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THE EFFECTS OF STORY GRAMMAR STRATEGY TRAINING ON THE STORY COMPREHENSION, SELF-EFFICACY AND ATTRIBUTIONS OF LEARNING DISABLED STUDENTS

BY

JEANNE ROONEY

A dissertation submitted to the Graduate Faculty in Educational Psychology in partial fulfillment of the Requirements for the Degree of Doctor of Philosophy The City University of New York

1997

This manuscript has been read and accepted for the Graduate Faculty in Educational Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

April 14, 1997
Date

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Abstract

THE EFFECTS OF STORY GRAMMAR TRAINING
ON THE STRATEGY LEARNING, SELF-EFFICACY AND ATTRIBUTIONS
OF LEARNING DISABLED STUDENTS

by

Jeanne Rooney

Advisor: Professor Shirley Feldmann

A reading strategy, story grammar, supplemented with modeling feedback and self-regulation training was taught to learning disabled students in order to investigate the effects of the strategy on the students' story comprehension, self-efficacy beliefs and attribution statements.

Ninety-one students, aged 9-2 to 12-5 years formed one control and four treatment groups. Each treatment group received basic story grammar strategy. Two treatment groups received either modeling feedback or self-regulation training. One group received both supplemental strategies.

Throughout, the reading strategy was reinforced as a tool meant to improve story comprehension. Various metacognitive statements were integrated to enable the students to remain focused on and to recall strategy components. Students read short narratives, identified

strategy elements and recorded responses on worksheets.

Modeling feedback training demonstrated strategy use, including various metacognitive statements. The students reviewed practice responses, which were corrected when necessary. Self-regulation training was implemented by training students to use a checklist designed to assist them to remember salient features of the strategy. Additionally, they predicted their ability to correctly identify strategy elements.

Story grammar strategy effects on story comprehension were measured by pre and post treatment worksheets. Self-efficacy beliefs and attribution statements were measured by a Likert-type questionnaire. Self-efficacy beliefs were measured pre and post treatment, attribution statements were measured post treatment.

An analysis of covariance was computed to assess effects on story comprehension and self-efficacy beliefs. An analysis of variance was utilized to investigate effects on attribution statements. Data analysis did not reveal any significant differences between any of the treatment conditions in improving story comprehension, self-efficacy beliefs and attribution statements.

Additional analyses demonstrated significant gains in story grammar skills from pre to post test, which may reflect mastery on the easier story grammar items rather than an improved understanding of all the story grammar

elements.

The implications of this study suggest that learning disabled students can learn a reading strategy and improve story comprehension. This most likely occurs when instruction involves strong auditory emphasis, repetition, practice and performance feedback. Improved self-efficacy beliefs and increased attribution statements appeared related to performance and added strategy training.

ACKNOWLEDGEMENTS

It is with deep appreciation and immense pleasure that I express gratitude to my advisors, relatives, friends and colleagues for their wholehearted support while I pursued this goal.

I am deeply grateful to my advisor, Professor Shirley Feldmann, for her wisdom and guidance in helping me to select a study that incorporated the two career choices that I hold dearly, school psychology and teaching. From the early meetings when study topics were discussed through many drafts of this manuscript, Professor Feldmann was knowledgeable, encouraging, ever cheerful and very reliable.

I appreciated the advice of my other committee members, Professors Saigh and Zimmerman. Professor Saigh's gentle prods to be selective in my study population helped me to observe the parameters of the "Scientist/Practitioner" model and to be more secure in my results. Professor Zimmerman's insights into the data encouraged me to see other theories. Additionally, his organizational suggestions contributed to the paper's readability. I am also grateful to Professor Marian Fish who interviewed me when I entered the program, and whose guidance led me to Dr. Feldmann. Your support during this doctoral process is most appreciated.

To my classmates Rachel, Ina and Chris, whose mirth, practicality and strong sense of accomplishment lessened the anxiety and loneliness of studying while instilling

confidence that this lofty goal was achievable.

Many thanks to the students and teachers who participated in this study. I met dedicated teachers whose interest and devotion to their classes was heartwarming. I will always appreciate the good-natured cooperation of the students in the study.

Also, I am very fortunate in having many friends who have daily cheered me on to this accomplishment. To Lynn Manning, I am eternally grateful for her confidence in my abilities and skill in helping me to push past my fears and reach my goals. Special thanks to Paul for his unfailing sense of humor regarding my dissertation fears and foibles, his editing skills and his computer. To Helene, thanks for repeatedly reminding me that sunnier days were ahead.

I am very fortunate to have good friends in my colleagues, Elise and Reyna, who cheerfully scored my data and were always supportive and encouraging. Also, I am very fortunate in my friends Joanne, Mel, Michelle and Marilyn. Their daily support and friendship eased the anxiety that is attached to a dissertation. My special thanks to Dr. Morton Frank, my Supervisor, who never once doubted my ability to accomplish this formidable task. Last, my special thanks to my Chairperson, Angelo Siconolfi. With his assistance and understanding, this study became achievable.

My family has always been a source of encouragement to me. Many thanks to my sisters, Carole and Pat and my

brother-in-law, Dave. I am full of appreciation for their support. Finally, I am grateful to my parents, whose short lives did not see this accomplishment, but whose values instilled in me a sense that I should set goals and work toward their realization. I am totally confident that they would have fully supported this goal.

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Chapter I

Introduction

A major interest in education today concerns the ways in which learners are able to comprehend what they read. Good reading comprehension is a critical factor in academic success as it equips a learner with a skill that is essential to expanding his or her knowledge base.

Research has shown that good readers have and employ a repertoire of strategies, both cognitive and metacognitive, in order to comprehend text effectively (Dole, Duffy, Roehler & Pearson, 1991; McCombs, 1988; Pressley and Associates, 1990). It has also been shown in the literature that good readers establish reading goals and monitor their own progress in accomplishing their desired ends (Dunlap & Dunlap, 1989; Pressley and Associates, 1990). Additionally, good reading comprehension provides the reader with the added benefit of reinforcing confidence in achieving success, thereby increasing the willingness to take the risks that are necessary to become a good reader (Pressley, Johnson, Symons & Kurita, 1989; Schunk, 1985). Lastly, these students are likely to attribute their success to personal characteristics such as ability, hard work and effort (Borkowski, Weyhing & Carr, 1988).

