graphic organizer, has resulted in success for students with learning disabilities. Additionally, in a few studies, class discussions about stories read

orally with rejoinder questions from teachers have also been successful. Teacher-led questioning during class discussions acts as a model for developing critical thinking for all students. Finally, teacher feedback and questions encourage students to make comprehensive judgments about the text topics and ideas.

CHAPTER III

METHODS

Participants

Thirty-one middle school students participated in the study. The student participants were both seventh- and eighth-grade students attending a school of 800 students (grades 6-8) in rural southern Oregon. Participant recruitment occurred among teams for students identified as LD in reading or writing or both. All student participants had the primary educational identification of specific learning disability in reading and writing. All participants had general education classes in science, social studies, art, music, physical education, and health, as well as using specially designed instruction in either a reading or writing special education class during the study. None of the participants took medication.

The early class assignment in the year preceding entry into the seventh grade presorted the students into seventh- and eighth-grade teams. The presorting allowed all teams to have equal numbers of students with special education needs, talented and gifted strengths, English as a second language challenge, and boy versus girl ratios within the teams. Therefore, the groupings of students in this study occurred naturally within their pre-assigned team time in special education. The following criteria were required for participation in the study: (a) students had no previous exposure to story-mapping procedures during their special education courses; (b) students spent at least

one class period a day receiving reading or writing instruction in a resource setting; (c) students scored a grade equivalent of at least 2.0 on the Wechsler Individual Achievement Test II (WIAT-II) word identification subtest and one grade-level below grade placement on the comprehension subtest; and (d) students attended 90% of the previous grading period.

Twenty students were boys whose ages ranged from 12 to 14 years old. Eleven students were girls aged 12 to 14 years old. Three groups were created from the 31 participants.

Story-Mapping Group

The Story-Mapping Group consisted of nine boys and no girls with an average age of 13.4 years old. The boys had an average reading comprehension score on the WIAT-II of a 4.5 grade equivalent and an average GPA of 2.6 from the first trimester of 2007-2008. In this group, 67% participated in the free- and reduced-lunch program. See Table 1 for complete demographic statistics of this group.

Story-Mapping/Rejoinder Group

The Story-Mapping/Rejoinder Group consisted of seven boys and four girls. The boys had an average age of 12.5 years, and the girls had an average age of 13.3 years (overall, mean age of 12.8 years). The boys had an average WIAT-II reading comprehension score of 4.5 grade equivalent, and the girls had an average WIAT-II reading comprehension score of 4.3 grade equivalent (overall 4.4 grade equivalent average score for reading comprehension). The average GPA for the group was 2.99

for the first trimester of 2007-2008. In this group, 36% participated in the free- and reduced-lunch program. See Table 1 for complete demographic statistics of this group.

Comparison Group

The Comparison Group consisted of five boys and six girls. The boys had an average age of 12.4 years, and the girls had an average age of 13.2 years (overall mean age of 12.8 years). The boys had an average reading comprehension score from the WIAT-II score of 4.1 grade equivalent, and the girls had an average reading comprehension score of 3.6 grade equivalent (overall 3.8 grade equivalent average score for reading comprehension). The average GPA for the group was 3.32 for the first trimester of 2007-2008. In this group, 72% participated in the free- and reduced-lunch program. See Table 1 for complete demographic statistics of this group.

Setting

The study took place in a middle school, special education resource classroom for students with mild learning disabilities. The intervention occurred within the resource classroom. All 31 students were familiar with the teacher who delivered the intervention. No scheduling changes for students were required for their participation in the study and no changes from the usual classroom procedures were required to participate in this research. The intervention was kept as close to routine class instruction as possible and relatively unobtrusive in the classroom setting. Each class period lasted 75 minutes every other day for 12 weeks.

Materials

The following materials were used in the study:

- (a) Story Map and Story Map Scoring Guide: The Read/Write publication of the *Weekly Reader Magazine* provided the student story map. The original map was modified to remove graphic and instructional distractions for the reader. The Story Map Scoring Guide provided descriptions of story grammar for scoring (Appendix A).
- (a) Easy Curriculum Based Materials (*EasyCBM*) Readings: The *EasyCBM* series of narratives was obtained from University of Oregon and included a 20-question quiz administered by computer from the *EasyCBM* site. A sample of the narrative with test questions is provided (Appendix B).
- (a) Reading A-Z Program: This reading program included selected narrative stories for daily class read-alouds. Nonfiction stories, poetry, plays, and expository materials were excluded from daily narratives. A narrative story example with test questions is provided (Appendix C).
- (a) Sixth-grade Oregon State Assessment Test--Sample Test (OSAT): The OSAT sample multiple-choice test for reading comprehension with passage and questions for student response is provided (Appendix D).
- (a) Student Self-Assessment Survey: Each student was asked to respond to questions about story mapping and school success in reading and writing. A blank self-assessment survey sample is included (Appendix E).

- (a) Study Skills Checklist for Students: The checklist, with a 1 to 5 scoring scale, was designed to investigate student organizational skills and provide a reflection of self-performance (Appendix F).
- (a) Procedural Items Checklist for Teachers: This checklist was produced to aid the teacher in providing students with specific questions during class discussions of narrative text (Appendix G).
- (a) Teacher Lesson Activation Form and Teacher Rejoinder Checklist for Story Discussions: The teacher used the Teacher Lesson Activation Form at the end of the lesson to activate processes for teaching new lessons as well as review past lesson strengths and challenges. The Teacher Rejoinder Checklist used during story discussions functioned as a reminder to use all five forms of rejoinder questions (Appendix H).

Independent and Dependent Variables

Independent Variables

The independent variables of the study included the story map and rejoinder questions. The story map contained seven main areas for recording characters, time, place, problems, solutions, outcomes, and themes. The rejoinder questions included five types for analysis: (a) null, (b) evaluative response, (c) elaboration or embellishment, (d) repeat or rephrase, and (e) correction.

Dependent Variables

The dependent variables of the study included the pre- and posttesting materials previously described:

- (a) Quizzes assessing literal, inferential, and evaluative comprehension.

Quizzes were part of the *EasyCBM* series obtained from the University of Oregon Behavioral Research and Teaching department.

- (a) Oregon State Assessment Test (for 6th grade) assessing reading skills.

OSAT sample test obtained from the Oregon Department of Education, Assessment Division, Resource Section for sample tests.

- (a) Scores obtained from story grammar elements on story-mapping

assignments. One point for each story grammar element included on the story map, with an additional point (1.0) per item for description of any story grammar element.

- (a) Teacher Observation Form. The teacher observation form provided

recordings of the reading instruction observations of teacher-led rejoinder questions that described teacher-student interaction patterns.

Protocol and Data Collection

Story Mapping, Story-Mapping/Rejoinder Questioning, and Assessment

During the 12-week intervention, students in the Story-Mapping/Rejoinder Group participated in the *EasyCBM* readings and quizzes each session that followed story-mapping instruction and teacher rejoinder questioning on the Reading A-Z, fictional, narrative read-aloud by the teacher to the students. Students in the Story-

Mapping Group received the same instruction as students in the Story-Mapping/Rejoinder Group, minus the rejoinder-questioning strategies delivered by the teacher during the class discussions of the Reading A-Z read-aloud. The *EasyCBM* computer narrative and quiz provided specific information to the student and the teacher about the type of questions the student answered. The questions identified as literal, inferential, and evaluative provided specific scores for each of the comprehension pieces. Although both groups of students answered the same questions for each story, the Story-Mapping/Rejoinder Group used the teacher rejoinder questions during the class discussion to help answer the questions, while the Story-Mapping Group searched for the answers only from the text. Students received a score for each completed series of test questions but no other feedback. The teacher recorded scores upon completion of each testing session. The Comparison Group received no story maps or teacher rejoinder questions but took the same *EasyCBM* readings and quizzes as the intervention groups. Following the intervention, the Comparison Group was able to participate in the intervention that had been delivered to the intervention groups.

Students also completed Self-Assessment Survey and Study Skills Checklist as performance measures to obtain an understanding of the reading lesson. Students completed a student survey about the process of story mapping before and after the study.

If two or more students missed an intervention session, the entire group repeated the session during the next class period. If one student missed a session, that session occurred in a one-to-one setting when the student returned. Each class

discussion session for the experimental groups was hand recorded by an observer in order to evaluate the relational statements following student responses or teacher rejoinder-questioning status of the lesson.

Oregon State Assessment Test (6th grade) and Study Skills Checklist

The Study Skills Checklist and the Oregon State Assessment Sample Test for the sixth grade were administered to participating students before and after the study. The Oregon State Assessment Test (OSAT) was obtained through the State of Oregon Department of Education web site. The OSAT was administered as a school informal assessment practice. Students wrote on the test itself and the tests were scored by the teacher.

The Study Skills Checklist provided students with a self-evaluation of their study skills at the beginning of the year. Questions were related to the topic areas of *assignments, attitude, organization, and use of class time*. Students scored each topic question with a Likert-type 1 to 5 scale, where 1 meant *never* and a 5 was equivalent to *all of the time*.

Rejoinder Questioning and Assessment

Questions such as “What do you think will happen next? Why do you think so? Can you prove it?” or “Where in the text did you find evidence for your answer?” are rejoinder type questions that were used to stimulate students to think beyond literal or factual answers in the Story-Mapping/Rejoinder Group. For example, the teacher asks the student, “What is the story about?” The student answers, “Rabbits.” The rejoinder

from the teacher might be, “Yes, it is about rabbits, but why do you think it is about rabbits?” Student questioning for the Story-Mapping Group was not inferential or evaluative. Rather, questioning was literal in type or factual, allowing the students to find the information in the text as needed. In this regard, students who were in the Story-Mapping Group had the same task of reading text and completing blank story grammar maps, but the teacher only asked literal questions, such as “What do you think?” or “Where in the text did you find your answer?”

Teacher rejoinder responses used in the Story-Mapping/Rejoinder Group included questions that engaged students in a discussion about the elements of a story or idea. The teacher anticipated an action from students in response to her questions, not just *yes or no* answers. Teacher rejoinder responses fell into one of five categories: *null*, *evaluate*, *rephrase/repeat*, *elaborate*, and *correct*. The *null* category included no verbal, facial, or body language response to the student answer. The teacher may have had eye contact with the student, but the eye contact may not have had facial expression or head motion occur at the same time. The category of *evaluate* occurred with simple statements such as *Yes* or *No*. Alternatively, *evaluate* could have had more explicit statements, such as, “That was a great answer, nice thinking.” The *rephrase/repeat* category included student responses that were *rephrased* or *repeated* by the teacher, using appropriate grammar and complete sentence format. The *elaborate* category applied to student responses that were *embellished* by the teacher, who then paraphrased the response and used it in a complete question. The last category was the *correct* category, where the teacher, rather than the student, initiated the elaboration, using language that was descriptive. The *correct* rejoinders allowed the

teacher to let the student know the answer was incorrect by *rephrasing* or *restating* the original question.

Teacher Lesson Activation Form and Procedural Items Checklists

Teacher Lesson Activation Form and Procedural Items Checklist were completed to quantify fidelity in the study. The teacher completed Teacher Lesson Activation Form after each lesson as a measure of the teaching process and rejoinder questioning strategies. The Teacher Lesson Activation Form reminded the teacher of the need to continue using the five types of rejoinder questions. The review that took place each session encouraged the use of all rejoinders over time and increased the teacher's potential for delivering the questions relative to the five rejoinders. Because the teacher had little experience with rejoinder questioning strategies within the context of teaching reading comprehension, it was important to review the strategies daily before working with the class.

The teacher used the Procedural Items Checklist during the class discussions as a self-help checklist to measure the inclusion of all story grammar elements. These items included story-grammar elements of time, characters, problem outlined in the story, and possible solutions. The teacher completed the checklist during each instructional session.

Reading Selections

The stories selected for the read-aloud segments of the study followed five criteria: (a) Stories were narrative (i.e., fictional or factual); (b) stories contained all story grammar elements (i.e., time, setting, characters, action, problem, goal, and

outcome or resolution); (c) stories used standard language; (d) stories were unfamiliar to the student, yet typical of children's stories; and (e) each passage had to be similar in length to standard fourth-grade narrative passages. These criteria were similar to those adopted by the studies of Carnine and Kinder (1985); Hall (1993); Montague, Maddux, and Dereshiwsky (1990); and Sadoski (1983).

The Reading A-Z narratives provided the teacher with narratives comparable to the *EasyCBM* computer-generated narrative series. The Reading A-Z narratives (1,200 to 2,000 words long) contained no pictures and provided a set of questions the teacher could transform into rejoinder-type questions. The Reading A-Z series was an online reading program with a leveled reading materials series. The series provided all of the material needed for the class intervention stories. The narratives were equivalent in length and difficulty level to both the sample Oregon State Assessment Test and the *EasyCBM* narratives. Passages from the Reading A-Z narratives were selected for appropriateness and interest level of seventh- and eighth-grade students with disabilities. The teacher read stories aloud to students. In addition, the Reading A-Z series included quizzes that provided the basis for discussion questions after the read-aloud.

Observational Records

Observational records were taken on the Class Observation Form to document instructional time. The start and stop times of each instructional session were recorded. Written recordings that documented statements spoken by the teacher were made for

each instructional session. These statements were used to code specific rejoinder statements or lack of rejoinder statements during the reading instruction.

Statistical Analysis Procedures

Two statistical procedures were employed to analyze data from this study. The first was an analysis of variance (ANOVA) and the second was the Kruskal-Wallis.

Initially, a parametric statistic was used to analyze the overall reading score. It was believed that the ANOVA was robust enough to overcome the many problems that this study encountered around the (a) nature of the underlying scale on the CBMs, (b) homogeneity of variance, (c) nonrandomized sampling, and (d) unequal and small sample sizes. However, Trachtman, Giambalvo, and Dippner (1978) warned that violations of any one or a combination of those four assumptions could lead to errors in the use of parametric tests. Thus, a secondary nonparametric analysis was proposed.

As noted, that secondary analysis was a nonparametric statistic. Harwell (1988) advised that data that has poor distributional characteristics (e.g., skewedness of distribution and low sample size) should employ a nonparametric analysis. Because this study suffered from those poor distributional characteristics, the Kruskal-Wallis test, a nonparametric statistic, was used to analyze the data from the three groups.

Rationalization for Using the Kruskal-Wallis

The Kruskal–Wallis test is most commonly used when there is one nominal variable and one measurement variable, and the measurement variable does not meet the normality assumption of an ANOVA. It is the nonparametric analogue of a one-

way ANOVA. A one-way ANOVA may yield inaccurate estimates of the P -value when the data are very far from normally distributed. The Kruskal–Wallis test does not make assumptions about normality. Like most nonparametric tests, it is performed on ranked data, so the measurement observations are converted to their ranks in the overall data set: the smallest value gets a rank of 1, the next smallest gets a rank of 2, and so on. Tied observations receive average ranks. Thus, if there were four identical values occupying the fifth, sixth, seventh and eighth smallest places, all would get a rank of 6.5. The loss of information involved in substituting ranks for the original values can make this a less powerful test than an ANOVA, so the ANOVA should be used if the data meet the assumptions. If the original data set actually consists of one nominal variable and one ranked variable, the Kruskal-Wallis test should be used in place of an ANOVA.

After summing the ranks for each group, the test statistic H is calculated. H is calculated by a formula that represents the variance of the ranks among groups, with an adjustment for the number of ties. H is approximately chi-square distributed, meaning that the probability of getting a particular value of H by chance, if the null hypothesis is true, is the P -value corresponding to a chi-square equal to H . Finally, the degrees of freedom are the number of groups minus 1.

CHAPTER IV

RESULTS

Participant Data

Table 1 includes demographic data of participants, Oregon Technology Enhanced Statewide Assessment (TESA) scores from the spring of 2007, WIAT word identification (Word ID), and WIAT reading comprehension (Comp) scores.