Some students with learning disabilities either lack or are unable to effectively access and employ such tools (deBettencourt, 1987; Dunlap & Dunlap, 1989; Loper & Murphy,

1985). However, the literature has established that such learners can be taught to employ cognitive strategies (Borkowski et al., 1988; Brown & Day, 1983; Harris, Graham & Freeman, 1988; McCombs, 1984; Pintrich, Anderman & Klobucar, 1994; Pressley & Associates, 1990), such as the use of story grammar and achieve increased reading comprehension (Gurney, Gersten, Dimino & Carnine, 1990; Newby, Caldwell & Recht, 1989). Additionally, the literature has established that learning disabled learners can be taught to employ metacognitive strategies (Borkowski et al., 1989; Loper & Murphy, 1985) and self-regulatory behaviors (Borkowski et al., 1988; Graham & Harris, 1989; Sawyer, Graham & Harris, 1992) and that these learners can effectively utilize teacher feedback to improve reading comprehension (Farmer, Klein & Bryson, 1992; Klein, Schumaker, Deshler, 1991; Knapczyk, 1989; Pany & McCoy,1988; Perkins, 1988).

The literature is less definitive regarding the learning disabled students' predictions of how well they will perform certain academic tasks as these learners are as likely to exaggerate their capabilities as they are to underestimate their ability to accomplish a task (Alvarez & Adelman, 1986; Clever, Bear & Juvonen, 1992; Dunlap, & Dunlap, 1989; Graham, Schwartz & MacArthur, 1993). Additionally, the literature does not explore the effect on reading comprehension that is achievable by teaching learning disabled students a cognitive strategy that

integrates metacognition in conjunction with instruction in the use of self-regulated behavior training and teacher feedback.

This study will explore whether increased reading comprehension is achieved by instructing learning disabled students in the use of story grammar that incorporates metacognitive strategies, in conjunction with instruction in the use of self-regulated behaviors and teacher modeling feedback. Additionally, it will assess the effect that the gains in reading comprehension may have upon the learner's self-efficacy. Finally, this study will explore the learner's perception of the usefulness of story grammar and whether it has increased his or her ability to recall story events.

The following section illustrates how cognitive reading strategies, particularly story grammar, metacognitive strategies, self-regulatory behaviors and modeling feedback contribute to a learner's skill in developing good reading comprehension. A summary of the relevance of each of these variables as they apply to learners who read with good comprehension is followed by a section on the definition and reading characteristics of learning disabled children.

Rationale

The importance of strategy use in the learning process has emerged as the view of the students' participation in that process has changed. Formerly, the learner was

considered a passive participant in the learning process; his/her active involvement is now considered to be crucial for the accomplishment of an academic task (Palmer & Goetz, 1988). Such active participation relies upon a learner's knowledge of strategies and his/her ability to apply an appropriate strategy to a task (Palmer & Goetz, 1988; Pressley and Associates, 1990). Similarly, research has shown that a knowledge of and an effective use of reading strategies are crucial to attaining effective comprehension of text (Brown & Day, 1983; deBettencourt, 1987; Lemmonier et al.; Alexander & Goetz, 1988; McCombs, 1984; Pressley and Associates, 1990).

The use of reading strategies actively engages the reader in learning to comprehend text. This is contrasted with prior theory that saw the main objective of reading comprehension as instructing students to merely mimic the meaning of text (Dole et al., 1991). Students mastering this "skill" were considered experts in reading comprehension. However, current research views such experts as "passive recipients of information provided in the text" (Dole et al., 1991, p. 241).

Further, current literature shows that reading comprehension is a multifaceted endeavor and that learners develop competence in reading comprehension by learning: 1) a number of strategies that assist them in obtaining the meaning of a text; and 2) the circumstances under which

those strategies are most applicable and beneficial (Garner, 1988). In this manner, learners are actively engaged as they select and employ the elements of a strategy to achieve a reading objective.

Instruction in reading comprehension has also evolved to reflect the student's prior knowledge about the topic under consideration. Pressley and Associates (1990) suggest that good reading may begin with prereading activities, such as: 1) previewing the text; 2) activating prior knowledge about the topic; and 3) formulating theses as to what the text might be about. Careful reading, reviewing and rereading as necessary would follow. Simultaneously, the reader is mentally noting whether subgoals are being met, when moving on or when rereading is necessary and is constantly engaged in the process of evaluating the strategy in use to determine if it is helping him or her achieve his/her goals. (Pressley & Associates, 1990).

Additionally, strategy use may require selecting a plan tailored to achieve specific objectives. Examples are strategies that assist the learner to: 1) determine the main idea; 2) summarize information; 3) draw inferences; and/or 4) generate questions (Dole et al., 1991). Under this model, the student constructs a meaning from the text that evolves as the strategies are implemented. Higher levels of thinking skills such as reasoning and critical thinking are applied as students construct and reconstruct evolving

meanings from the text (Dole et al., 1991, p. 243).

Strategies, which are either automatically or consciously evoked and implemented by the reader (Palmer and Goetz 1988; Pressley and Associates, 1990), have been described as a series of sequential activities that the learner controls (Garner 1988). DeBettencourt (1987) adds that proficient learners formulate systematic plans of action for gathering information. In so doing, these learners follow a preconceived structure, which reduces confusion in meeting goal objectives and increases opportunities for success (p. 24).

Pressley, Johnson, Symons, McGoldrick and Kurita (1989) define reading strategies as plans that are deliberately activated and adaptable to various texts and tasks. Story grammar is an example of such a plan as the learner can memorize specific questions to ask him/herself about the story as it is read (who the main character is, where and when the story takes place, what the main characters do and how the story ends) that will aid in recall and improve comprehension (Pressley et al., 1988, p.13). The story grammar strategy is fundamental to this study as it provides a structure that enables learning disabled students to organize important story details under headings that facilitate the recall of story events, at least as it refers to story grammar elements (Gurney et al., 1990; Newby et al., 1989).