Table 1. *Characteristics of Participants*

<i>ID</i>	<i>Gender</i>	<i>Grade</i>	<i>Eligibility</i>	<i>TESA – Reading</i>	<i>WIAT Word ID</i>	<i>WIAT Comp</i>
<i>Story- Mapping Group</i>						
1A	M	8	90	231	5.3	5.1
2A	M	8	90/50	207	3.2	3.6
3A	M	8	90/80	230	5.2	5.3
4A	M	8	90	229	5.1	5.6
5A	M	8	90	212	4.6	3.1
6A	M	8	90	219	3.2	5.2
7A	M	8	90	214	3.8	4.1
8A	M	7	90	220	3.8	4.5
9A	M	7	90	n/s	3.5	4.1
Range				207 - 231	3.2 – 5.3	3.1 – 5.6
Median Score				219.50	3.80	4.50
Mean Score				220.25	4.19	4.51
Standard Deviation				9.04	0.87	0.85

Table 1. (Continued)

<i>ID</i>	<i>Gender</i>	<i>Grade</i>	<i>Eligibility</i>	<i>TESA - Reading</i>	<i>WIAT Word ID</i>	<i>WIAT Comp</i>
<u><i>Story-Mapping/Rejoinder</i></u>						
<u><i>Group</i></u>						
1B	M	7	90	222	4.2	5.1
2B	F	8	90	231	4.8	5.1
3B	F	8	90	225	2.1	2.3
4B	M	7	90	213	2.1	2.9
5B	M	7	90	222	3.5	4.5
6B	F	7	90	217	5.1	5.5
7B	F	8	90/70/50	218	4.1	4.2
8B	M	7	90	231	5.7	6.1
9B	M	8	90/50	218	3.1	4.3
10B	M	7	90/50	222	3.7	4.5
11B	M	8	90	225	4.1	4.1
Range				213 - 231		2.3 - 6.1
Median Score				222.00	4.10	4.50
Mean Score				222.18	3.86	4.42
Standard Deviation				5.64	1.14	1.09
<u><i>Comparison Group</i></u>						
1C	F	7	90	n/s	3.5	3.1
2C	M	7	90	n/s	3.5	3.2
3C	M	7	90	222	3.6	4.1
4C	M	7	90	196	3.8	3.9
5C	F	8	90	230	5.1	6.1
6C	F	7	90/50	217	3.1	4.1
7C	F	8	90	223	5.1	5.2
8C	M	7	90/50	207	3.4	3.7
9C	F	8	90	221	3.6	3.2
10C	M	7	90	211	3.1	3.2
11C	F	8	90	231	2.1	3.1
Range				207 - 231		3.1 - 6.1
Median Score				221.00	3.50	3.70
Mean Score				217.56	3.63	3.90
Standard Deviation				11.27	0.86	0.97

Differences Among Groups on the Overall Reading Total and Subtest Scores

Prior to presenting any statistical analysis, I will provide the means and standard deviations for results of the *EasyCBM* (a) overall reading test, (b) literal subtest, (c) inferential subtest, and (d) evaluative subtest. Table 2 provides the complete descriptive statistics for the test and subtests, including minimum and maximum scores.

Table 2. *Descriptive Statistics for All Comprehension Measures Split by Group*

	<i>Count</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min.</i>	<i>Max.</i>
<i>EasyCBM</i> Result Detail					
Reading Total					
Comparison	11	105.27	31.16	60.00	161.00
Story Mapping	9	109.00	31.89	69.00	149.00
Story Mapping/Rejoinder	11	126.55	26.32	77.00	158.00
Literal Subtest Total					
Comparison	11	39.18	11.21	27.00	59.00
Story Mapping	9	40.89	12.59	27.00	61.00
Story Mapping/Rejoinder	11	49.18	10.36	27.00	59.00
Inferential Subtest Total					
Comparison	11	37.18	11.19	22.00	55.00
Story Mapping	9	37.33	11.26	22.00	53.00
Story Mapping/Rejoinder	11	42.64	9.97	23.00	54.00
Evaluative Subtest Total					
Comparison	11	28.91	10.58	11.00	47.00
Story Mapping	9	30.78	9.24	19.00	42.00
Story Mapping/Rejoinder	11	34.73	8.09	17.00	46.00

The next section presents an analysis of variance (ANOVA) for the overall reading scores. Differences in the overall scores for the Comparison Group, the Story-

Mapping Group, and the Story-Mapping/Rejoinder Group were nonsignificant, $p = .22$, as shown in Table 3.

Table 3. ANOVA Table for Reading Total Split by Group

	<i>DF</i>	<i>SS</i>	<i>MS</i>	<i>F-Value</i>	<i>P-Value</i>
<u>Group Reading Totals</u>					
Group	2	2793.80	1396.90	1.58	0.22
Residual	28	24768.91	884.60		

Means Table for Reading Total

	<i>Count</i>	<i>Mean</i>	<i>Std. Dev.</i>
Comparison	11	105.27	31.16
Story Mapping	9	109.00	31.89
Story Mapping/Rejoinder	11	126.55	26.32

Retrospective Power Analysis

A retrospective power analysis was conducted on this ANOVA. The power analysis revealed a 30% probability of correctly rejecting a false null hypothesis. Considering that the commonly accepted power for a study is 80% or greater, the low power can be attributed to (a) lack of directional hypothesis, (d) small sample size, (c) measurement error, and/or (d) low effect size.

Importantly, this power analysis also calculated what an acceptable sample size should be if this study were to be conducted again. The required sample size was 28 for each subgroup compared to the actual participant group numbers of 11, 9, and 11.

This next section reanalyzes the overall scores and subtest scores, using the Kruskal-Wallis nonparametric test.

Differences Among Groups on the Overall Reading Score

The Kruskal-Wallis test for the overall reading score determined whether there was a significant difference in median scores for the three groups. Results of that analysis indicated a nonsignificant difference, with a tied $p = 0.23$. The Story-Mapping Group had a mean rank of 14.17, the Story-Mapping/Rejoinder Group had a mean rank of 19.77, and the Comparison Group had a mean rank of 13.73. See Table 4 for complete statistics.

Table 4. *Differences Among Groups on Overall Reading Score*

Kruskal-Wallis Test for Overall Score

DF	2
# Groups	3
# Ties	8
H	2.95
P-Value	0.23
H corrected for ties	2.95
Tied P-Value	0.23

<i>Kruskal-Wallis Rank for Overall Score</i>			
	<u>Count</u>	<u>Sum Ranks</u>	<u>Mean Rank</u>
Comparison Group	11	151.00	13.73
Story-Mapping Group	9	127.50	14.17
Story-Mapping /Rejoinder Group	11	217.50	19.77

Differences Among Groups on Literal Comprehension Questions

The Kruskal-Wallis test for the literal comprehension subtest determined whether there was a significant difference in median scores for the three groups. Results of that analysis indicated a nonsignificant difference, with a tied $p = 0.17$. The Story-Mapping Group had a mean rank of 14.22, the Story-Mapping/Rejoinder Group had a mean rank of 20.09, and the Comparison Group had a mean rank of 13.36. See Table 5 for complete statistics.

Table 5. *Differences Among Groups on Literal Comprehension Questions*

Kruskal-Wallis Test for Literal Comprehension

DF	2		
# Groups	3		
# Ties	8		
H	3.50		
P-Value	0.17		
H corrected for ties	3.51		
Tied P-Value	0.17		

Kruskal-Wallis Rank for Literal Comprehension

	<u>Count</u>	<u>Sum Ranks</u>	<u>Mean Rank</u>
Comparison Group	11	147.00	13.36
Story-Mapping Group	9	128.00	14.22
Story-Mapping /Rejoinder Group	11	221.00	20.09

Differences Among Groups on Inferential Comprehension Questions

For the *EasyCBM* inferential questions, the Kruskal-Wallis test was conducted to determine whether there was a significant difference in median scores of three groups. Results showed a nonsignificant difference, tied $p = 0.43$. The Story-Mapping Group had a mean rank of 14.44, the Story-Mapping/Rejoinder Group had a mean rank of 18.86, and the Comparison Group had a mean rank of 14.41. See Table 6 for complete statistics.

Table 6. *Differences Among Groups on Inferential Comprehension Questions*

Kruskal-Wallis Test for Inferential Comprehension

DF	2		
# Groups	3		
# Ties	6		
H	1.69		
P-Value	0.43		
H corrected for ties	1.70		
Tied P-Value	0.43		

Kruskal-Wallis Rank for Inferential Total

	<u>Count</u>	<u>Sum Ranks</u>	<u>Mean Rank</u>
Comparison Group	11	158.50	14.41
Story-Mapping Group	9	130.00	14.44
Story-Mapping/Rejoinder Group	11	207.50	18.86

Differences Among Groups on Evaluative Comprehension Questions

As with the two previous analyses, a nonparametric analysis was used to assess student scores from the *EasyCBM* evaluative questions. The Kruskal-Wallis test indicated a nonsignificant difference between the three groups, tied $p = 0.35$. The Story-Mapping Group had a mean rank of 15.17, the Story-Mapping/Rejoinder Group had a mean rank of 19.09, and the Comparison Group had a mean rank of 13.59. See Table 7 for complete statistics.

Table 7. *Differences Among Groups on Evaluative Comprehension Questions*

Kruskal-Wallis Test for Evaluative Comprehension

DF	2
# Groups	3
# Ties	5
H	2.12
P-Value	0.35
H corrected for ties	2.13
Tied P-Value	0.35

Kruskal-Wallis Rank for Evaluative Comprehension

	<u>Count</u>	<u>Sum Ranks</u>	<u>Mean Rank</u>
Comparison Group	11	149.50	13.59
Story-Mapping Group	9	136.50	15.17
Story-Mapping/Rejoinder Group	11	210.00	19.09

Differences Among Groups on the Oregon Statewide Assessment

For reasons detailed in the *EasyCBM* results, a nonparametric analysis was used to evaluate the scores on the Oregon Statewide Assessment sample test. The Kruskal-Wallis test showed a nonsignificant difference, tied $p = 0.31$, between the three groups. The Story-Mapping Group had a mean rank of 13.89, the Story-Mapping/Rejoinder Group had a mean rank of 19.36, and the Comparison Group had a mean rank of 14.36. See Table 8 for complete statistics.

Table 8. *Differences Among Groups on the Oregon Statewide Assessment*

Kruskal-Wallis Test for OSAT

DF	2
# Groups	3
# Ties	8
H	2.35
P-Value	0.31
H corrected for ties	2.36
Tied P-Value	0.31

Kruskal-Wallis Rank for OSAT

	<u>Count</u>	<u>Sum Ranks</u>	<u>Mean Rank</u>
Comparison Group	11	158.00	14.36
Story-Mapping Group	9	125.00	13.89
Story-Mapping/Rejoinder Group	11	213.00	19.36

Differences Between Groups on Study Skills Perception

Closed-ended survey results. Students in the Story-Mapping and the Story-Mapping/Rejoinder Group completed the Study Skills Checklist. The checklist was a survey of their perceptions around their learned study skills. The first question was about *assignment completion*. While only three of the nine students in the Story-Mapping Group reported better *assignment completion*, 9 of the 11 in the Story-Mapping/Rejoinder Group thought they had been better at this task. Score range increased by 3.0 points in this group, and the mean increased by 4.4 points over time in the Story-Mapping/Rejoinder Group, while the Story-Mapping Group's range

increased by 2.0 points and the mean increased by 1.1 points over time. See Table 9 for complete details.

The second question on the Study Skills Checklist referred to *student attitude*. All 11 of the students from the Story-Mapping/Rejoinder Group students reported better *attitudes* about school assignments. Specifically, they rated themselves high in the area of being more organized and producing clear, neat, and complete assignments, as well as showing thought and effort in their coursework. All students in this group were reading more and demonstrating their knowledge of text in their language arts classes, as disclosed by teachers at conferences. The student scores in the *attitude* section increased by 2.1 points over time. At the same time, only 4 of the 9 students in the Story-Mapping Group reported an increase in positive *attitudes* towards reading assignments, with no changes in their language arts organization or completion of tasks. The Story-Mapping Group had a mean increase of 1.3 points over time in *attitude*. See Table 9 for details.

Questions on *organization* from the checklist produced higher scores by 8 of the 11 students in the Story-Mapping/Rejoinder Group, as compared to only 4 of the 9 students in the Story-Mapping Group. The Story-Mapping/Rejoinder Group increased its mean score over time by 2.0 points, while the range increased by 3.0 points. The Story-Mapping Group's *organization* mean increased by 1.3 points, while its range of scores increased by 3.0 points. Again, see Table 9.

The last set of Study Skills Checklist questions reviewed *use of class time*, asking about independent work, work completion, appropriate participation during class discussions, and listening to teachers and peers. All 11 students in the Story-

Mapping/Rejoinder Group reported improvement at the end of the study. Mean scores for the Story-Mapping/Rejoinder students increased by 3.3 points over time. Only four of the nine students in the Story-Mapping Group reported improvement in *use of class time*. Mean scores for this group increased by 2.3 points over time. See Table 9 for complete student scores.

Table 9. *Study Skills Checklist Results*

	<u>Story-Mapping/Rejoinder Group</u> N = 11			<u>Story-Mapping Group</u> N=9		
	<u>Mean</u>	<u>Range</u>	<u>Standard Deviation</u>	<u>Mean</u>	<u>Range</u>	<u>Standard Deviation</u>
Assignments						
Pretest	19.4	15-24	3.01	16.6	10-22	3.41
Posttest	23.7	15-27	3.32	17.7	15-24	3.73
Attitude						
Pretest	11.7	10-13	0.90	10.3	6-13	2.32
Posttest	13.8	13-15	0.60	11.6	8-15	3.06
Organization						
Pretest	8.5	8-9	0.52	8.7	8-10	0.67
Posttest	10.5	8-12	1.29	10.1	8-13	1.94
Use of Class Time						
Pretest	20.3	15-22	1.95	16.1	15-17	0.88
Posttest	23.6	20-25	1.57	18.4	15-24	3.43

Open-ended survey results. In the open-ended student Self-Assessment Survey questions about use of story maps resulted in 7 of the 11 Story-Mapping/Rejoinder Group students writing more than two sentences describing the use of the story map, its elements, and how it might help one as a reader or writer. In comparison, 7 of the 9 Story-Mapping Group members gave brief details of less than one sentence about the functional use of story maps, and many did not include all seven elements in their answer. Students were asked to (a) explain what a story map was, (b) tell when they might use a story map, (c) describe the elements of the story map, (d) tell how a story map could help their writing, and (e) tell how a story map would help them write.

In response to the five questions asked in the Student Self-Assessment Survey, the students in the Story-Mapping/Rejoinder Group responded with two sentences or more about what a story map is. Students in this group reported that (a) story maps helped put ideas in order before writing or reading; (b) story maps helped with describing the setting, plot, characters, problems, and solutions; (c) story maps provided students with a better understanding of the books or story; and (d) story maps helped the student keep track of ideas about the reading. Students in this group stated: “Story maps help you understand things you might not understand just because it is more organized.” In sharp contrast, the students in the Story-Mapping Group added, “You could tell someone a story from the map. You could name the characters and the place the story happened. The map is like a web.” Students in the Story-Mapping Group were unclear about *how* a story map could help a person in reading or writing.

Differences Between Groups for Story Mapping

Students who were in the Story-Mapping/Rejoinder Group wrote twice as much as the students in the Story-Mapping Group on their story maps. Students in the Story-Mapping/Rejoinder Group wrote more descriptive details about the story grammar elements (i.e., action and events, characters, setting and time, problem or plot, resolution). An example from the Story-Mapping/Rejoinder Group included the rich detail about the French king who wanted to take money, land, or harvested crops from the poor peasants who lived on the land. The nine students in the Story-Mapping Group with the same question would respond by saying something similar to the following statement, “The king was rich and wanted all the poor people’s stuff.” The lack of details in the Story-Mapping Groups oral discussions did not provide adequate descriptions about the place or characters or provide ideas for further discussion within the group. Additionally, the Story-Mapping Group struggled with completing all of the story elements for each of the story maps prepared after class discussions. Students from the Story-Mapping/Rejoinder Group were able to fill in 90% of the story map with good to excellent details, as evidenced by the extra points they each received for detailed description of the story grammar elements. Mean scores ranged from a low score of 0.8 in *goal related to problem* to a high mean score of 1.4 in *descriptive extra points*.

Similarly, the Story-Mapping Group responded by providing only limited information for each of the story map elements, with only one person in the group able to fill out the story map in entirety by filling in all of the elements of the map. Students from the Story-Mapping Group routinely used only one or two words to name a person

or place with little or no additional description of the story elements. Areas that presented the most difficulty to this group included the *goal related to the problem*, with a 0.3 posttest mean score, and *setting* and *time*, with a 0.6 posttest mean score. Mean scores for the Story-Mapping Group ranged from a low score of 0.1 in *descriptive extra points* to 0.9 in *characters* and *problem*. See Table 10 for descriptive statistics.

Teacher Use of Rejoinder Questions

Teacher Lesson Activation Forms tracked the teacher's use of rejoinder questioning strategies during every class for the Story-Mapping Group and the Story-Mapping/Rejoinder Group. Table 10 and the following two paragraphs break down the Teacher Lesson Activation Form's descriptive statistics for the two groups.

Table 10. *Story-Mapping Descriptive Statistics*

<u>Elements of Story Mapping</u>	<u>Story-Mapping/Rejoinder Group</u>		<u>Story-Mapping Group</u>	
	<u>Mean</u>	<u>Range</u>	<u>Mean</u>	<u>Range</u>
Action/Events				
Pretest	0.7	0-1	0.5	0-1
Posttest	1.0	1-1	0.8	0-1
Characters				
Pretest	0.6	0-1	0.5	0-1
Posttest	1.0	1-1	0.9	0-1
Setting				
Pretest	0.6	0-1	0.5	0-1
Posttest	1.0	1-1	0.8	0-1
Time				
Pretest	0.6	0-1	0.5	0-1
Posttest	1.0	1-1	0.6	0-1
Problem				
Pretest	0.7	0-1	0.5	0-1
Posttest	0.9	0-1	0.9	0-1
Goal Related to Problem				
Pretest	0.5	0-1	0.2	0-1
Posttest	0.8	0-1	0.3	0-1
Resolution				
Pretest	0.5	0-1	0.5	0-1
Posttest	1.0	1-1	0.8	0-1
Descriptive Extra Points				
Pretest	0.8	0-1	0.1	0-1
Posttest	1.4	1-3	0.1	0-1

Use of Rejoinder Questions in the Story-Mapping/Rejoinder Group

Of the 71 rejoinder questions asked of this group, 20% were *null* rejoinder questions, where no facial expression occurred with the response from students. The mean score was 1.0 for the *null* rejoinder. An *evaluative* response, which judged the students' response with a statement of positive reinforcement, occurred 26% of the time. Example statements that reinforced positively were as follows: "I like your thinking. You are on the right track. Great ideas. You must listen carefully to be able to answer my questions so well." These statements encouraged students to be confident in their oral discussion (Hall, 1993; Weber & Shake, 1988). The mean score was 1.4 for the *evaluative* response. The teacher *repeated* or *rephrased* questions or answers 19% of the time. The mean score was 1.3 for *repeat/rephrase*. The *elaborate* or *embellish* student rejoinder response occurred 22% of the questioning time and had a mean score of 1.1. The teacher demonstrated the most difficulty with incorporating the *correction* rejoinder. In this instance, if students were wrong with an answer, the teacher told them they were inaccurate in their thinking and led with more questions to the answer that was correct. The *correction* response occurred only 11% of the overall discussion time, as most students understood the questions and gave answers considered correct. The mean score was 0.6 for the *correction* response. When the teacher used the rejoinder questioning strategies that *evaluated*, *repeated*, and *rephrased* student answers, the responses were about 75% more descriptive and informative of background knowledge or prior experiences.

Use of Rejoinder Questions in the Story-Mapping Group

For the Story-Mapping Group, only rejoinder questions that focused on literal information were asked. Questions included *when* and *where* the story took place, or *what time* the story took place, or *why* something specific happened. The teacher did not *embellish*, *elaborate*, *repeat*, or *rephrase* responses for this group to review. The teacher did request more information and sometimes acted curious about the student responses. Of the 100 questions asked of this group over the course of the ten sessions, a few times the teacher gave an *evaluative* response to the Story-Mapping Group by telling a student his or her response was a good response, and that rejoinder-type response had a mean score of 0.3 over time. The teacher did not correct any student responses but instead skipped to another student for the correct answer. See Table 11 for descriptive statistics.

Table 11. *Descriptive Statistics for Teacher Rejoinder Questions*

<u>Rejoinder Type</u>	<u>Story-Mapping/Rejoinder Group</u>		<u>Story-Mapping Group</u>	
	<u>Mean</u>	<u>Range</u>	<u>Mean</u>	<u>Range</u>
Null Rejoinder	1.0	1-1	0.0	0-0
Evaluative Response	1.4	0-2	0.3	0-1
Repeat/Rephrase	1.3	1-3	0.3	0-1
Elaborate/Embellish	1.1	0-2	0.0	0-0
Correction	0.6	0-2	0.0	0-0

Visually Analyzing Group Differences

Differences Among Groups on Literal Comprehension Questions

In the next section, results from this study are shown using box plot graphs for visual inspection. The box plot for literal questions in Figure 1 demonstrates that with more students, significant differences might have occurred in reading comprehension results when using story mapping and teacher rejoinder-questioning strategies.

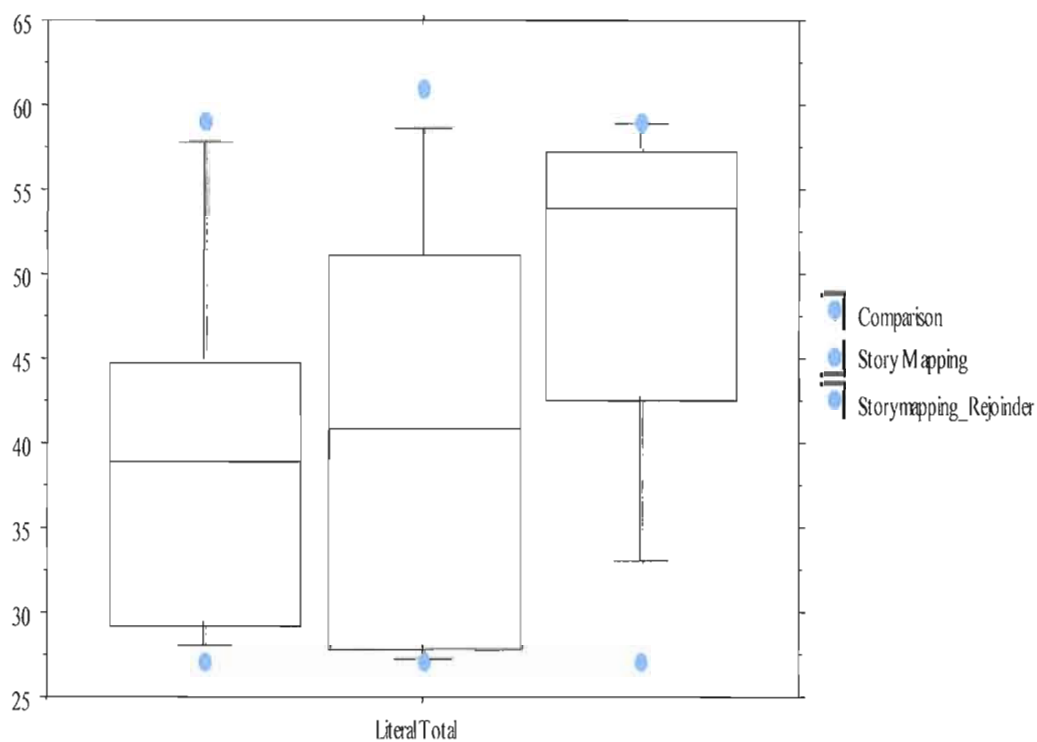


Figure 1. Box plot for literal questions.

Table 12. *Percentiles for Literal Comprehension Scores Split by Group*

<u>Groups</u>	<i>10th %tile</i>	<i>25th %tile</i>	<i>50th %tile</i>	<i>75th %tile</i>	<i>90th %tile</i>
Comparison Group	28.20	29.50	39.00	45.00	57.80
Story-Mapping Group	27.40	28.00	41.00	51.25	58.60
Story-Mapping/Rejoinder Group	33.00	42.75	54.00	57.50	59.00

Table 12 shows that the 10th percentile scores for the Story-Mapping/Rejoinder Group is higher than the 25th percentile scores for the Story-Mapping Group and Comparison Group. Further, the 50th percentile score for the Story-Mapping/Rejoinder Group is higher than the 75th percentile score for the Story-Mapping Group and the Comparison Group. Finally, the 90th percentile score for the Story-Mapping/Rejoinder Group is higher than either the Story-Mapping Group or the Comparison Group. See Figure 1 and Table 12 for complete percentile scores.

Differences Among Groups on Inferential Comprehension Questions

The box plot for the inferential questions in Figure 2 demonstrates greater inferential scores in the Story-Mapping/Rejoinder Group than in the other two groups. Table 13 shows that the 10th percentile score for the Story-Mapping/Rejoinder Group is higher than either the Story-Mapping Group or the Comparison Group. The 25th

percentile score for the Story-Mapping/Rejoinder Group is higher than the 50th percentile score for the Story-Mapping Group and the Comparison Group. Further, the 75th percentile score for the Story-Mapping/Rejoinder Group is higher than the other two groups' 75th percentile scores. Finally, the 90th percentile score for the Story-Mapping/Rejoinder Group is higher than the Story-Mapping Group's 90th percentile score. In practical terms, the elevated percentile scores for the Story-Mapping/Rejoinder Group represents an educational potential with a larger population of LD students. See Figure 2 and Table 13 for complete percentile scores.

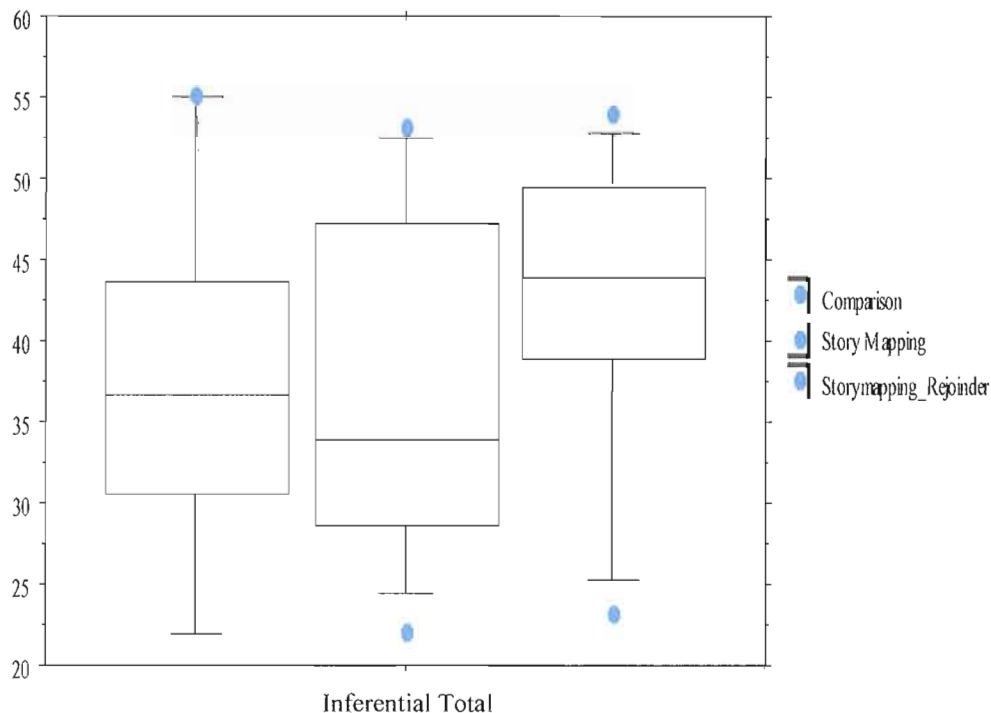


Figure 2. Box plot for inferential questions.

Table 13. *Percentiles for Inferential Comprehension Scores Split by Group*

<u>Groups</u>	<i>10th</i> %tile	<i>25th</i> %tile	<i>50th</i> %tile	<i>75th</i> %tile	<i>90th</i> %tile
Comparison Group	22.00	30.75	37.00	43.75	55.00
Story-Mapping Group	24.40	28.75	34.00	47.50	52.60
Story-Mapping/Rejoinder Group	25.40	39.00	44.00	49.75	52.80

Differences Among Groups on Evaluative Comprehension Questions

The scores for the Story-Mapping/Rejoinder Group were only slightly higher than the Story-Mapping or Comparison Group, as demonstrated by the box plot for evaluative questions in Figure 3. Additionally, Table 14 displays the 10th percentile score for the Story-Mapping/Rejoinder Group as higher than the 25th percentile score for the Story-Mapping Group and the Comparison Group. Further, the 50th percentile score for the Story-Mapping/Rejoinder Group is higher than the score for the Story-Mapping Group and the Comparison Group. Within the 75th percentile, the score for the Story-Mapping/Rejoinder Group is higher than the score for the Story-Mapping Group or Comparison Group. Finally, the 90th percentile score for the Story-Mapping/Rejoinder Group is higher than the Story-Mapping Group, with the Comparison Group being higher than the other two groups. Study limitations may have had a greater effect on the Comparison Group scores. In practical terms, the results demonstrate an educational potential when teachers use story mapping and rejoinder

questions as instructional strategies for increasing evaluative reading comprehension.

See Figure 3 and Table 14 for complete score details.

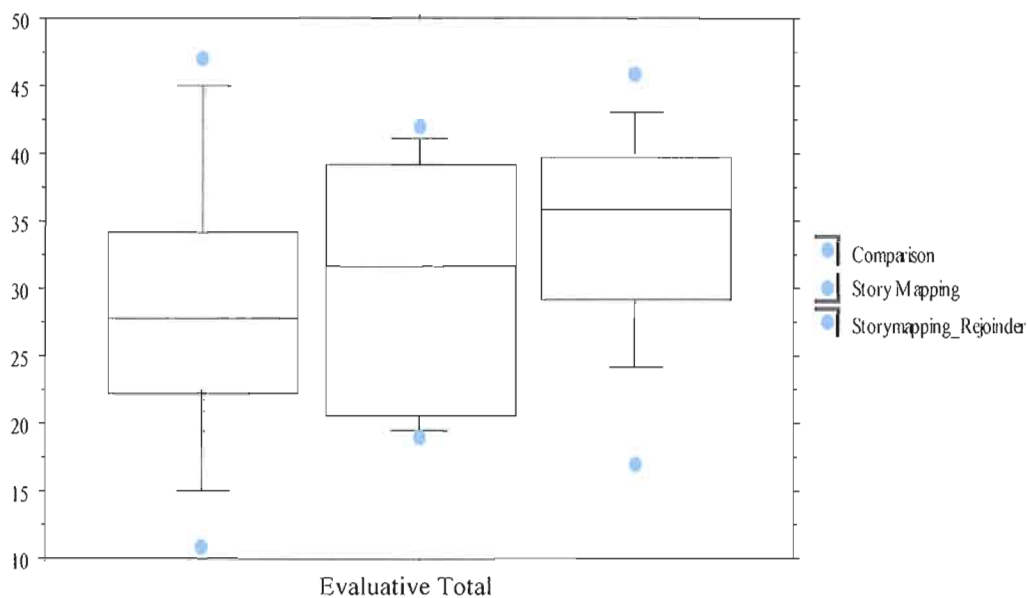


Figure 3. Box plot for evaluative questions.

Table 14. Percentiles for Evaluative Comprehension Scores Split by Group

<u>Groups</u>	<i>10th %tile</i>	<i>25th %tile</i>	<i>50th %tile</i>	<i>75th %tile</i>	<i>90th %tile</i>
Comparison Group	15.20	22.50	28.00	34.25	45.20
Story-Mapping Group	19.40	20.75	32.00	39.25	41.20
Story-Mapping/Rejoinder Group	24.20	29.25	36.00	40.00	43.00

Differences Among Groups on the OSAT Sample Test

All groups completed the OSAT sample test at the beginning of the study as part of the regular baseline assessment required by the middle school for seventh- and eighth- grade students. Students also completed the OSAT for comparative analysis. Although no significant differences from pretesting to posttesting among the groups occurred, scores within the groups increased over time for the two experimental groups. On the posttest, Table 15 shows that the 10th percentile score for the Story-Mapping/Rejoinder Group was higher than either the Story-Mapping or the Comparison Group. The 25th percentile score for the Story-Mapping/Rejoinder Group was also higher than the score for either the Story-Mapping or the Comparison Group. In the 50th percentile, the score for the Story-Mapping/Rejoinder Group was higher than the story mapping or Comparison Group. In the 75th percentile, scores for the Story-Mapping/Rejoinder Group were higher than the 90th percentile scores for either the Story-Mapping Group or the Comparison Group. The scores in the Comparison Group decreased over time, possibly from a decrease in reading comprehension interest. The increase among the experimental groups demonstrates that with more students, a larger educational difference over time may occur among groups. The box plot in Figure 4 demonstrates the educational growth for students in the Story-Mapping Group and the Story-Mapping/Rejoinder Group. See Table 15 for descriptions of percentile scores.