Good readers monitor their understanding of the text as they read. Their self-observation is referred to as metacognition (Harris et. al., 1988), which is an awareness of one's thinking and learning processes (Gordon & Braun, 1985; Reid and Borkowski, 1987), as well as a deliberate and conscious control of cognitive actions (Gordon & Braun, 1985). Metacognition involves the learner's ability to judge the amount of effort that will be necessary to complete the task and whether that effort expenditure is warranted (Harris et. al., 1988; Pressley and Associates, 1990). Metacognitive awareness of any learning situation is the result of the learner's recognition that three characteristics, namely, the learner, the task and the strategy, come into play and interact to influence the outcomes of cognitive activities (Gordon & Braun, 1985).

The integration of metacognitive strategies into strategy instruction is important to this study as the learner's recognition of his or her progress in acquiring a strategy is essential to insure that the learner will take the steps necessary to correct failures or move forward when success is achieved. The addition of metacognitive strategies to strategy instruction should facilitate acquisition of story grammar that will ultimately improve recall of important story details.

Self-regulation involves the use of specific strategies that are utilized to attain academic goals and are based on

perceptions of self-efficacy (Zimmerman, 1989, p.329). Self-regulated learning strategies may include such activities as organizing, changing or adding information and rehearsing or using memory aids. Academic goals vary but can include objectives such as achieving certain grades or meeting requirements for post graduation opportunities (Zimmerman, 1989, p. 329). Self-efficacy refers to the learner's self-views that he or she can both select and execute activities that will result in the desired outcome (Zimmerman, 1989).

Self-regulation is influenced by the mutual interplay of environmental, behavioral and personal factors and involves three reciprocally influential subprocesses: self-observation, self-judgment, and self-reaction (Zimmerman, 1989 p. 331). For example, a learner who reads a narrative and identifies some story grammar parts correctly (self-observation) will rate his or her skill acquisition (self-judgment) and then determine his or her willingness to either maintain, increase or decrease strategy input (self-reaction).

Self-regulated students assume custody for their academic success and secure learning through the use of strategies (Zimmerman & Martinez-Pons, 1992). Although many students have knowledge of strategies, not all employ them or utilize them effectively. Greater use of strategies depends on the learner's monitoring of the effectiveness of

the strategy and attribution of the academic outcome to the strategy (Zimmerman & Martinez-Pons, 1992). An individual who has learned and successfully applied a strategy will likely redeploy it. Likewise, a strategy that has an unfavorable outcome is most probably surrendered (Graham & Harris, 1994).

Self-regulation encompasses a number of skills that the learner activates to ensure that a strategy or an activity is proceeding as planned. Examples include goal setting, self-instruction, self-assessment, self-recording and self-reinforcement (Graham & Harris, 1989; McCurdy, & Shapiro, 1992; Pressley & Associates, 1990). Training in self-regulation will be part of this study as it instructs the learner to set his or her own goals, identify the strategy with an objective that will enable them to meet the goals, evaluate their performance and attribute reading recall improvement to the strategy, story grammar.

Feedback is essential to learning because it provides evaluative information to the learner that indicates whether or not he or she is grasping the activity at hand (Greenwood, Arrega-Mayer & Carta, 1994; Perkins, 1988; Shake, 1986). It is especially necessary when an individual is involved in learning a new skill or strategy (Perkins, 1988). Feedback has been shown to raise achievement scores for learning disabled students although it has less effect on achievement results for normal achieving students

(McCurdy, & Shapiro, 1992).

Feedback can be communicated in several ways. In corrective feedback, the learner is told immediately of incorrect responses (Farmer et al,, 1992; Shake, 1986). In terminal feedback, either the teacher or another student provides the correct response. Sustained feedback includes the teacher giving cues to help the reader self-correct (Shake, 1986). Delayed feedback (Shake, 1986) allows the reader to make use of cues to self-correct and thereby reduce reliance on another person for immediate corrections (Espin & Deno, 1989). In modeling feedback, a correct response is modeled for the learner immediately after an incorrect answer is given. Modeling feedback will be fundamental to this study, as immediate correction of incorrect responses should improve a learning disabled student's acquisition of the story grammar strategy to improve reading comprehension.

Self-efficacy is the individual's confidence that he or she can successfully execute a strategy to bring a task to completion (Schunk, 1985). Schunk (1985) proposes that confidence in achievement behaviors is influenced by the learner's actual achievement (Palmer & Goetz, 1988). Achievement and self-efficacy, then, are mutually influential. In addition to observing their actual achievement, learners also base their confidence in their abilities on: 1) vicarious experiences; 2) forms of

persuasion; and 3) physiological responses. Observing peers or classmates accomplish certain tasks may influence learners to determine that they too can perform a particular activity. For some, this is an accurate appraisal while for others, this observation may be an overestimation of ability and potentially lead to failure. Persuasion includes statements such as "you can do it" (Schunk, 1985, p. 14). Physiological symptoms such as rapid heart beat or sweating may signal the learner that an endeavor beyond his/her skill ability (Schunk, 1985).

A learner's self-efficacy is also influenced by factors in the environment (Schunk, 1985). Observing models and receiving feedback also influences self-efficacy. The particular characteristics of a learner may additionally influence how significant others view the learner. For instance, teachers or students may entertain a bias that learning disabled students are less capable than their peers and thereby reduce their expectations of these learners and diminish the learner's self-confidence in reading pursuits.

Pressley and Associates (1990) suggest that good strategy users have confidence in their ability to manage their own thinking activities and consequently are motivated to expend whatever effort and diligence are needed to execute the strategy of choice. In this regard, readers who have developed a cache of strategies that they apply to various tasks are said to have high self-efficacy, are

motivated toward success and regulate their behaviors in constructive and productive ways toward these ends (p. 9). In contrast, a student who does not anticipate success with a task is likely to put less effort into an activity that is self-assessed as not likely to produce rewarding results (Palmer and Goetz, 1988) or to avoid tasks that are perceived to be difficult or unattainable (Schunk, 1985).