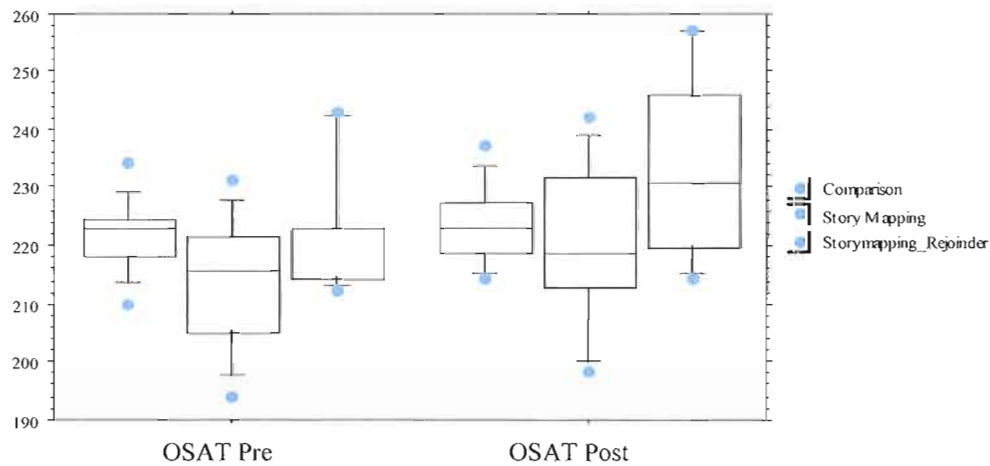


Figure 4. Box plot for OSAT pretest vs. posttest.

Table 15. Percentiles for OSAT Split by Group

<u>Pre and Post Groups</u>	<i>10th %tile</i>	<i>25th %tile</i>	<i>50th %tile</i>	<i>75th %tile</i>	<i>90th %tile</i>
Pre-OSAT Comparison Group	213.6	218.25	223	224.5	229.2
Pre-OSAT Story-Mapping Group	197.6	205.25	216	221.5	227.8
Pre-OSAT Story-Mapping/Rejoinder Group	213.2	214.5	223	223	242.4
Post-OSAT Comparison Group	215.2	218.75	223	227.5	233.4
Post-OSAT Story-Mapping Group	200	212.75	219	231.75	238.8
Post-OSAT Story-Mapping/Rejoinder Group	215.2	220	231	246	257

Differences Among Groups on Study Skills Checklist

Table 16 shows the 10th percentile posttest score for the Story-Mapping/Rejoinder Group was higher than the 25th percentile score for either the Story-Mapping Group or the Comparison Group on the Study Skills Checklist. The 25th percentile score for the Story-Mapping/Rejoinder Group was higher than the 50th percentile for either the Story-Mapping Group or the Comparison Group. Further, both the 75th and 90th percentile scores for the Story-Mapping/Rejoinder Group were higher than either the Story-Mapping Group or Comparison Group on this checklist. See Figure 5 and Table 16 for complete details.

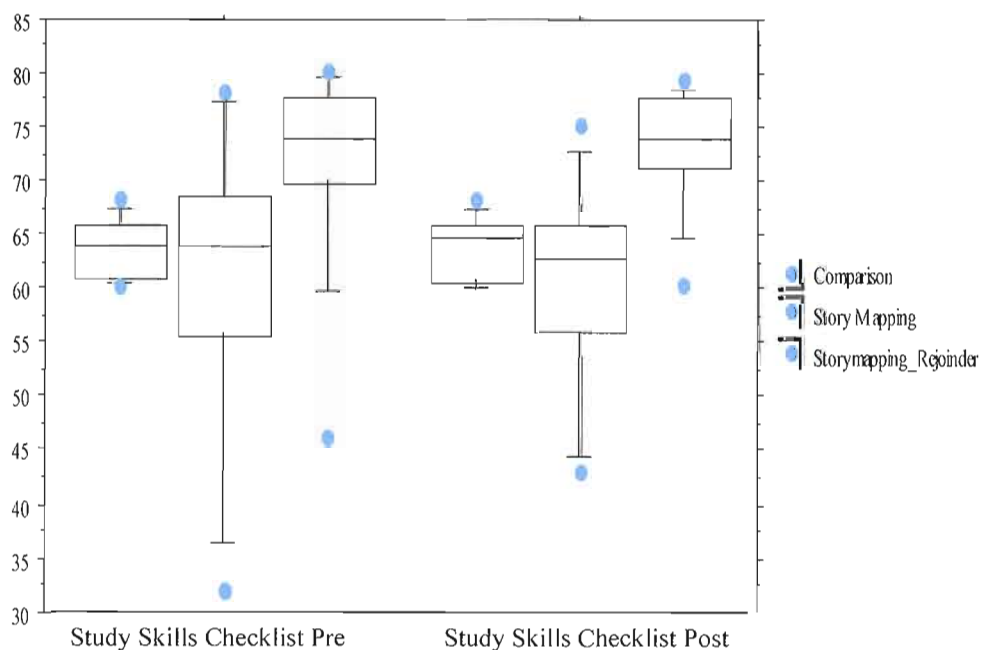


Figure 5. Box plots for Study Skills Checklist pre vs. post

Table 16. *Percentiles for Study Skills Checklist Split by Group*

<u>Group</u>	<i>10th %tile</i>	<i>25th %tile</i>	<i>50th %tile</i>	<i>75th %tile</i>	<i>90th %tile</i>
Study Skills Checklist pre-survey Comparison Group	60.40	61.00	64.00	66.00	67.20
Study Skills Checklist pre-survey Story-Mapping Group	36.40	55.75	64.00	68.50	77.20
Study Skills Checklist pre-survey Story-Mapping/Rejoinder Group	59.80	70.00	74.00	77.75	79.40
Study Skills Checklist pre-survey Comparison Group	60.00	60.75	65.00	66.00	67.20
Study Skills Checklist pre-survey Story-Mapping Group	44.60	56.00	63.00	66.00	72.60
Study Skills Checklist pre-survey Story-Mapping/Rejoinder Group	64.80	71.25	74.00	77.75	78.40

Students and Story-Mapping Details

Table 17 shows that the 10th percentile scores for Story-Mapping/Rejoinder Group post-scores were higher than the Story-Mapping Group. In the 25th percentile, the scores were higher for the Story-Mapping/Rejoinder Group than the Story-Mapping Group.

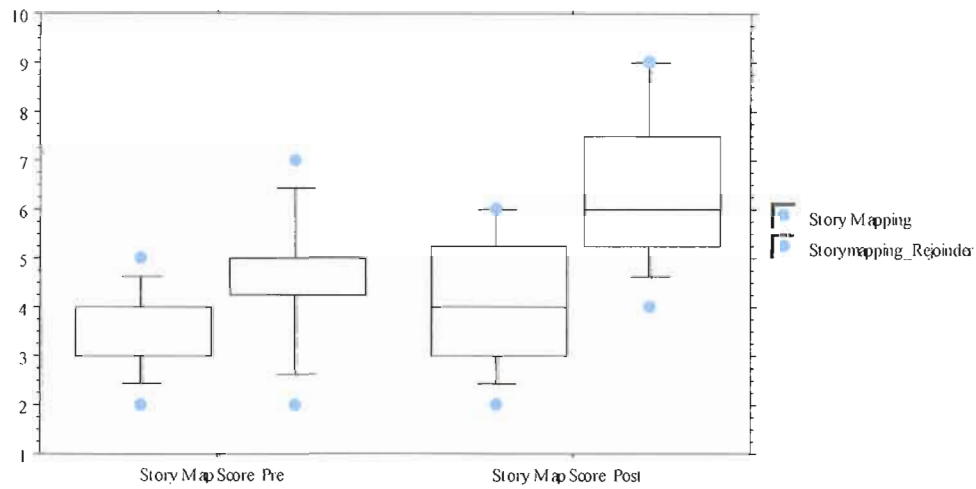


Figure 6. Box plot for story map scores.

Table 17. Percentiles for Story Map Scores Split by Group

<u>Groups</u>	<i>10th %tile</i>	<i>25th %tile</i>	<i>50th %tile</i>	<i>75th %tile</i>	<i>90th %tile</i>
Story-Mapping Group Pre: Story-mapping score	2.40	3.00	4.00	4.00	4.60
Story-Mapping/Rejoinder Group Pre: Story-mapping score	2.60	4.25	5.00	5.00	6.40
Story-Mapping Group Post: Story-mapping score	2.40	3.00	4.00	5.25	6.00
Story-Mapping /Rejoinder Group Post: Story-mapping score	4.60	5.25	6.00	7.50	9.00

In the 75th percentile, scores were higher for the Story-Mapping/Rejoinder Group than the Story-Mapping Group. Finally, in the 90th percentile, the score was higher for the Story-Mapping/Rejoinder Group than the Story-Mapping Group. These results are another indication that with more LD students, there might be a greater educational benefit and significant difference among groups with the use of story maps and teacher rejoinder-questioning strategies. See Figure 6 and Table 17 for details.

Summary of Findings

The results of the study showed no significant difference among groups for LD students when using story maps and teacher rejoinder questions. However, my results suggest that a possible educational difference might exist for these students using the described strategies for reading comprehension if (a) my study had more participants or (b) I repeat the study later. Furthermore, the study indicated that students perceived improvements in their academic skills, assignment completion, school attitude, organization, and use of class time.

CHAPTER V

DISCUSSION

This study explored the combined use of story maps and teacher rejoinder questions on reading comprehension scores for middle school students with learning disabilities. The discussion that follows summarizes the differences in scores between the (a) Story-Mapping/Rejoinder Group, (b) the Story-Mapping Group, and (c) the Comparison Group on the OSAT sample test and in literal, inferential, and evaluative comprehension questions from the *EasyCBM*. Demographic data was included for comparison of all participants in the study. *EasyCBM* details for reading overall totals and individual subtotals in the areas of literal, inferential, and evaluative scores can be compared. Although statistical analysis using both ANOVA and Kruskal-Wallis nonparametric tests revealed nonsignificant differences between the three groups scores, a visual analysis of group differences presented by box plots indicated a possible educational benefit and thus lends itself to discussion. First, box plots demonstrate visual differences for both pretest and posttest scores from the sample OSAT. Second, student survey results illustrate the students' perspective of success over the course of the study. Finally, visual inspection of box plots and percentiles presents the educational benefit for students who participated in Story-Mapping Group discussions with teacher rejoinder questions. Prior to these discussions, however, I

believe it is important to provide a context for thinking about this study's results, and describing the study's limitations is a necessity.

Study Limitations

Limitations of the study include selectivity bias for student selection, research history of participants, alternative interpretations for the outcome, as well as internal and external validity threats that decrease generalization outcomes. Consideration of each limitation is relevant because any single limitation could be detrimental to the outcome results. Of these, two main limitations were selectivity bias and research history bias.

Selectivity Bias

A small number of special education students were selected and presorted into three groups for reading instruction. Because students came from pre-established teams with given times to see the special education teacher, the special education group makeup for each team was administratively prearranged. The selection of students might confound the results of the study. In other words, this was not a random selection of students placed on teams. Instead, the three teams grouped the students needing special education support (selection threat) at a specific time of day for their individualized instruction.

Another selection bias occurs when students discover they are in a study; the students may display different attitudes towards a specific subject because of this knowledge. This validity threat is described as the Hawthorne effect in the research

literature (Gall, Borg, & Gall, 1996). The students in the study knew about their selection for the study, but not the group to which they would be assigned. This selection variable is not measurable because there are no pretests to measure the *study attitude* variable, and therefore there is no information to report for the possible differences between the groups in the study. The *study attitude* variable may have a positive or negative effect on the study results, and it must be considered a limitation.

The team that made up the Story-Mapping Group had 9 students of the 120-student team who needed individualized instruction from special educators in the area of reading or writing. The Story-Mapping/Rejoinder Group had 11 students out of the 125-student team who needed reading or writing support from specialists. The Comparison Group of 11 students who needed reading or writing support from specialists came from the third team of 110 students. The three groups of special education students were distributed equally on teams due to their predetermined needs levels. The age range was between 12 years and 14 years old for the 31 seventh- and eighth-grade students in the study.

Research History

The research history of the participants was a second limitation. In other words, a difference in the participants' research history occurred simultaneously with the treatment. This history, not the actual treatment, may have caused the outcome. There were two main differences for the three groups. First, the Comparison Group had a different special education teacher for the study than the Story-Mapping Group or Story-Mapping/Rejoinder Group. Second, the class interruptions caused by

conferences, holidays, band rehearsals, school plays, teacher in-service days, snow days, Oregon statewide testing, and student illness caused subject area teachers to revise their day-to-day schedules in order to make up content area class time. This change affected all special education students, each team at a different time. The schedule change caused special education students to miss resource classes for three to four days, particularly around the holidays, in order to make up content area class times. More time in content area classes with less direct instruction might have had an impact on the study, either positively or negatively. Additionally, a student's affinity for his or her specific team, peers, and teachers may have had an impact either positive or negatively on the study. An example would be relationship building as a provision by one team and not the other team. Some of the students with disabilities reported that they liked their team teachers and class friends, while other students described their relationship with the team as "not fitting in" with their friends. Each of these specific types of relationships or nonrelationships one must consider as having either positive or negative effects on the study.

Instrumentation of Assessments and Observations

A final internal validity threat may have been the instrumentation of both class assessments and observations. Using an assessment instrument multiple times may have caused changes in scores due to student familiarity. Repeat performance may have caused students to gain knowledge about the posttest from taking the pretest. A potential limitation to consider was the decrease or increase in student performance. This study did not use an observation of fidelity tool; instead, only teacher report was

used. Class observation by a trained observer may have also reflected more growth because the observer may have expected something to happen. Class observation may have produced either a positive or a negative effect, depending on the observer's expectations, and may have produced limitations for the study (Gall, et al., 1996).

Can the student with learning disabilities be helped by story mapping with rejoinder questioning strategies anywhere, or is this a result of the specific targeted population in the study? Several factors that may have influenced generalizability of the study included students of differing abilities, socioeconomic status, gender, extraversion-introversion personalities, and anxiety levels (Gall, et al., 1996). Each of these factors may have affected the outcome of the study either positively or negatively, and each threat must be considered.

Review of Findings

The results from this study did not support the original hypothesis that story mapping and teacher rejoinder-questioning strategies would produce significantly better literal, inferential, and evaluative comprehension scores for LD students. The literal comprehension scores between the three groups demonstrated a tied $p = 0.17$ value, which reflected a nonsignificant difference between the groups. The inferential comprehension scores between the three groups resulted in another nonsignificant difference, with a tied $p = 0.43$ value. The last score between the three groups on evaluative testing reported a nonsignificant difference with a tied $p = 0.35$ value. The statistical findings in this study are not consistent with prior research indicating that teacher rejoinder questions and story maps increased comprehension scores, although

the question remains unanswered with larger groups of LD students (Hunkins, 1989; Pressley, 2003; Raphael & McKinney, 1983; Weber & Shake, 1988).

Teacher Questioning

Unlike Hunkins' (1989), who described questioning as the integral part of student's procedural knowledge, I found no significant differences between the Story-Mapping Group and the Story-Mapping/Rejoinder Group. However, I noticed that students gained skills in answering questions about the narrative stories read aloud in class as demonstrated by the increase in description and volume of answered questions. This finding is puzzling, considering that other researchers (Ezell, Hunsicker, Quinque, & Randolph, 1996; Ezell, Kohler, Jarzynka, & Strain, 1992; Raphael, 1984; Weber & Shake, 1988) used teacher questions as a comprehension prompt (as did the Story-Mapping/Rejoinder Group). It could be that prompting is level specific, as found by Raphael and McKinney's (1983) study. Their results indicated that fifth-grade students (elementary) found prompting to use their knowledge of question-answer relationship helpful, but eighth-grade students (middle school) did not. In that regard, my findings mirrored the second part of Raphael and McKinney's study. Furthermore, these grade-level differences could not be attributed to differences in rejoinder-type questions asked by the teacher because I used the Teacher Lesson Activation Form, which addressed differences in rejoinder-type questions. Remember, Weber and Shake (1988) demonstrated that teachers predominantly favored the null rejoinder and that different types of rejoinders contributed differently to the reading comprehension lessons.

Pressley (2003) made the most significant report with evidence that explanatory

responses to questions as part of a learning group increase learning for those who are explaining the question. Furthermore, students who predicted the content of upcoming text by responding to pre-reading questions displayed relevant learning of text materials. Students in the Story-Mapping/Rejoinder Group often explained the teacher or peer questions to the class with their predictions of what could happen next in the story. The 11 students in this group all actively participated in making predictions and story comparisons, while students in the other groups did not engage in the lesson in the same manner.