The characteristics of self-efficacy are relatively stable. An occasional failure for a relatively successful learner is not likely to immobilize that individual in other academic pursuits. Likewise, an occasional success for a student with low self-efficacy is not likely to dramatically change that individual's approach to learning (Schunk, 1985). Nonetheless, self-efficacy is relevant to this study as a learner's success in obtaining knowledge of a strategy and successfully using that strategy should influence his or her self-confidence in the task and improve recall of story events.

Learners also account for their success or failure of an activity. These accountings are attributions, the most common of which are: 1) ability; 2) effort; and 3) task difficulty (Palmer & Goetz, 1988). Learners who attribute outcomes to stable causes such as ability or lack of ability, are more likely to either expect continued success or continued failure (Palmer & Goetz, 1988).

Learners who attribute stable causes to success are

more likely to persevere with a difficult task and expend greater effort than a learner who essentially anticipates failure on a task (Palmer & Goetz, 1988; Pressley and Associates, 1990). Therefore, it is essential to this study to understand how the learning disabled students perceive the story grammar strategy as affecting their use of the story grammar elements.

Good readers then have acquired a number of strategies that they can implement at will for particular tasks. Additionally, these learners: 1) can monitor their progress and either continue with their plan or revise it as needed; and 2) can plan or regulate their activities and assess the plans they have formulated. Additionally, these readers have high self-efficacy, which is believed to fuel their willingness to continue to learn.

In contrast to good readers, learning disabled readers typically have poorly developed strategies, use strategies inappropriately, often do not demonstrate planning skills and often expend less effort in accomplishing a task (Pintrich et al., 1994; Wong, 1985, 1986). An unexpected finding in the literature reveals that the self-efficacy of this population is not necessarily lower than that of their normal achieving peers (Alvarez & Adelman, 1986; Gresham et al., 1988), but their ability to match task requirements with strategy use is poor (Alvarez & Adelman, 1986).

Learning disabled students who are weak in reading

comprehension are prime candidates for skill instruction. This population is fundamental to this study as they are the group who will receive the story grammar reading strategy. Increasing their strategy repertoire and instructing them in the appropriate application of the strategy should provide them with a skill that is useful in increasing their knowledge base. Coincidentally, as they develop skill in a strategy and have pride in their accomplishment, their confidence in academic pursuits should also increase as well as their ability to attribute increased success in recall of story events to story grammar.

It is the goal of this study to explore the added effects that self-regulatory training, and modeling feedback will have on a learner's acquisition of the story grammar strategy that integrates metacognition and the concomitant improved recall of story grammar elements. Additionally, this study will investigate the influences of these variables on improved changes in the learning disabled student's self-efficacy and on his/her ability to attribute the improved reading to knowledge of story grammar strategy.

Chapter II

Review of the Literature

This section presents the literature that has explored the effectiveness of story grammar instruction, metacognitive instruction, self-regulatory behavior training and modeling feedback on improving learning disabled (LD) students' reading comprehension. In addition, the research literature that explores the relationship between self-confidence, strategy knowledge and application and task accomplishment as it applies to LD students will be proffered. Finally, this section concludes with the research that examines the commonly held beliefs of LD students as to why they succeed or fail at a task and how those beliefs influence the willingness of this population to learn and use a strategy to accomplish a task.

Reading Cognitive And Metacognitive Strategies

Reading Cognitive Strategies

This section begins with a study that investigated LD students' ability to increase their skill in selecting a correct answer by learning a cognitive strategy, Constraint-Seeking Questioning, which provides a formula for narrowing the range of possible answers (Simmonds, 1990). In this study, 60 LD boys and girls, aged 9 to 12 years, were randomly selected and assigned to one of two treatment conditions: 1) cognitive modeling alone or 2) cognitive

modeling with verbalization. Each treatment consisted of four 20 minute sessions and in each condition, the Ss played a '20 Questions' game.

In the cognitive modeling alone condition, LD students observed an instructor model the strategy within the '20 Questions' game and then identify the correct picture from an array of several pictures. The instructor and learners then took turns playing the '20 Questions' game although the learners received no assistance or feedback.

In the modeling and verbalization condition, the Ss were given explicit instructions in the use of the constraint-seeking questions. They were taught 1) to arrange the stimulus items into sets of common characteristics; 2) to order the stimulus sets hierarchically and designate each with a name; 3) to question from the most general before proceeding to the more specific; and 4) to remove items that were eliminated by the questioning. The instructor provided immediate feedback to the Ss and alternated playing the game with them.

Results indicated that the LD students in each treatment condition improved their constraint-seeking questioning in an information-seeking task. However, the addition of explicit verbalization did not significantly improve strategy knowledge. The author has suggested that the simplicity of the task may have negated the need for this added reinforcement. Nonetheless, these results

provide support that LD students can learn cognitive strategies when instruction is appropriate and timely.

Story grammar.

Before citing the literature that has investigated the relationship between a specific reading strategy, story grammar, and LD students' reading comprehension, story grammar will be defined. Specifically, story grammar is a definite plan or procedure that students can employ to improve comprehension. It is either deliberately or automatically evoked and is based on the way stories have been traditionally retold (Gurney, Gersten, Dimino & Carnine, 1990). According to Stein and Glenn (1979), story grammar reduces a story into smaller, though still interconnected, segments, which essentially, can be separated into two major parts, namely, the setting and episodes. The 'setting', which acquaints the reader with the main character, also provides details regarding the place and time of the story. The 'episode', which sets up the problem and problem resolution, customarily includes the following components: 1) starter event; 2) goal; 3) action of the main character; and 4) the reaction of the main character to the solution (Graham & Harris, 1989; Stein & Glenn, 1979). In brief, then, when using story grammar, the students are directed to identify specific aspects of a story, such as the main character, setting, problem, events and solution as they read.

This section begins with a study that contrasted the ability of LD students' with their nondisabled peers to include story grammar elements in the retelling of a story (Griffith, Ripich & Dastoli, 1986). The Ss, aged 7.0 to 12.5 years, listened to three stories of varying levels of difficulty where the more difficult stories incorporated the most story grammar components. The stories were read individually to the Ss over three sessions; after each reading a listener entered the room and the S retold the story to the listener as it was taped.