Reading Comprehension Scores

The following discussion presents the differences among groups for the three comprehension components measured in the study by the *EasyCBM* and OSAT sample test: (a) differences among groups on literal comprehension questions on the *EasyCBM*, (b) differences among groups on inferential comprehension *EasyCBM* questions, (c) differences among groups in *EasyCBM* evaluative comprehension scores, and (d) differences in scores among groups on the OSAT sample test.

Differences Among Groups on Comprehension Questions

While there was no significant difference among groups, it is likely that with more students in the group, the average score between those who received instruction in story mapping with teacher rejoinder-questioning strategies and those who did could show a greater difference. Results from the *EasyCBM* scores indicated an average of 5 correct answers out of 7 literal comprehension questions by the Story-

Mapping/Rejoinder Group. On the other hand, the Story-Mapping Group's and the Comparison Group's average score of 3.5 correct answers out of the 7 questions per test suggests a difference. The 1.5 mean difference suggests that teacher rejoinder questions with story maps influenced students in their search for literal information. While there were no significantly different scores, probably due to low sample size, a visual inspection of the group scores provides a glimmer of educational significance.

Hunkins (1989) reported that students were influenced by teacher rejoinder questions, and the box plots representing student story-mapping details in this study suggested an educational benefit during narrative questioning for the students. Therefore, teacher questioning that promotes the stimulation of recall ideas, as well as inference and evaluation of text, are a needed area of ongoing study. Research by Durkin (1978-1979) indicated that when students answered the question with an invalid response, often teachers moved on in the text to the next question without review for the students who had incorrectly responded to the questions. Yet in another study, questioning strategies increased student confidence and stimulated prior knowledge (Stahl, 2004), which was similar to the reports that students believed there was an increase in their knowledge even if the questions they answered were not correct. Students reported that if their answers were not correct, the teacher would help them find the correct answer by restating the question or providing facts that could initiate a different answer to the question.

Students who were in the Story-Mapping Group struggled with answering the questions to narratives after the oral read-aloud. When they answered questions, students in this group were unable to provide details or description during the class

discussion. Student responses to teacher questions were “I guess so,” “yes,” “no,” or “I don’t know.” On the other hand, the students in the Story-Mapping/Rejoinder Group answered the same questions with detail and description about the story elements. Additionally, students from the Story-Mapping/Rejoinder group asked questions for clarification and tried to respond to questions regardless of the difficulty level. Students in the Story-Mapping/Rejoinder Group responded much like the Story-Mapping Group during the initial part of the study. The more the teacher used the rejoinder questioning strategies with the Story-Mapping/Rejoinder Group, the better the students became at answering the questions with detail, description, and organization of ideas about the content of the narrative stories discussed in class.

My findings showed that many of the students in the Story-Mapping Group responded similarly to the elementary students in the research of Richards and Anderson (2003), where elementary students were unable to deduce information from one segment of the text to the next and could not integrate implied information in other parts of the story. Although students from the Story-Mapping Group in this study were not as young as the Richards and Anderson readers, they still demonstrated similar difficulties. While Dewitz and Dewitz (2003) reported that emerging readers experienced problems due to lack of syntactical knowledge or a limited vocabulary, it can also be said that the struggling reader displays similar characteristics.

Both types of readers, struggling and emergent, have poorly developed reasoning abilities, a lack of prior knowledge for story content, or an overdependence on prior knowledge that causes them to invent credible but incorrect answers (Anderson & Pearson, 1984; Dewitz & Dewitz, 2003; Neuman, 1990; Suh & Trabasso,

1993). The lack of each of these necessary reading skills contributes to creating barriers to comprehension. While the research of Cooper, Chard, and Kiger (2006) suggested that the use of a predicting strategy set a purpose for reading, helped students read between the lines in text, and increased student engagement in reading, it appears that the story map with rejoinder questions contributed to that sense of purpose for the study group. Perhaps rejoinder questions that *embellished, restated, or rephrased* the student's response set the stage for reading by activating prior knowledge or background experiences that stimulated the student's ability to find literal information, determine inferences, and evaluate text. In essence, readers from the study constructed text meaning through text information and background knowledge just as they did in the findings of Beck and McKeown (1987). Their study suggested that rejoinder questions may increase the level of background knowledge and thus discussion among Story-Mapping/Rejoinder Group students. Many students in the study engaged in the story discussion, while other students participated in the descriptions of characters, details of time, place, events, and problems. Ongoing classroom discussions with the Story-Mapping/Rejoinder Group stimulated answers that were of an inferential and evaluative nature about the characters, time and place of narrative, and problem and resolution for the story. Finally, Pearson (1985) claimed that organization and retention of important information in a story by LD students occurred when teachers used questions related to the elements of story grammar with story maps. Students in the study reported good retention of the story elements by filling out the story maps. In essence, the story structure or story map supported important relationships and thus led to a deeper understanding of the text (Gardill & Jitendra, 1999).

EasyCBM score results demonstrated a 1.0 point higher score for the Story-Mapping/Rejoinder Group over the Story-Mapping Group. The Comparison Group averaged 0.5 points less than the Story-Mapping Group and 1.5 points lower than the Story-Mapping/Rejoinder Group on literal questions. I expected higher scores in the area of literal comprehension because the work of Applegate, Quinn, and Applegate (2002) suggested that students judged as proficient readers can recall information from the text. Therefore, it was my belief that struggling readers did not find literal information challenging, and their greatest need was to make inferences or evaluate text. Previous studies supported this belief. Additionally, Hunkin's (1989) study in the area of factual recall reported that students who lacked minimal proficiency could be supported by rejoinder questions that expanded student recall or fact-finding. Furthermore, Allington (2001) reported that when reading assessments focused on critical reading and response to text, only a few students demonstrated minimal proficiency.

The students in all groups of the current study reported that they skimmed the text for information for the correct answers. This held true for the answers on the *EasyCBM* questions and class discussion questions during the read-aloud stories. The poor scores for struggling readers in literal comprehension were reflective of the student-reported skimmed text and demonstrated a need for continued work on strengthening literal comprehension through rejoinder questioning strategies targeted for literal information retrieval. Future studies that teach students how to find specific literal information in-text through rejoinder questioning combined with story mapping are crucial to the support of earlier studies (Hunkins, 1989), as well as those that

develop questioning strategies to increase reading potential in students (Ezell, Hunsicker, Quinque, & Randolph, 1996; Ezell, Kohler, Jarzynka, & Strain, 1992; Raphael, 1984; Weber & Shake, 1988).

In the Story-Mapping/Rejoinder Group, the teacher used strategies to expand the simplest of student answers through rejoinder questions. Elaborating or embellishing student answers, encouraging group interaction with vocabulary meanings, and rephrasing questions answered incorrectly in order to guide students to a correct response were the framework used in developing rejoinder questions.

While students in the Story-Mapping/Rejoinder Group answered evaluative questions with description and detail, students in the Story-Mapping Group answered the same questions without detail. An example of these answers occurred with the reading of the Robin Hood story. When asked questions about the problem in the story, the Story-Mapping Group responded to the teacher, "Robin Hood stole money and gave it to the poor." When the same questions were posed to the Story-Mapping/Rejoinder group, one student responded, "Robin Hood stole from the rich French kings to give to the poor peasants." When the teacher restated the student's response by saying, "Robin Hood stole from rich kings to give to the poor peasants," another student piped in, stating, "The French kings were greedy; they took land and money from the poor, and that was the reason Robin Hood was stealing from the rich." When the primary investigator replied with an evaluation of the statement, "Nice explanation and description," a third student argued, "Robin Hood wanted to make things better for everyone by stopping the king from stealing from the poor people to make themselves richer." Discussions with the Story-Mapping/Rejoinder Group

presented richly detailed examples of similar life circumstances and well-organized explorations of content and ideas. Similar discussions with the Story-Mapping Group were limited in details, description, or disclosure of prior knowledge or background experiences. Group percentile scores and box plots indicate a greater level of understanding by students who received instruction with teacher rejoinder questions and story maps.

During discussions, students in the Story-Mapping/Rejoinder Group demonstrated educational potential for synthesizing and summarizing the story effectively with details and description. The student reports aligned with the work of Cooper et al.(2006) because students used strategies that evaluated the text. In contrast, the Story-Mapping Group struggled with retelling the story with any descriptive details about the place, characters, or other story elements. The teacher rejoinder questions enabled the Story-Mapping/Rejoinder Group to develop that core of critical thinking that McLaughlin and DeVogd (2004) described as important in making sense in the world. With an understanding of the importance of adequate teacher questioning strategies and student interactions, the results of the literal, inferential, and evaluative comprehension scores between each of the groups should demonstrate a significant difference. None of the groups made any significant gains in the area of evaluative literature over the course of the study on the *EasyCBM* quizzes. Study limitations may have produced this lack of difference between group scores.

All students in the three study groups fit the profile of unskilled readers; they lacked the ability to make inferences and evaluate literature, demonstrated by their low scores on entry testing for special education. Tierney and Pearson (1983) found that

struggling readers' difficulties stemmed from an inability to collate information or build on the existing knowledge base and a lack of flexibility in using background information or written cues for inference requirements. Many of the students in the study reported difficulties organizing information or finding background knowledge before they began working with story maps and teacher rejoinder questions. McNamara and O'Reilly's (2002) work suggested that enhancing the strategy system builds confidence in the struggling reader. The demonstration of educational growth by using story-mapping and teacher rejoinder-questioning strategies contributed to the McNamara and O'Reilly research: Building student confidence by stimulating prior knowledge and background experiences allowed struggling readers to become confident readers.

Student Perceptions, Story Mapping, and Teacher Lesson Activation Details

The following discussion presents the differences between the groups for three qualitative components measured by the study: (a) the student Study Skills Checklist demonstrates perception differences among groups, (b) the breakdown of student story-mapping details between groups, and (c) the differences between groups on the Teacher Lesson Activation Form.

Student perceptions of Self-Assessment Survey and Study Skills Checklist. A pre- and post-survey using the Student Self-Assessment Survey, asked questions about student knowledge of story mapping, understanding of literature, and student work perspectives. In addition, a pre- and post-checklist using the Study Skills Checklist, had

questions regarding student study skills that required a score of 1 to 5 for each question. The scores of 1 to 5 used a Likert-type scale with 1 being *low* and 5 being *high*.

Between the two experimental groups, the Story-Mapping/Rejoinder Group completed both the student Self-Assessment survey and the Study Skills Checklist more positively. This group provided details about story maps (e.g., “A story map helps put your ideas down and find the different parts of the story like the setting, characters, place, and problem before you start to write or answer questions”) and high marks about themselves on the Self-Perspective Survey. Students in the Story-Mapping/Rejoinder Group gave themselves higher marks on the checklist for achievement, organization, and accomplishments for the trimester. The Story-Mapping Group replied with simple detail (e.g., “Story maps help you write”) on their reflective Student Self-Assessment Survey and low marks on their Study Skills Checklist.

The student Study Skills Checklist include pre-checklist and post-checklist of the of student academic ability as represented in the box plot in Figure 5 as well as Table 13. Scores demonstrated an increased score for pre-checklist and post-checklists in all groups at the 10th percentile level, with the Story-Mapping/Rejoinder Group demonstrated the highest score at that level on post-checklist. In the 25th percentile, the Comparison Group scores dropped from the pre-checklist to the post-checklist, while the Story-Mapping Group and the Story-Mapping/Rejoinder Group increased slightly from pre-checklist to post-checklist. In the 50th percentile, the Comparison Group increased slightly, the Story-Mapping Group decreased slightly, and the Story-Mapping/Rejoinder Group remained the same. In the 75th percentile, the Comparison

Group remained the same from pre-checklist to post-checklist, the Story-Mapping Group dropped slightly, and the Story-Mapping/Rejoinder Group increased over time. In the 90th percentile, the Comparison Group stayed the same, the Story-Mapping Group dropped by 5.0 points, and the Story-Mapping/Rejoinder Group dropped by 1.0 point. Because the overall scores of the checklist were at their peak points at the 90th percentile, a change of one or two points in a student's score could affect the scores in either direction. On the lower end of the scale, the Comparison Group could make great increases by gaining three or four points for each student.

The general knowledge about story mapping on the Student Self-Assessment Survey was positive. In the Story-Mapping/Rejoinder Group, 10 of the 11 students described positive self-perceptions, while only 4 of the 9 in the Story-Mapping Group demonstrated similar self-perceptions. Additionally, the Comparison Group scores did not change much over time on either the story mapping Self-Assessment survey or student Study Skills checklist for study skills perceptions, as indicated by the box plot in Figure 6 and percentile details found in Table 16. The demonstration of prior knowledge and previous experience on both self-assessment survey and study skills checklist suggested a higher self-perception at the end of the experimental period by the Story-Mapping/Rejoinder Group. The increased self-perspective was the dynamic that McCormick (1992) might have been looking for in his study of unskilled readers. McCormick's study indicated that it was important for struggling learners to develop a sense of confidence in their reading skills. Story-mapping and rejoinder questioning strategies helped the students focus on the critical concepts of story grammar in narrative text. Furthermore, as the research of Cooper et al.(2006) maintained, students

used summary and synthesis to evaluate text when given strategies to be successful. Students in the Story-Mapping/Rejoinder Group reported they felt confident in their narrative story retellings because they had learned to use story maps and talked about the stories in class.

Story Map Scores. Students in the Story-Mapping/Rejoinder Group demonstrated greater confidence in their writing by using details and descriptive language to identify the story elements of characters, time, place, event, problem, and resolution in their story maps. Students needing support in writing do not produce many words for description. The students in this group were not hesitant to use story maps to produce multiple words under each element. Additionally, when the teacher used rejoinder questioning strategies, students added words and details after class discussion of the narratives. Story-Mapping/Rejoinder Group students used twice as many words on the story maps as the Story-Mapping Group. The details and inclusion of the story elements allowed students to receive scores upward of 6.4 on their first story maps in the Story-Mapping/Rejoinder Group. The addition of details as well as all of the elements of story grammar increased scores in the last story maps to 9.0 points for the Story-Mapping/Rejoinder Group. Scores indicate that over time, some students added more story elements to the story with details. Not as many students were successful with the descriptive details in the Story-Mapping Group as were those in the Story-Mapping/Rejoinder Group.

The observer's and teacher's overall impressions of the students in the Story-Mapping/Rejoinder Group was one of more confidence, better organization of

materials, more informed discussions, and a wider breadth of understanding about how their prior knowledge was important for making inferences and evaluating the literature. Additionally, the Story-Mapping/Rejoinder Group of students wanted to use story maps for note-taking while reading during three out of four stories on the *EasyCBM* series. The Story-Mapping Group was not interested in pursuing any type of story-map writing during the *EasyCBM* reading series or quizzes. The groups of students who did use the story maps to guide their reading or writing in either group were more successful in interpreting and finding the specifics in the literature they were reading.

Teacher Lesson Activation details and teacher results. The teacher completed the Teacher Lesson Activation Form after each class discussion and presentation. In 1993, Hall developed the Teacher Questionnaire for similar research. In this study, the form was identified as the Teacher Lesson Activation Form. The form contained six questions. The first two questions required the teacher to rate the instructional characteristics of the lesson. The next four questions required the teacher to give a judgment of his or her reading instruction during the observed lesson. A four point Likert-type scale with descriptive anchors allowed teachers to rate their lesson performance.

The first two questions in the activation form allowed the teacher to rate the lesson in relation to other lessons taught in class. In other words, teachers rated the normalcy of the lesson observed as compared to other lessons. Based on the

vocabulary, concepts, questions, and story structure, the teacher had to consider and report on the level of difficulty of the lesson as compared to other lessons.

The next four questions directed the teacher's thinking towards the passage reading and his or her reflection of interactions with the students during the question and discussion period that followed the reading. Additionally, the four questions specifically related to the Class Observation Form that the observer would be completing during the class lesson. Targeted areas of teacher rejoinder questions or student responses on the Teacher Lesson Activation Form included *evaluate*, *restate/rephrase*, *elaborate*, *embellish*, and *correct*.

The Teacher Lesson Activation Form results indicated that teachers, including the teacher in the study, felt most comfortable in those questioning strategies that were easiest. The *evaluative* rejoinder questioning strategies use was at 26%. *Evaluative* rejoinders require a positive response about the action the student takes, such as, "Good thinking!" or "That was well-stated!" These remarks are an evaluation of the student thinking, much like positive reinforcement, and are perhaps the easiest to use in a classroom setting even by the seasoned teacher. Positive feedback encourages students to answer more questions in class discussions. Both results of *repeating* and *rephrasing* at 19% and *elaborating* and *embellishing* at 22% demonstrate instructional effort in the area of questioning strategies.