Results indicated that the LD students recalled as many story grammar parts as their nondisabled peers and were as organized in the retelling of the stories as the nondisabled students. It is the authors' contention that the LD students in this research fared competitively because they were engaged in a listening activity as opposed to a reading activity. However, these findings are meaningful since reading comprehension proceeds from a capacity to acquire information from listening activities. The LD students in this study clearly demonstrated that they were able to utilize an internal structure as competently as their peers to retell the important events of stories to which they had listened. Although these results provide evidence that LD students can utilize story grammar elements in a listening activity, this study does not indicate that the Ss were aware that they were using story grammar elements to retell

the story or that they would be able to transfer this skill to a different task, such as reading a narrative for comprehension.

In a similar study, Laughton and Morris (1989) investigated the abilities of LD and non-learning (NLD) students to include story grammar components in written narratives. The Ss were 96 LD and 96 NLD students in grades 3, 4, 5, and 6, living in either a rural area or a small city in Louisiana.

The Ss viewed a filmstrip without a storyline that nevertheless contained all story grammar elements. Following the filmstrip viewing, the Ss were asked to write a story about the filmstrip for their teacher who had not viewed the film.

Results of this study demonstrated that the NLD Ss included significantly more story grammar elements in their compositions than did the LD students. Except for the Ss in grade 6, developmental differences in inclusion of story grammar categories were noted. Grade 3 and 4 Ss identified the main character, relationships among characters and the time of the story. Grade 5 Ss were more skilled at recognizing the problem of the narrative than Ss in either of the earlier grades and their abilities to distinguish the solution to the story problem were more defined at this grade level. Additionally, it was found that the LD students were less likely than their NLD peers to write

complete stories. Few third grade Ss were able to do this and by the fifth grade, only 29% of LD Ss wrote complete stories when compared with 54% of NLD Ss.

This weaker writing performance on the part of the LD students is consistent with other studies that have found this particular population of students to have poorly developed strategies, less ability to apply the strategy and weak planning skills (Pintrich et al., 1994, Wong, 1985, 1986). However, in this study, the LD students were not prompted to use a the story grammar strategy to write their stories. Since the literature has demonstrated that LD students are able to learn and use a strategy with adequate training (Simmonds, 1990), more carefully stated directions and/or expectations might have altered the results.

Gurney et al. (1990) used a modeling-guided practice-independent practice paradigm (p. 337) to instruct High School LD students in story grammar to improve their comprehension of short stories with the guided practice phase implemented to insure that the Ss would gradually use the strategy independently. Seven LD Ss who attended two rural schools in western Oregon were randomly assigned to one of the experimental phases: a) traditional basal literature instruction and b) story grammar instruction. Group 1 was given 9 days of traditional instruction followed by story grammar instruction. The second group began story grammar after showing no improvement on the three assessment

passages after Group 1 began training. A third comparison group served as a control and received traditional instruction during the experimental phase. Instruction in the story grammar condition included: 1) identifying the purpose of the story grammar instruction; 2) explaining the five major components of the strategy; 3) guided instruction to prepare the students to independently use the story grammar strategy; and 4) completion of a story grammar worksheet.

In both conditions, the students' progress in reading comprehension was assessed every other day. The Ss independently read a narrative and answered comprehension questions that tapped story grammar elements and inferential questions typically found in exercises of this type. A modified multiple baseline design was employed to assess the effectiveness of the two experimental phases.

Results indicated that students trained in the story grammar strategy improved their ability to correctly answer comprehension questions that were based on story grammar elements. However, instruction in story grammar did not improve the Ss' scores on basal literature questions that typically accompany stories in literature anthologies used in High Schools. The authors suggest that this may have occurred because those questions typically focus on minor details and the story grammar instruction moves the students toward identification of important ideas. Of note is the

finding that the comparison group did not improve even in their ability to answer questions that tapped the story grammar elements despite extensive oral discussion and feedback of these discussions during the treatments.

The studies presented thus far provide findings that LD students: 1) can listen to a story and retell it to another child complete with essential story grammar elements and in an orderly fashion; 2) are less able than their nondisabled peers to view a filmstrip and retell the story in writing, although this skill improves with age; and 3) that High School LD students improve their ability to comprehend written questions that pertain to story grammar elements when they have been given explicit guided practice and routinely complete a worksheet. It is clear that LD students can identify story grammar elements and that opportunities for success increase when instruction is clear and when opportunities are provided for independent practice of the acquired skill.

Story grammar was also the strategy utilized to improve the reading comprehension capabilities of seven students, aged 8 to 10 years old, diagnosed with dysphonetic and dyseidetic dyslexia (Newby et al., 1989). Individuals with dysphonetic dyslexia experience considerable difficulty decoding words while those diagnosed with dyseidetic dyslexia cannot process words as a whole. Three of the seven Ss received LD services in their schools. All Ss in

this study applied for tutoring services at a college based, professionally staffed reading clinic and were given two 70 minute, one to one tutoring sessions per week for 7 weeks. A single subject design was utilized to distinguish improvements in the treatment phase.

The baseline phase of this study included vocabulary instruction, establishing the goal of the reading passage, which was linked to the content of the story, reading the story and answering comprehension questions related to the story. During the treatment phase, the same procedures were followed except the elements of the story grammar were introduced gradually over the early treatment sessions. During this phase, the dysphonetic learners drew representations of the story elements or wrote brief descriptions on index cards while dyseidic learners used the prepared outline which sequentially identified the story grammar elements. At all times all Ss were encouraged to verbalize the story grammar parts of the story and how these aspects helped them remember what they read. They could refer to their notes at any time except during recall assessment period.

Results of this study suggest that all of the learners in this study made significant gains in recalling the important ideas of reading passages after instruction in story grammar strategy. Additionally, an informal analysis of the recall transcripts found that some Ss improved their

structure of understanding of the text. For example, the random and nonsequential characteristics of early recall of events gradually gave way to more specific and orderly recalls, and the learners were likely to highlight their recalls with "the main character is.." or " the main events are...". The authors suggest that these demonstrations are indications of greater metacognitive awareness on the part of the learner. With greater self-awareness, the learners are more likely to assess how the strategy benefits them as learners and make decisions regarding its utility. This study adds credence to the proposal put forth that integrating metacognitive strategies into story grammar instruction may increase the student's knowledge and use of the strategy.

The final study in this section also investigated the role of story grammar in aiding LD students to recall more events from a reading passage (Benardczyk, 1991). The components of story grammar strategy were taught within the framework of self-instruction. A multiple baseline design was utilized with multiple probes across the baseline. Results indicate that the LD students were able to recall more story grammar components and more events from baseline probe through post instruction probes.

The studies presented thus far on the utility of story grammar indicate that LD students are receptive to strategy instruction and that it increases reading skill, especially

when guided practice and student verbalization are built into the strategy instruction. However, none of these studies explored the affective changes that an LD student might experience as a result of story grammar use and improved achievement and whether these changes motivate the student to take more learning risks.

It has been said previously that LD students have poor strategy skills or use them ineffectively (Wong, 1985). Integrating metacognition into strategy instruction may increase the LD student's ability to monitor his or her progress in learning the strategy. The following two studies investigate the relevance of metacognition in strategy instruction.

Harris et al. (1988) hypothesized that teaching learning disabled students to predict how well they would do on a spelling test would increase their metacognitive awareness and increase their ability to plan an appropriate intervention. In this study, 40 fourth-grade LD students were administered the Test of Written Spelling (TWS) and then randomly assigned to one of four study conditions: 1) directed-study; 2) student-controlled; 3) teacher monitored; and 4) control. In all but the control condition, the Ss were trained in a spelling strategy to: a) say the word; b) write and say the word; c) check the word; and 4) write the word from memory and check it.

In the student controlled and teacher-monitored

conditions, the Ss were instructed to use the strategy and then directed to use the strategy to guide their studying. In the teacher-monitored group, the Ss' progress was monitored by the teacher and they were given assistance if it was requested whereas in the directed study group, the instructor verbalized each step of the strategy and did not proceed with subsequent steps until the previous ones were mastered. Subjects in the control condition played a Spelling game with the instructor and then were directed to study as they wished.

It was predicted that LD learners would be most successful in predicting their spelling accuracy on a spelling test after strategy training if it involved teacher monitoring. This was hypothesized to be the most effective treatment plan since it encouraged independent strategy implementation but provided teacher guidance upon request. However, the results indicated that the Ss in this condition outperformed only the control group and there were no differences among treatment groups in predicting spelling accuracy. Subjects in the teacher monitored group exhibited significantly better metamemory skills than those in the free study condition. The authors interpret this finding as a support that students benefit metacognitively when their strategy use is monitored. The teacher monitored condition provides opportunities for the student to take charge of his/her study activities while having a resource available

when the need arises. This study underscores the need for students to have optimal opportunities to practice their skill until it becomes automatic. This does appear to initially require expert guidance which decreases in importance as the student gains greater expertise in the strategy.

Cognitive and metacognitive instruction were utilized to improve the mathematical problem solving abilities of 6 sixth, seventh and eighth grade LD students (Montague, 1992). A multiple baseline, across-subjects design was used to assess the effects of the treatments. The experimental phases lasted four months and included baseline, two levels of treatment, near and far temporal generalization, and retraining. Intervention materials included scripted lessons and three wall charts listing: 1) the seven cognitive strategies only; 2) the metacognitive strategies only; and 3) a combination of the two. Each LD learner received both conditions, however, they were randomly assigned to either the cognitive or metacognitive treatment in the first treatment phase.

During Cognitive Strategies Instruction (CSI) the Ss were taught the names of the processes (read, paraphrase, visualize, hypothesize, estimate, compute) and their descriptions and were told to memorize the initial letters of each process as a guide in remembering the processes. In the Metacognitive Strategy Instruction (MSI), the Ss were

instructed to memorize the metacognitive activities that are associated with the cognitive process (i.e., SAY, ASK, CHECK [p. 234]).

Treatment focused on strategy acquisition, which included demonstrations, guided practice and testing sessions. It also involved a discussion of the LD learner's current performance, a description of the cognitive or metacognitive processes being taught, verbal rehearsals, teacher modeling of strategy application, teacher-student role exchange during demonstrations, corrective and positive feedback and a mastery check. Post instruction follow-up was arranged a few weeks after instruction stopped and five months later. Three months after the last training, a booster treatment plan was provided which consisted of strategy review, practice and feedback.

Results suggest that the combination of cognitive and metacognitive strategy instruction is more effective in producing higher achievement in mathematical problem-solving than either strategy given alone. However, these students did not maintain the strategy over time. This fact motivated the author to suggest that generalization strategies be included in the cognitive and metacognitive training.

Self-Regulation Strategies

Graham and Harris (1989) investigated achievement effects on LD students' written compositions under two

conditions: 1) self-instruction training (strategy training) and 2) explicit self-regulation strategies on self-instruction strategy (explicit strategy training). Twenty-two fifth-and-sixth-grade students participated in this study. A randomly selected group of 11 normal achieving students (NA) served as the control.

The authors designed and tested a scale for assessing student's composition skills. The inclusion and quality of eight story elements served as the criteria and included main character, locale, time, starter event, goal, action, ending and reaction.

In both conditions, instruction stressed the collaborative role between the teacher and students, with the students knowing that responsibility for writing would eventually fall to them. Strategy training focused on defining, identifying and generating a composition using a mnemonic. Following mastery of the mnemonic, the students discussed their pretest compositions in terms of these criteria. The students were then given a five-step writing strategy, written on a chart and modeled by the instructor, using a "thinking out loud" strategy, consistent with Meichenbaum's (1977) guidelines for self-instructional training. Four practice sessions were provided.

In the explicit strategy training group the LD learners were given instruction and practice in recording and graphing the number and kind of story grammar elements

contained in their practice stories. Additionally, they were instructed in establishing goals for the number of elements to be included in subsequent practice stories.

Self-instructional strategy training improved LD students' compositions skills. However, in this study, the addition of goal setting and recording use of the components did not improve the learners' composition writing. When compared with the normal achieving (NA) learners at posttest, LD students' compositions were indistinguishable in terms of number of story grammar elements that were included. However, on further study, the quality of the LD students writing required more remediation.