Both Hunkins (1989) and Stahl (2004) spoke to the need for teacher-led questioning as the model for critical thinking in their studies. Teaching students how to be unafraid to take a stance on the questions they answered in response to text generates students' critical thinking (Hunkins). Therefore, it is essential that teachers

learn questioning strategies that will direct students to think more critically about literature and guide them in the right direction when they have given incorrect answers.

Implications

Although study implications do not have the statistical strength to add to the body of literature in the field of story mapping with teacher rejoinder-questioning strategies, student scores demonstrated an educational impact as they used the strategies of story mapping and relevant question-gathering to become better readers and writers in the classroom. Of greatest value to the students was the realization that they could increase their scores by looking for factual details in literature, documenting the details, and asking questions about the details before answering literal questions. In some ways, the knowledge that the answers were apparent in the text, if they looked for the details, built confidence in their reading and written responses. An example of this confidence was demonstrated by the two groups of students engaged in literal questions about the written text after completion of the study. The literal questions required the student to find the facts within the reading text. Students located factual questions by reviewing the text or recalling the specifics of the story. Literal answers were often simplistic in nature, requiring only one or two words specifically from the text. Once answered, the teacher was able to move on to the next question. After completing story maps, students quickly answered literal questions.

The students in the Story-Mapping/Rejoinder Group and the Story-Mapping Group completed the story map while the teacher asked the same basic question to each group. In the Story-Mapping/Rejoinder Group, the teacher used teacher rejoinder

strategies to expand student responses and interactions during the discussion of the teacher read-aloud passage. Clearly, the educational benefits of the study group were in line with research of both Hunkins (1989) and Stahl (2004) who reported that teacher rejoinder questions expanded students' critical thinking, increased students' confidence, and stimulated students' prior knowledge about a subject area.

With an understanding of the importance of adequate teacher questioning strategies and student interactions, the results of the literal, inferential, and evaluative comprehension scores between each of the groups should demonstrate a significant difference. The lack of difference among groups may have resulted from study limitations, researcher bias, and small study size or power. A nine-month study, as compared to the twelve-week study, has the potential to demonstrate a greater increase in all areas of reading comprehension for LD students.

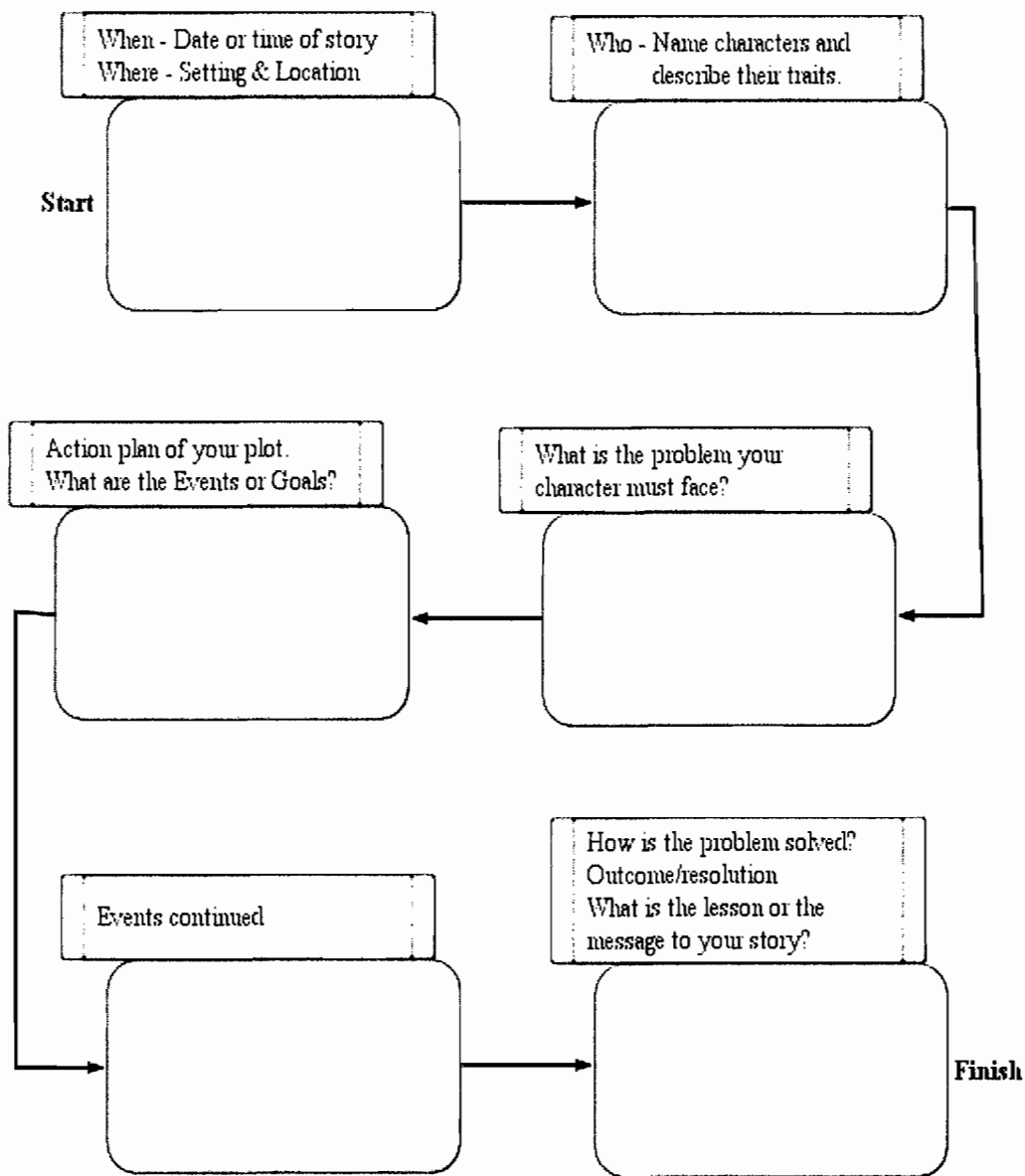
Future Studies

Future research should include matched demographics among participants to create group size with equivalent socioeconomic status and average or equivalent grade- point averages among groups. Time spent in teacher training with rejoinder questioning strategies would benefit both teacher and students. Students should demonstrate solid literal comprehension by providing facts from texts and narrative stories, developed through fact-finding strategies and class discussions before beginning another study. A solid literal understanding of text would rule out the literal comprehension variable and allow data collection specifically for inferential and evaluative comprehension information.

APPENDICES

APPENDIX A
STORY MAP AND SCORING GUIDE

Story Mapping: Map Your Story



Story-Mapping Scoring Guide

Scoring of story grammar elements found in the story map includes one point for the presence of any mention of the seven story grammar elements as follows:

C= Characters or the *who* of the story, must name characters.

A = Action phrase, or sentence describing the event or action of the story.

S = Setting or *where* the story takes place.

T = Time, date, or *when* the story occurs.

P = Problem or *what* challenge the main character is facing in the story.

G = This is related to the problem – describing the action plan or the goal to resolve the problem.

O = Outcome or resolution – *how* the problem is solved. Student describes what the character learned. The message of the story is clearly stated by the student.

An additional point (1) for each story element may be given if a student writes more details describing the story element.

APPENDIX B
EasyCBM MATERIALS

EasyCBM - Student Copy Form

Directions: Please read the story and then answer the questions that come after it.

Snow Camping Adventure

It was New Year's Eve. Jake, Will, and Claire were darting around the house. They couldn't wait to play in the snow! It would be their first overnight, outdoor trip to Mt. Hood. They were going snow camping near Timberline Lodge. This meant camping in a tent perched on top of the snow. Their dad, Mr. Wittmer, had a great passion for the outdoors. He was an active member of the Portland Mountain Rescue Team and enjoyed climbing mountains, backpacking, and rock climbing. Mr. Wittmer always said he was made for the outdoors.

Mrs. Wittmer also enjoyed the outdoors, but she wasn't sure about spending the night on a mountain in the snow. Her hands and feet were often cold, and she feared that an overnight snow camping trip would be uncomfortable. Knowing this, Mr. Wittmer bought her the best outdoor gear he could find. When Mr. Wittmer was done shopping, Mrs. Wittmer and the kids had cozy down sleeping bags, thick gloves, and warm winter clothes. They had goggles and headlamps too.

Timberline Lodge was getting ready for its annual New Year's Eve fireworks display. This was another reason Jake, Will, and Claire were looking forward to this trip with great anticipation. For the first time, Mrs. Wittmer agreed to go snow camping with her husband and three kids. As soon as he heard his wife agree to come along, Mr. Wittmer raced through the house grabbing snow camping gear for the family trip. This family adventure was a dream come true for him!

The Wittmer family also invited the Lee family to join them. Mr. Lee often went on outdoor trips with Mr. Wittmer. The two families had been friends for many years. Mr. and Mrs. Lee had two older boys, Tran and Sami. On New Year's Eve morning, the phone rang every ten minutes. Did Mr. Lee have a stove? Could Sami borrow a sleeping bag? Were there enough water bottles packed? What was the weather report? Even the kids were planning snowball fights and talking about the trip: Oh what fun!

After loading their separate cars, the two families headed towards snowcovered Mt. Hood. It was early afternoon when they set out. Jake, Will, and Claire passed the time by playing games like "I Spy" and Battleship. When Mrs. Wittmer suggested playing the "Quiet Game," Jake turned on his I-pod and fell asleep. Sighing, Will and Claire also decided to take a nap.

EasyCBM - Student Copy Form

With the kids asleep, Mr. Wittmer said, "This is going to be so much fun. I have always wanted to take my family snow camping."

"Well, I'm not so sure about this," said Mrs. Wittmer. "I am afraid we'll get really cold or a storm might hit."

"Oh sweetie," replied Mr. Wittmer, "Don't worry. There hasn't been a severe storm up here in years, and I brought us great gear. Just relax and enjoy yourself."

"I'll try," smiled Mrs. Wittmer.

The children awoke as the car charged up the mountain. Excited, Claire asked, "Are we there yet?"

"Almost," said Mr. Wittmer.

The kids were thrilled as they gazed at the clumps of snow on the roadside. "I can't wait for the snowball fight," exclaimed Jake as he poked Claire and grinned.

"Mom, Jake is going to get me in the snowball fight," cried Claire.

"Now Claire," said Mrs. Wittmer, "I'll be on your team and help protect you."

"Then Dad is on my team," hollered Jake.

As the car reached the parking lot, the Lee family was already unloading. Jake, Will, and Claire popped out of the car. Tran and Sami ran over shouting, "We beat you. We beat you. Now we're gonna eat you."

"Now boys," said Mrs. Lee, "Come over here and finish getting your gear." Mr. Wittmer and Mr. Lee went out on a short exploratory jaunt. The kids decided it was time for their snowball fight to begin. After thirty minutes, the men came back with a great camping site in mind. They said it was close enough for a great view of the fireworks yet far enough away from other snow campers to give them lots of privacy. The families grabbed their backpacks and began hiking through the snow towards this perfect spot.

As soon as they arrived at the site, the Wittmer and Lee parents began stomping the ground. They looked as though they were participating in some sort of odd dance. Stomp, stomp, wriggle forward half a pace, stomp, stomp. The kids watched and giggled. After they had stomped the snow into a hard flat surface,

EasyCBM - Student Copy Form

the families waited for forty-five minutes because the snow had to settle before the tents went up. Finally, enough time had passed. The group unpacked three tents: one for the Wittmer family, one for the Lee family, and an enormous one in the center of the campsite that they could use for a common meeting place.

The families planned an early surprise birthday party for Claire. She couldn't believe it because her birthday was still three days away. Without letting her daughter know about the plan, Mrs. Wittmer had packed in an elaborate ice cream cake. They all sang and ate the birthday cake together. They shared stories about what made Claire so special to each of them. She had a marvelous time! After the party, the families drank hot chocolate and spiced apple cider to keep warm.

Finally, the New Year arrived with a bang! The fireworks coming from Timberline Lodge were brilliant. The colors painted the sky in splashes of red, blue, orange, and yellow. The kids yelled out to welcome the year 2002. The adults quietly hugged each other and kissed. In the meantime, the sky was turning a dark gray, and the wind blew stronger. After the fireworks display was over, the families said goodnight and marched to their separate tents to get out of the blustery wind.

All night long, the snow fell quietly. It just wouldn't stop. Early in the morning, Mrs. Wittmer awoke, hearing the wind beat against the tent. It was so cold; it hurt to poke her head out from where it had been covered by the sleeping bag. She needed to go to the bathroom outside but didn't want to move. It was so cold in the tent that it hurt to move. She crawled out of her sleeping bag and unzipped the tent door. All she could see was white! The tent was surrounded by at least two feet of snow, and her boots were filled too. She decided not to go out. Lying next to Mr. Wittmer she asked him, "Do you really love this?"

He was awake and replied, "It's not usually like "this."

There was a call from outside the tent. Mr. and Mrs. Wittmer both leaped up, and Mr. Wittmer accidentally hit his wife's nose. It started to bleed! Mr. Wittmer quickly gave her a cloth to help stop the bleeding. At this point, the kids were awake. "What is going on?" they asked. Mr. Wittmer told them things were fine and to go back to sleep. Mrs. Wittmer asked for her glasses. It was a good thing too because her contacts were frozen in their solution.

Mr. Wittmer went outside to check on the Lee family. As Mr. Wittmer got within one foot of their tent, he noticed the whole tent had collapsed on top of them! This was a violent storm. "Are you alright in there?" asked Mr. Wittmer.

EasyCBM - Student Copy Form

"Yeah," the Lee family replied. Mr. Wittmer and Mr. Lee decided it was time to head for the lodge. They were camping in whiteout conditions!

The women along with the Wittmer children remained in the Wittmer's tent. It took both of the men and the two Lee boys to keep the tent they were putting away from blowing away. As the struggle went on, Mr. Lee's forty-pound backpack rolled away. Holding hands so they would not get lost in the storm, the two men and boys recovered the pack. You couldn't see one foot in front of the other. After the two families slowly fought through the storm, they finally made it to the lodge. They soon discovered this was the worse storm Mt. Hood had seen in forty-two years! All the roads and ski lifts were closed at Timberline. The two families gathered around the fire to wait for "the storm to pass and roads to open. As the Wittmer family returned to their Subaru, they discovered that the back window was cracked. The car was filled to the top with snow! What next? Thankfully, the dry snow came out easily, and they were on the road before too long. This was a snow camping trip to remember.

EasyCBM - Student Copy Form

PLEASE USE YOUR SCAN SHEET TO MARK YOUR ANSWERS.
DO NOT MARK ON THIS PAPER!

1. What did snow camping mean?
 - A. The tent would be on the ground with snow around it.
 - B. The tent would be placed right on top of the snow.*
 - C. The campsite would be in a place where it snowed.
2. How did the story end?
 - A. The families were safely on their way home.*
 - B. The families sat around the fire waiting to leave.
 - C. The families decided to stay inside the warm lodge.
3. What probably caused Mr. Lee's pack to roll away?
 - A. It was on a hill.
 - B. The wind blew it.*
 - C. It was too heavy.
4. What was this story mostly about?
 - A. How families can have fun doing something they haven't done before.
 - B. How a New Year's Eve fireworks party was ruined by the weather.
 - C. How a trip can go wrong even when there is careful planning.*
5. How often had Mrs. Wittmer been snow camping with her family?
 - A. This was her first time.*
 - B. She had gone once before.
 - B. She always went with them.

EasyCBM - Student Copy Form

6. What will Mrs. Wittmer probably tell her husband the next time he invites her to go snow camping?
- A. She will never go snow camping or any other type of camping again.
 - B. She will only go if he can promise that there won't be a snow storm.*
 - C. She would be happy to go because the last trip was such a fun adventure.
7. What was Mrs. Wittmer probably thinking about the trip when she woke up to the snow and cold?
- A. It was her husband's fault that this happened, and she was freezing.
 - B. Her husband made a big mistake talking her into going on the trip.
 - C. This was just the thing that she was worried could happen.*
8. What were the children looking forward to most?
- A. Snow fights and fireworks.*
 - B. Sleeping in tents in the snow.
 - C. Drinking hot chocolate and cider.
9. What did Mrs. Wittmer discover right after her nose bled?
- A. She had to go to the bathroom.
 - B. Her shoes were full of snow.
 - C. Her contacts were frozen.*
10. What was Mr. Wittmer probably thinking when he awoke and realized there had been a snowstorm?
- A. It was too bad for the rest of the group that this happened, but he liked it.
 - B. He could deal with it, but he would need to help his wife get through it.*
 - D. He was glad it happened because he was hoping this would be a great adventure.