At issue here, also, was whether the learner's self-efficacy improved following training in a strategy. In this study, both interventions significantly improved the LD learner's self-efficacy which increases the learner's confidence that he or she can execute a task.

Improvement in LD student's compositions and the impact of improvement on LD students' self-efficacy were also the subject of investigation by Sawyer et al. (1989). Four experimental conditions were designed to assess the effectiveness of each in improving the composition skills and self-efficacy of LD students. The conditions were: 1) Full Self-Regulated Strategy Development (FSRSD); 2) Self-Regulated Strategy Development without goal setting and self-recording (SRSD); 3) Direct Instruction (DI) of

strategy use; and 4) a non-randomized practice control.

Subjects were 33 fifth-and-sixth-grade students receiving Resource Room, a special education service, from three schools in suburban Washington, D.C., who were randomly assigned to one of the four experimental conditions. Ten similar students attending a different school participated in the control group. Thirteen normal achieving (NA) students were randomly selected from the schools participating in the experimental conditions.

In the FSRSD group, instruction involved explicit self-regulation procedures, including goal setting and self-monitoring of strategy use and effectiveness. Scaffolding and discussion were used and individual feedback was provided. Strategies were explicitly and overtly modeled and the goals and significance of the strategy were made clear. In the SRSD condition, the students were given instruction and practice to facilitate goal setting and self-monitoring but not explicit instruction. In the third condition, DI, components of the strategy instruction that prompted self-regulation were removed. Students were apprised of the goal of the instruction and instructed in the elements of the strategy. Neither teacher modeling, goal setting, or feedback were provided to this group.

The results supported the hypothesis that both the SRSD and the FSRSD conditions yielded higher performance in composition writing than either of the other conditions. The

present study also found that longer term maintenance, at four weeks, was higher in the FSRSD than in the other conditions, though not at the two week maintenance. However, the results of this study did not find that the self-efficacy of the LD students improved after treatment. It is important to note, however, that at pretest, the LD students demonstrated high self-efficacy scores, despite relatively poor pretest writing performances. This finding, however, is not unusual in the literature.

A study was designed by Case, Harris and Graham (1992) to investigate the effectiveness of teaching a 'task-specific strategy' along with self-regulation training for solving simple addition and subtraction word. It has been shown that LD students typically make errors when answering word problems because they added when they should have subtracted and vice versa.

Four LD students, aged 11-1 to 11-8 years old, in a large northeastern metropolitan city served as subjects. The students were given instruction in identifying and learning the meaning of important cue words that are usually found in number problems of this type. The students were apprised of their progress at the beginning of each instruction period, were informed as to the goal of the instruction and were advised as to how the learning strategy would help the student reach the objective. Charts were made and the instructors modeled the strategy using a "talk

aloud" procedure, for example, "How can I solve this problem, what is it I have to do?"

Data analysis (using a multiple-baseline-across-subjects and across-two-behavior design) found that errors due to the use of wrong mathematical operations were significantly reduced. Impressive gains were made on the subtraction word problems, an area that was weaker for the students. Additionally, the students claimed to use this self-instruction strategy in other learning situations.

As previously stated, the above studies (Case et al., 1992; Graham & Harris, 1989; Sawyer et al., 1992) report improvement in self-efficacy beliefs following strategy and self-regulation training. These findings are relevant to the current investigation which is interested in exploring how training in self regulatory behaviors will enhance instruction in story grammar and improve the LD learner's self-efficacy beliefs.

Self-Efficacy Studies

A number of studies have investigated differences in self-efficacy between LD students and their normal achieving (NA) peers (Alvarez & Adelman, 1986; Deci, Hodges, Pierson & Tomassone, 1992; Graham, Schwartz & MacArthur, 1993; Gresham et al., 1988). In each of these studies, LD students and the comparison groups were administered self-reports or given interviews to identify their sense of self-efficacy. While these studies do not implement a strategy training,

they are relevant for the present study as they provide empirical evidence on the self-efficacy characteristics of this LD population.

Deci et al. (1992) found that self-efficacy was tied to a learner's perception of competence and autonomy. In this study, where LD students were contrasted with students classified as Emotionally Handicapped, the LD students were lower on feelings of competence and autonomy. The authors attribute this to the number of failings that LD students typically experience in school.

Learning disabled students were also found to have lower academic and social efficacy when compared with groups of non-handicapped and gifted peers (Gresham et al., 1988). This finding is significant since LD students very likely recognize this fact which then impacts on their views regarding their sense of how well they can accomplish a task.

The perceptions of LD students regarding their composition writing abilities was investigated by Graham et al. (1993). When compared with their normally achieving (NA) peers, these 10 to 12 years LD students were conceptually less mature in writing knowledge and in the writing process. Nonetheless, these students were as positive as their NA peers in ability to write a composition despite weaker abilities on this task and a history of school failures.

Although Alvarez and Adelman (1986) designed a study to

investigate the self-efficacy, self-concept and success expectancy of 19 students, aged 9 years 6 months to 15 years 2 months who were classified as LD or emotionally handicapped (ED), the authors soon found that the Ss were overstating their abilities and instead explored the reasons for the overstatements. The authors found that the inflated academic confidence may serve a self-protective feature. Because these learners may feel threatened by their low ability, they present a facade that hides these feelings of vulnerability. Another view offered by the authors suggests that by overstating their abilities the students may be able to avoid undesirable consequences. For example, if the students view the self-reports as a diagnostic, they may think that low competence responses is a covert request for tutoring or other remedial assistance, which they may want to avoid.

Schunk (1985) investigated the effects of goal-setting strategies in improving self-efficacy. In this study, 30 sixth grade LD students, attending two middle schools, were randomly assigned to one of three treatment groups where all of the LD students were unable to correctly solve 25 percent of a particular type of subtraction problems. The treatment groups were identified as self-set goals, assigned goals and no goals.