EasyCBM - Student Copy Form

11. What did Mr. Wittmer do to get his wife to agree to go on the camping trip?
- A. Her bought her all the best camping equipment that he could find.*
 - B. He invited a family to go with them whose mother had been snow camping.
 - C. He told her the children would be disappointed if she didn't go.
12. Why did Mrs. Wittmer probably go on the camping trip?
- A. She enjoyed the outdoors and thought this trip would be a great, adventure.
 - B. She loved outdoor camping trips in the snow and wanted to be with her family.
 - C. She only went to be with her family because she didn't like to be cold.*
13. How did Mrs. Wittmer probably feel when Mr. Wittmer hit her nose?
- A. She knew it was an accident, but she was in no mood to forgive him just then.
 - B. This was the last straw, and it was time to pack up and get out of the snow.
 - C. She could take care of the nose bleed and was more concerned about the kids.*
14. What secret plan did the families make?
- A. Make hot chocolate and spiced apple cider.
 - B. Give an early surprise birthday party for Claire.*
 - C. Go for a hike to the lodge for a warm meal.
15. Why did the Lee family trust Mr. Wittmer to plan the camping trip?
- A. He had a lot of outdoor and camping experience.*
 - B. He enjoyed being outside more than anything else.
 - C. He knew where to buy the best camping equipment.

EasyCBM - Student Copy Form

16. What should have happened when the sky turned dark gray, and a strong wind started to blow during the fire works?
- A. The men should have made another check to make sure the tents were staked down really well and were safe.
 - B. Everyone should have gone into their tents a little earlier so they would be protected from the storm that was coming.
 - C. Mr. Wittmer should have warned the group there might be a snowstorm because he knew about weather signs.*
17. What was Mrs. Wittmer's worst fear?
- A. A storm might hit, and it would get really cold.*
 - B. They wouldn't be able to see the fireworks.
 - C. All would be too cold to enjoy themselves.
18. What was Mr. Wittmer like?
- A. He loved the outdoors as much as he loved his family.
 - B. He loved the outdoors but loved his family more.*
 - C. He loved the outdoors more than he loved his family.
19. Why didn't the families know during the night that it was snowing?
- A. They were so tired from staying up late they slept right through it.
 - B. Their heads were completely covered by their sleeping bags.
 - C. The wind was loud, and the snow didn't make any noise when it fell.*
20. How would the parents probably talk about the trip after they got home?
- A. Mr. Wittmer did a good job of planning, but he should have had a back up plan in case a storm came up.
 - B. No one could know that the storm would come, and Mr. Wittmer did a good job of planning the trip.*
 - B. They should have listened to Mrs. Wittmer and gone to watch the fireworks someplace where it was warmer.

APPENDIX C

PERMISSION FOR MATERIALS

READING A – Z PROGRAM – SAMPLE MATERIALS

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Robin Hood and the King

A Reading A-Z Level W Quick Reader

Word Count: 1,633

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This story is an English folktale adapted for Reading A-Z by Katherine Follett from an original Robin Hood and the King retelling by Bertha E. Bush published in 1912.

An English Folktale

Adapted by Katherine Follett

Illustrated by David Cockcroft

Robin Hood and the King

Level W Quick Reader

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Introduction p. 4

Robin Hood and his Merry Men lived hiding in Sherwood Forest, because every French lord in the land wanted to hang Robin for highway robbery. Even though Robin and his band were outlaws, they only stole from the rich, so they could give money to the poor. Robin thought the greedy French lords were the real thieves and outlaws. They were the ones who seized the money and land from the poor in the first place. They had conquered England, and they ruled the land while kind King Richard was off at war. But the French soon found that the English people hated the cruel lords, while they loved and admired Robin Hood. Even the king himself, when he returned from war, could not help respecting this outlaw who tricked the corrupt rulers.

King Richard p. 5

"I wish I could see Robin Hood," said King Richard. "I wish I could see him and his men shoot and wrestle and do all the things that show off their amazing skills. But if they heard that the king was coming, they would think that I only wanted to arrest them. They would flee deep into the forest and I would never get a glimpse of them."

King Richard spoke kindly, for he loved all sports and those who excelled in them.

Robin Hood and his band were well known to be the best archers, wrestlers, and sword fighters in all the land. They spent all their days in the forest practicing these arts.

"I would give a hundred pounds to see Robin Hood and his Merry Men of Greenwood," he said.

"I'll tell you how you can see him," laughed one of the king's trusty companions. "Put on the robes of a fat abbot and ride through Sherwood Forest with a hundred pounds in

your pouch. You will be sure he will offer you a feast, to try and steal your money."

For this was how Robin Hood lured the wealthy lords into the forest. No greedy nobleman could refuse a feast, even if they suspected it was offered by an outlaw. "I'll do it!" cried King Richard, slapping his knee. "It will be a huge joke."

The Feast p.7

So the king and seven of his followers dressed themselves as an abbot and seven friars. They rode out along the highway toward Sherwood Forest. Sure enough, Robin Hood and his men took them and brought them to the meeting tree, and there they searched them and took the pouch of gold. But they returned one third of the gold to the king, because it was not their custom to leave any man in need. Robin Hood was pleased with these churchmen because they did not resist or scold him. In fact, they seemed happy to be in his company.

"Now we shall give you a feast that will be worth all your money," said Robin Hood.

"I have a good appetite for a feast," said the pretend abbot. "But even more, I would like to see the archery and wrestling and all those other things in which I have heard you are so good at."

"You will see the very best we can do," answered Robin, "but, Holy Father, why don't you take off your hood so you can enjoy this sweet evening air?" "No, I cannot," answered the pretend abbot, "because I and my brothers have vowed not to let our faces be seen during this journey."

"Very well, then," said Robin Hood. "I interfere with no man's vows." And he never

once thought that he was entertaining the king. Robin and his men gave a splendid feast of roasted venison and pheasants and fish and wild fowl, all cooked perfectly over the roaring fire. The King was very impressed with the delicious food the Merry Men seemed to produce out of nothing but the forest. He had no idea that outlaws could be so well fed and happy. After they cleared the dishes, they arranged the sports.

The Archery Match p. 9

The archery target was a mark that only the best archers could hit, made of a tiny garland of leaves and flowers hanging from a stake a great distance away. "Now shoot!" said Robin Hood. "Each of you will have three shots, and anyone who fails to place his arrows within the garland will receive a punch to the side of the head as hard as I can give."

"Can anyone hit inside that little garland at such a distance?" asked the king in amazement. "Look and see, friend abbot," answered Robin Hood proudly.

First, David of Doncaster shot and lodged all three arrows within the garland while the king looked on, astonished. Then Midge, the miller's son, also placed all his arrows inside the garland. These truly were the best archers in all of England, and the King had not yet seen Robin Hood, who was the best of all. Then Wat the Tinker drew his bow, but he was unlucky-one of his arrows barely missed the mark.

"Come here and take your punishment," called Robin Hood. The king supposed that, since Wat had missed by so little, he would receive only a tap. Instead, he got a blow that knocked him head over heels. "Ha, ha, ha!" laughed his companions.

"Qh ho!" thought King Richard, "I am glad I am not in this." But he was impressed with the way Robin Hood's men obeyed him. "They are better at following his commands than my servants are at following mine," he thought. The shooting went on, and most of the men shot their arrows within the garland, but a few missed and received tremendous punches.

The last to shoot was Robin Hood. His first shaft struck so hard, it split off a piece of the stake on which the garland was hung. His second lodged a scant inch from the first. But the last arrow he shot was not feathered right and it swerved to one side and struck an inch outside the garland.

Then all the company roared with good-natured laughter for they seldom saw their master miss. "Go and take your punishment master" said Midge, the miller's son, "and I hope it will be as rough as Wat's was."

"Well," said Robin Hood, "I will surrender my arrow to our guest and take my punishment from him."

Robin was being somewhat crafty in this. Although he did not mind hard knocks at all, he did not like the thought of being sent sprawling in front of his band. He figured that the arms of a churchman would be soft, for they never worked or used their muscles much. But the pretend abbot bared an arm so thick and muscular that it made the men stare. King Richard was an active king, and years at war had made him incredibly strong. Robin Hood placed himself squarely in front of him, and the king struck a blow that would have knocked out an ox. Down went Robin Hood, rolling over and over on the ground stake on which the garland was hung. His second while his men shouted with laughter.

"Well," said Robin Hood, sitting up, half arrow he shot was not feathered right, and it dazed, "I did not think that there was an arm in England that could strike such a blow. Who are you, man? I'll bet you are not the churchman you appear to be."

King Richard Reveals Himself p. 8

King Richard threw back his hood, and Robin knew it was his king. If he had been a disloyal man as well as an outlaw, he would have trembled. But Robin had always remained loyal to his King. Indeed, he believed that stealing from the French and giving to the English poor was the greatest service he could perform for King Richard. Robin Hood had never knelt for any lord, but there was no shame in his voice when he knelt before the king.

"Your majesty," he said, "you have no subjects in all England who are more loyal than I and my Merry Men. We have done no evil except to the greedy and rich who have abused your subjects. We beg your pardon if we have done wrong, and we beg for your protection, as we always serve you faithfully." Then the king looked down in amazement that an outlaw should speak so well. He was also amazed that Robin Hood hadn't run away in fear of being arrested. He saw that Robin Hood truly was one of his best subjects. King Richard also knew that Robin was the best archer in all England, and he wanted him by his side.

"I will forgive all your law-breaking and order the nobles to leave you alone," he said, "if you will come with me to my court and serve me there. You shall bring Little John and Wat and Will Scarlet to become knights in my court. As for the rest of your men, I

will make them royal rangers, since I am sure they can protect Sherwood Forest better than anyone. They have done good deeds in providing for the English poor."

"With all my heart," replied Robin Hood, and a great roar went up from the Merry Men. They adored their king, and though they loved the outlaw life, they had always wanted their good deeds to be recognized by the throne.

So Robin Hood left the greenwood and went to the king's court where he served King Richard well. His men became rangers of the forest, and never again feared punishment from wicked sheriffs. Robin Hood was never far from the forest, though. He often disguised himself as a greedy noble, laden with the king's gold, and rode through Sherwood Forest. Only after his men had stolen from him did he reveal himself, congratulating them on their work. The common folk of England never had to suffer the injustice of the French again.

Glossary

abbot - the leader of a group of religious monks (p. 6)

friar - a certain kind of Christian monk (p.7)

fowl - birds (p. 8)

garland - a small group of branches arranged in a circle or semicircle (p. 9)

laden - covered with; heavy with (p. 15)

lodged - stuck in deeply and securely (p. 10)

lured - led by the promise of something good; tempted (p. 6)

pounds - British unit of money, worth about \$1.50 in U.S. dollars and \$2.50 in Canadian dollars (p. 6)

sangers - people who watch over and protect a forest or wooded area (p. 14)

scant - very little; tiny; barely (p. 11)

sprawling - laid out flat with arms and legs spread out (p. 12)

venison - deer meat (p. 8)

Level W Reading A-Z Leveled Reader Quick Check Robin Hood and the King

Name _____ Date _____

Directions: Read each question carefully and choose the best answer.

1. When would Robin Hood punch his men in the head as hard as he could?
 - a. If they were disobeying him.
 - b. If he wanted to impress the king.
 - c. If they failed to hit the target with an arrow.
 - d. If they didn't give him all the gold they stole.

2. Even _____ respected Robin Hood.
 - a. the French
 - b. King Richard
 - c. the robbers
 - d. all of the above

3. What did Robin Hood do to show he was concerned about the wealthy people?
 - a. He didn't turn them in the King of England.
 - b. He gave them back some of their gold he stole.
 - c. He made sure they got back to their homes safely.
 - d. He would hide in the forest before he stole from them.

4. Robin Hood sent one of his men sprawling. What does sprawling mean?
 - a. to fall with no control
 - b. to steal from the rich
 - c. to spy on others
 - d. to chase

Level W Reading A-Z Leveled Reader Quick Check Robin Hood and the King

Name _____ Date _____

Directions: Read each question carefully and choose the best answer.

5. What did Robin Hood do when he knew the abbot was really the king?
- a. He ran away.
 - b. He shot at the king.
 - c. He told his men to hide.
 - d. He knelt on the ground.
6. What was the conflict/problem of this story?
- a. King Richard wanted to see how well Robin Hood and his men could shoot and wrestle.
 - b. King Richard wanted to trick Robin Hood into fighting him so he could arrest him.
 - c. Robin Hood wanted to test his men's ability to shoot arrows.
 - d. Robin Hood wanted to work for King Richard.
7. What does it mean to reveal something?
- a. to hide it
 - b. to give it away
 - c. to keep it for yourself
 - d. to show or display it

Level W Reading A-Z Leveled Reader Quick Check Robin Hood and the King

Name _____ Date _____

Directions: Read each question carefully and choose the best answer.

8. How did the king know that Robin Hood's men truly obeyed him?
- a. They told him that they did.
 - b. He saw them shoot arrows at a small target.
 - c. He saw them receive hard punches to their head with no argument.
 - d. They always stole from the rich French and gave to the poor English.
9. What happened to Robin Hood's last arrow during the shooting contest?
- a. It split another arrow in the center of the target.
 - b. It hit an inch outside the target.
 - c. It flew off in the wrong direction.
 - d. It missed the tree.
10. Why were Robin Hood and his men such good archers, wrestlers, and sword fighters?
- a. They spent so much time practicing.
 - b. Robin Hood had taught them well.
 - c. They stole good swords and arrows.
 - d. They practiced with the king's men.

1 Level W Reading A-Z Leveled Reader Quick Check Robin Hood and the King

Name _____ Date _____

Directions: Read each question carefully and choose the best answer.

11. What happened after Robin got knocked to the ground by the king?
- a. His men beat up the king.
 - b. He tried to fight the king.
 - c. His men laughed at him.
 - d. His men ran to him.
12. What did King Richard do because Robin Hood decided to come out of the woods to serve him?
- a. He forgave all Robin Hood's law breaking.
 - b. Robin Hood's men became royal rangers.
 - c. He ordered the nobles to leave Robin Hood alone.
 - d. all of the above
13. Extended Response: Why did King Richard think that Robin Hood was truly one of his best subjects?
14. Extended Response: Explain why, after he went to work for the king, Robin Hood would disguise himself and ride through the forest.

APPENDIX D
OREGON STATE ASSESSMENT
SAMPLE SIXTH-GRADE TEST

SAMPLE TEST

2006-2008

READING/LITERATURE

GRADE 6

Vocabulary

Read to Perform a Task

Demonstrate General Understanding

Develop an Interpretation

Examine Content and Structure: Informational Text

Examine Content and Structure: Literary Text

OFFICE OF

ASSESSMENT & INFORMATION SERVICES

THE OREGON DEPARTMENT
OF EDUCATION

DIRECTIONS

Read each of the passages. Then read the questions that follow and decide on the BEST answer. There are of different kinds of questions, so read each question carefully before marking an answer on your answer sheet.

EMMA LAZARUS

Little did Emma Lazarus know that she would one day be remembered in American history for writing the poem, "The New Colossus." Read this passage to learn about the history and importance of this poem.

EMMA LAZARUS, WHO LIVED FROM 1849 TO 1887, was a successful writer. By age eighteen, she had already written her first book. Eventually, she published several more. She became most famous, however, for one special poem called *"The New Colossus."* The word *colossus* means gigantic statue.

The colossus Emma Lazarus wrote about in her poem was the Statue of Liberty, then ready to be raised in New York Harbor. Although the title of the poem is not well known, the last five lines of the poem are. In them, "Lady Liberty" says:

"Give me your tired, your poor,
Your huddled masses yearning to breathe free.
The wretched refuse of your teeming shore,
Send these, the homeless, tempest-
Tost to me,
I lift my lamp beside the golden door!"

Emma Lazarus had good reason for writing those words. In addition to her writing, she was devoted to the cause of helping Jewish refugees from **Russia**. These people, rejected by their own country, crossed the ocean to America seeking new homes and freedom. They often arrived penniless. Emma Lazarus spent time and money organizing help for these immigrants. She believed strongly in America as a place for people looking for freedom.

"The New Colossus" was first read at an event to raise money for building the base of the Statue of Liberty. For the next twenty years, however, the poem was mostly forgotten. Emma Lazarus died not knowing how many people her words would inspire.

Then in 1903, the poem was chosen to be inscribed on a bronze tablet inside the entrance to the state. Since that time, millions of Americans have read the poem. Its words have helped make the Statue of Liberty known as a symbol of freedom throughout the world.

1

Why do you think the author ended the selection by telling about the SYmbolism of the Statue of Liberty?

- A. To show People the way to New York
- B. To explain how long it took to write the poem
- C. To describe how the statue was made
- D. To emphasize how important the statue is.

2

"The New Colossus" is a POem about

- A. New York Harbor.
- B. The Statue of Liberty.
- C. Emma Lazarus.
- D. Russia.

3

Emma Lazarus was not only a successful writer, she also

- A. helped people who were new to America.
- B. designed the Statue of Liberty.
- C. wrote her POem on a bronze tablet
- D. brought the Statue of Liberty to New York.

4

Although the selection doesn't say, you can tell that Emma Lazarus was a woman who was

- A. tired from writing all the time.
- B. the first person to help refugees from Russia.
- C. important in the building of the Statue of Liberty.
- D. kind and caring about people less fortunate.

5

"The New Colossus" was first read in public when

- A. a fundraiser was held to build the statue's base.
- B. Jewish refugees were finally able to land on U.S. shores.
- C. the Statue of Liberty was opened in 1886.
- D. groups from around the world remembered Emma Lazarus.

SWAMP TALK

In *SWAMP TALK* by Jean George, Billie Wind, a Seminole Indian, is punished for not believing in the "old ways." She is sent out to the SUXImp to learn some lessons. Read about one of her experiences.

SHE FOLDED HER ARMS AND LOOKED over the forest. The trees were flared at the bases. This uncanny growth buttressed the cypress in the rainy season when the island was flooded with water and rendered the trees unstable. Near each tree jutted waist-high triangular "knees" that grew up from the roots. These breathed air when the roots were under water. Billie Wind walked among them until she found two slender trees that did not have buttresses.

"These trees are talking to me," she realized. "When the land is high and dry cypress trees do not grow buttresses, they grow straight like these. So the land is dry here. I have found a good campground.

"Petang," she called. "Where are you? We are going to camp here until our boat is made." The otter answered by rustling the palmettos and splashing into the water. Billie Wind slung her hammock high. The species of mosquito that had been biting her did not fly higher than nine feet above the land, and so she would hang her bed at least ten feet high. To get up and down she braided a rope out of one of the many kinds of vines, tied it to the timmock and climbed up the tree. She secured the hammock. Petang returned as she was putting the last stone on the fireplace. His sides were round and bulging.

"Goodness," she said. "You have been eating well. What's out there? Frogs? Fish?" She walked toward the shore to gather for herself whatever Petang had eaten.

A hiss sounded. The palmettos thrashed, and as Billie Wind jumped backward, she looked down on an enormous mother alligator who was escorting dozens of baby alligators down the side of a mound of humus, her nest. She turned back to help one hatchling who was still buried and peeping. Using her awkward-looking foot, she gently pulled back the black plants and let him climb out. A raccoon pounced on a baby at the bottom of the pile. She roared down on him, slashed her jaws and cut off his tail. He ran screaming into the brush. A heron flapped down and hovered over the tasty hatchlings. The mother alligator grunted and slammed her jaws, barely missing the bird, who rose higher to wait for another opportunity to strike. Roaring and snapping, the mother gator led her brood toward the safety of the water.

Billie Wind backed all the way home and climbed her rope to her hammock. She knew better than to stay anywhere near a mother alligator and her young.

In the sentence, "The island was flooded with water and rendered the trees unstable," *rendered* means

- A. obtained by heating.
- B. caused to become.
- C. strengthened.
- D. performed.

7

When the mother alligator was escorting dozens of baby alligators, she was

- A. throwing them
- B. watching them
- C. going with them
- D. teasing them.

8

Which of the following BEST describes Billie Wind?

- A. Confused and worried
- B. Grouchy and tired
- C. Careful
- D. Lonely and frightened

9

How could you BEST describe the author's message?

- A. Keep away from swamps.
- B. Watch out for alligators.
- C. Respect nature and learn from it
- D. Always carry proper tools.

10

Onomatopoeia is a term used when words sound like the thing being described. Which of the words below is an example of onomatopoeia?

- A. Screaming
- B. Slammed
- C. Roaring
- D. Hiss

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Reading and Literature

FAT CONTENT OF SANDWICHES

Too much fat in our diets can be a problem. Examine these charts about sandwich ingredients to answer the questions.

Deli meat-and reduced fat alternatives

<i>Meat</i>	Calories	% calories from fat	Total Fat (g)	Saturated Fat (g)	Sodium
Deli beef bologna, regular, two slices (2 Oz.)	175	81%	16	7	555
BolognUte, two slices (2 oz.)	45	0%	0	0	490
Butcher Lite Bologna, two slices (2 oz.)	120	60%	8	3	400
Deli ham, regular, two slices (2 Oz.)	105	52%	6	2	745
Slimpig Ham, regular, two slices (2 Oz.)	35	0%	0	0	530
Cooklite Ham, regular, two slices (2 oz.)	60	23%	1.5	0.5	470
Delite Fanns Deli Select, two slices (2 oz.)	50	28%	1.5	1	690
Deli turkey breast, two slices (2 oz.)	55	15%	1	0.5	625
Betterball 96% Fat FreSmoked, three slices (3 oz.)	70	32%	2.5	0.5	490
Delite Fanns Turkey Roast, three slices (3 oz.)	60	8%	0.5	0	620
<i>Meatless alternatives</i>					
NoBologna, two slices (2 oz.)	70	0%	0	0	530
HamItUp, two slices (2 oz.)	65	0%	0	0	390
TurkeyLike, three slices (3 Oz.)	80	0%	0	0	600

Sandwich Ingredients

Sandwich Ingredient	Serving	Calories	Fat (g)
White bread	2 slices	90	2
Whole wheat bread	2 slices	80	0
Mayonnaise	1 tablespoon	100	11
Brown Mustard	1 tablespoon	15	1
Cheddar Cheese	1 slice	120	10
Swiss Cheese	1 slice	40	0

Reading and Literature

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Which statement is true?

- A. Deli turkey has more calories than its alternatives.
- B. Deli beef bologna has more fat than deli ham.
- C. You should limit yourself to 2-ounce servings of sandwich meat.
- D. Meat contributes the most calories to sandwiches.

12

Which brand of ham has the greatest percentage of calories from fat?

- A. *Slimpig*
- B. *Cooklite*
- C. *DeLite Fanns Deli Select*
- D. *HamItUp*

13

Which sandwich would contain the fewest calories?

- A. 3oz.of *Delite Fanns Turkey Roast* with one slice of **Swiss** cheese
- B. 2 oz. of deli ham with one tablespoon of mustard
- C. 2 oz. of *Slimpig Ham* with one tablespoon of mayonnaise
- D. 3oz.of *Betterball 96% Fat Free Turkey* with one slice of cheddar cheese.

GOING BATTY

Many of us have heard the saying "blind as a bat," but are bats really blind? Read this part of the book THREE CHEERS FOR BATS by Laurence Pringle to learn a lot more about these flying creatures.

TO MANY PEOPLE, bats are scary, ugly creatures. The superstitions about them range from tales of Dracula-type vampires to the belief that they entangle themselves in people's hair. These notions about bats are still common; no wonder bats are still feared and persecuted in many lands.

These old beliefs are disappearing, however, as people learn about the lives of *real* bats. About a thousand kinds of bats live on all continents except Antarctica. None are blind, and some see very well. Large fruit-eating bats that live in the tropics have big eyes and doglike snouts. They're called flying foxes.

Reading and Literature

Most bats are insect eaters, and they are the ones with weird faces. They usually have big ears and sometimes have odd-looking noses. With their beady little eyes they see as well as mice or other small mammals. To catch food in the dark, though, they rely on a sonar, or echolocation, system that is more advanced than anything devised by people. In fact, scientists still don't understand many details of this extraordinary system.

The bats emit high-pitched squeaks that we cannot hear. Some of these sounds echo off objects in front of the flying bats: tree branches, wires, flying insects. Bats listen to the echoes and get an instantaneous and changing picture in their brains of what lies ahead. They dodge twigs and other obstacles. They zoom in on moths and even tiny mosquitoes. The odd-looking noses and ears of some bats are part of their sonar equipment. Their echolocation system works beautifully. Bats can and do easily avoid getting tangled in a person's hair. When they sometimes swoop near people who are outdoors at night, they are often chasing mosquitoes, which they pluck out of the air before the insects can feast on the humans.

Where mosquitoes are abundant, a small bat can catch several hundred in an hour. People who know this take steps to encourage bats to live near their home. They put up specially designed bat houses in which bats can rest in the daytime.

14

What is true about the noises made by bats?

- A. They sound like noises made by foxes.
- B. They cannot be heard by humans.
- C. They warn mosquitoes.
- D. They sound like a low growl.

15

Which of the statements below is an opinion?

- A. There are more than a thousand different kinds of bats.
- B. Bats that live in the tropics usually eat fruit.
- C. Bats use echolocation to keep from flying into things.
- D. Most bats with beady eyes are ugly.

Reading and Literature

16

The story tells you that "where mosquitoes are abundant, a small bat can catch several hundred in an hour." The word *abundant* means

- A. making their nests.
- B. landing on the ground.
- C. appearing in large numbers.
- D. living on other insects.

17

The author's main purpose is to teach people some things about bats. This is probably a good idea because

- A. there aren't enough books about animals.
- B. people are often afraid of things they don't understand.
- C. bats are an endangered species.
- D. now scientists can study echolocation for use in the future.

18

Which word could the author have used instead of *persecuted* when he wrote, "...bats are still feared and persecuted in many lands?"

- A. Hidden
- B. Mistreated
- C. Worshipped
- D. Caged

19

What do you think is most likely to happen if more people read this story and learn some things about bats?

- A. People will be glad most bats are around.
- B. Bats will be killed for ruining our fruit crops.
- C. Most people will want to get bats for pets.
- D. People will think bats are scary.

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Reading and Literature

STEAM SHOVEL

Charles Malam's poems ask us to look at everyday objects from a different perspective.

*The dinosaurs are not all dead.
I saw one raise its iron head
To watch me walking down the road
Beyond our house today.
 Its jaws were dripping with a loa
Of earth and grass that it had cropped.
It must have heard me where I stopped,
Snorted white steam my way,
And stretched its long neck out to see,
 And chewed, and grinned quite amiably.*

20

The machine “grinned quite amiably.” Used this way, *amiably* means

- A. in a lonely way.
- B. Un an unfriendly way.
- C. In the middle of.
- D. In a good-natured way.

21

Based upon the description Malam uses, you would characterize the steam shovel as

- A. rude.
- B. bored.
- C. friendly
- D. loving.

22

The poet uses a dinosaur to compare to a steam shovel rather than another creature because

- A. steam shovels were also prehistoric creatures.
- B. dinosaurs ate earth and grass.
- C. steam shovels are huge and have long necks.
- D. dinosaurs are buried deeply where steam shovels dig.

23

The details in this poem support the idea that Malam wrote it

- A. to show that dinosaurs had personalities.
- B. to increase the reader's understanding of dinosaurs.
- C. to teach the reader about driving steam shovels.
- D. to give a light, humorous look at a large machine.

24

The effect of the line "Snorted white steam my way" is to

- A. compare the speaker's fear to the shovel's size.
- B. establish the historic validity of dinosaurs.
- C. continue the comparison between the shovel and a dinosaur.
- D. emphasize the insignificance of humans when confronted.

APPENDIX E
STUDENT SELF-ASSESSMENT SURVEY

Student Self-Assessment Survey

Student Name:

Team:

Date:

Explain in words what a story map is:

Tell me in words when you might want to use a story map:

Describe in writing what elements you would find on a story map:

Tell me how a story map might help you when you are reading:

Tell me how a story map might help you when you are writing:

APPENDIX F
STUDY SKILLS CHECKLIST FOR STUDENTS

Study Skills Checklist

Name: _____

Date: _____

- 5 = All of the time
 4 = Most of the time
 3 = About half the time
 2 = Less than half the time
 1 = Never

Self-Evaluation

Assignments

- _____ Shows thought, time, and effort on assignments.
 _____ Turns in assignments.
 _____ Finishes assignments on time.
 _____ Assignments are well-organized, clear, neat, and complete.
 _____ When absent, comes in next day to get make-up work.
 _____ Seeks help when needed.

Attitude

- _____ Has a positive attitude.
 _____ Shows respect toward other people and property.
 _____ Accepts responsibility for own actions.

Organization

- _____ Arrives in class on time with necessary materials.
 _____ Keeps binder and locker neat.
 _____ Keeps track of assignments in binder reminder.

Use of Class Time

- _____ Listens well to teacher and other students.
 _____ Participates appropriately during class discussions.
 _____ Uses class time to complete work.
 _____ Avoids distracting other students during work time.
 _____ Works well independently.
 _____ Works well in groups.

_____ Total Points

APPENDIX G
PROCEDURAL ITEMS CHECKLIST FOR TEACHERS

Procedural Items Checklist for Teachers

	YES	NO
Teacher provides students with a purpose for using story maps.	<input type="checkbox"/>	<input type="checkbox"/>
Teacher presents students with appropriate passage.	<input type="checkbox"/>	<input type="checkbox"/>
Teacher uses transparency of the story map to record answers during class discussion of passage.	<input type="checkbox"/>	<input type="checkbox"/>
Teacher begins a new passage as criteria is met.	<input type="checkbox"/>	<input type="checkbox"/>
Teacher administers directions for the story map.	<input type="checkbox"/>	<input type="checkbox"/>
Teacher addresses the elements of the story map.	<input type="checkbox"/>	<input type="checkbox"/>

Notes

APPENDIX H
TEACHER LESSON ACTIVATION FORM,
CLASS OBSERVATION FORM
&
TEACHER REJOINDER CHECKLIST FOR STORY DISCUSSION

Teacher Lesson Activation Form

Please circle the most appropriate number to answer the questions about this lesson. You may circle N/A to indicate the question is Not Applicable. Use the spaces provided for any additional comments you may have after the lesson.

In this lesson, you asked comprehension questions of literal, inferential, and evaluative nature that students have answered. Please reflect on the percentage of answers in which you provided a reaction (positive, general, or negative) as a follow up to the student answers.

1 -----	2-----	3-----	4	NA
Almost never	Quite infrequently	Quite frequently	Most of the time	
<10%	< 50%	50 - 90%	>90%	

Comments:

About what percent of the time do you think you rephrased or repeat student answers to the comprehension type questions during this lesson?

1 -----	2-----	3-----	4	NA
Almost never	Quite infrequently	Quite frequently	Most of the time	
<10%	< 50%	50 - 90%	>90%	

Comments

What percentage of the time did you directly correct student answers to comprehension questions during this lesson?

1 -----	2-----	3-----	4	NA
Almost never	Quite infrequently	Quite frequently	Most of the time	
<10%	< 50%	50 - 90%	>90%	

Comments:

How much of the time did you embellish the students' answers to comprehension questions during this lesson?

1 -----	2-----	3-----	4	NA
Almost never	Quite infrequently	Quite frequently	Most of the time	
<10%	< 50%	50 - 90%	>90%	

Comments:

What percentage of the time did you evaluate student answers with a “great answer, nice response, good search for detail in text” to comprehension questions during this lesson?

1 -----	2-----	3-----	4	NA
Almost never	Quite infrequently	Quite frequently	Most of the time	
<10%	< 50%	50 - 90%	>90%	

Comments:

What percentage of the time did you elaborate a student answer to comprehension questions during this lesson?

1 -----	2-----	3-----	4	NA
Almost never	Quite infrequently	Quite frequently	Most of the time	
<10%	< 50%	50 - 90%	>90%	

Comments:

Teacher Rejoinder Checklist for Story Discussions

Name of Story:

Null Rejoinder - No facial expression or head motion in response to student answers.

Question:

Student Response:

Teacher expression or reply: Answer *yes* or *no* only with no facial response to students.

Evaluative Response – That was a great answer, nice thinking. This demonstrates the teacher likes the ideas the student has given in the discussion.

Question:

Student Response:

Teacher expression or reply: Positive affirmation of student thinking and how the answer might have been found by looking back at the text.

Repeat/Rephrase – Rephrase or repeat the student's response, correcting the grammar as needed.

Question:

Student Response:

Teacher Checklist for Story Discussions

Elaborate – The teacher embellishes the students response by paraphrasing and using the response in the next complete question.

Question:

Student Response:

Correct – The teacher uses more descriptive language than the student who initiated the elaboration. The teacher will restate the original question to try to get the student to move towards the correct answer.

Question:

Student Response:

Finally, rejoinder questions are not *yes* or *no* type of questions. Instead use the following:

How would you solve the problem?

What would you have done in a similar situation?

Tell me about a time when you were in a similar situation: How did you resolve the problem?

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