In the <u>self-set</u> treatment, children were encouraged to establish their own estimate of how many pages of math

problems they could complete. In the assigned-goals group, the students were instructed to complete a set amount of pages. Following this, the LD learners worked on samples of subtraction problems; explanations for solving the problems were provided at the top of the worksheet. All learners worked independently and were given no feedback. After five sessions, the students were posttested. Results indicated that the LD students who participated in the goal-setting group demonstrated both increased self-efficacy and skill development in solving subtraction problems. It is also the author's suggestion that a combination of the child observing both goal achievement and improved math achievement increased self-efficacy.

The results of this investigation are important to this study since the LD students' academic goal setting increased skill improvement and self-efficacy. This is in contrast to the two previously cited studies (Graham et al., 1988; Sawyer et al., 1989) where goal setting was not found to significantly improve academic achievement over strategy instruction. However, in those two studies, a number of treatment variables were investigated. In Schunk's less complicated study (1985) the goal setting element proved beneficial to the academic outcomes, suggesting that goal setting with story grammar may improve reading comprehension skill and self-efficacy.

Attribution

Borkowski et al. (1988) investigated the effects of motivational and cognitive training in improving the reading comprehension strategy use of LD students. In this study, 75 LD students living in the mideast and attending special education classes, were randomly assigned to one of four treatment conditions.

In the Reading Strategies Plus Complex Attribution condition, two phases of treatment were administered. In the first phase, the Ss were taught clustering rehearsal and elaborative strategies along with a specific program in attribution training, which highlighted the importance of effort in executing strategies. In the second phase for this group, they were taught summarization skills together with attribution retraining that stressed the importance of strategy-based reading.

In the Reading Strategies Plus Attribution group, Ss received the Phase 2 portion of the Reading Strategies Plus Complex Attribution condition. An Attribution Control group received cluster-rehearsal, elaborative and summarization training in Phases 1 and 2 but no attributional training. A Reading Strategies control group practiced all of the tasks without strategy or attributional training.

The authors found that the results were encouraging. Students in the combined attribution and strategy training group showed nearly 50% improvement in summarizing

paragraphs, as compared to gains of only 15% made by Ss in the strategy only condition. When the scores of Ss in the Reading Strategies Plus Complex Attribution and the Reading Strategies Plus Attributions were combined and compared with the scores of the remaining two groups, a significant difference was found. Long-term changes in summarization skills were found in the two attribution groups. While the Ss in this study came to attribute the reading strategy to their reading gains (situation-specific attribution), their attributions in other non-reading domains remained stable. The results of this research led the authors to conclude that strategy training with LD students must be given in conjunction with attribution training across domains. In this way, they will perhaps be more comfortable with studying and become more strategic and active learners. This study is relevant to the present investigation because it provides evidence that children's attributions can change with academic improvement and cognitive strategy instruction.

Reid and Borkowski (1987) explored the effects of stable and program-specific attributions and self-control training on underachieving, hyperactive students and their ability to maintain strategy instruction over the short and long term. Additionally, they examined the effects of both conditions on the Ss' self-efficacy. While the characteristics of this population differ from those of the

learning disabled population that is of interest to the present study, the effectiveness of attribution and self-control training are relevant.

Seventy-seven second, third and fourth grade students, referred by their teachers for attentional difficulties, impulsivity and overactivity were randomly assigned to one of two experimental conditions: 1) self-control and 2) self-control plus attribution (antecedent plus program-specific).

The self-control condition consisted of a five-step self-instructional sequence that focused on learning mediators on a recall readiness task. In the self-control plus attribution group, the students were given the same strategy training with training in enhancing their self-attributions. Antecedent training was given after failures during self-control training and included: 1) discussion of beliefs that cause failures to occur; 2) opportunities to successfully perform previously failed items using self-control steps; and 3) a reflection on the beliefs about the causes of success. Training of program-specific attributions included feedback about the relationship between strategy use and recall accuracy.

As expected, the children in this study demonstrated short-term success in strategy-based learning, improved attributional beliefs, both antecedent and program-specific, and more reflective self-control. These children also exhibited increased metacognitive awareness of the

importance of the use of strategies. In addition, the children showed greater strategy transfer and increased metamemory. The authors suggest that the improved attribution assignments occurred because the attribution training focused on modifying the child's maladaptive antecedent attributions through failure-coping dialogues and specific feedback as to why items are correct or incorrect. Additionally, the focus on strategically based effort and self-control improvement very likely contributed to improvement in attribution assignment.

Feedback

As stated earlier, feedback enhances learning during the skill instruction period. A feedback of interest in this investigation involves the effects of modeling in reducing error responses and increasing correct answers. Perkins (1988) investigated the effects of four feedback conditions on male LD students in grades 1 through 4. The Ss were randomly assigned to one of the experimental groups and orally read consonant-vowel-consonant (CVC) nonsense words. The four treatment conditions were: 1) general; 2) corrective/modeling; 3) corrective/sound-it-out; and 4) no feedback. If an error occurred in the general feedback, the Experimenter (E) told the learner to try it again. In the corrective/modeling condition, the E modeled the correct answer. In the third condition, the E told the S to sound out the error. No feedback was provided in the last group.

In each group, the S was told to read the C-V-C nonsense word, and told to read the word again if it was incorrect. If an error was recorded on the first trial, the treatment was given and the S was asked to read it again.

Results indicated that any of the feedback conditions improved oral reading over no feedback. The modeling and sound-it-out feedback conditions produced the highest correct response rates. Modeling feedback produced the strongest immediate increase in correct responses. An advantage to the corrective/modeling feedback is that the students are not guessing and producing additional errors.

Espin and Deno (1989) compared the effects of prompting and modeling feedback on the sight word reading performance of second and fourth/fifth-grade LD students. Group 1 consisted of 4 second-grade Ss, assessed to be reading on a first/second grade level by the teacher. Group 2 comprised the older students informally assessed to be reading on a second/third-grade level. The modeling and prompting conditions were alternated for all Ss during the experiment.

All Ss read from a Dolch list of words appropriate for their respective reading level. The students had three seconds to read the word correctly. If it was read incorrectly, a treatment was supplied. In the modeling treatment, the E modeled the word and waited for the S to repeat it correctly. If the student did not respond, the E proceeded to the next word. In the prompt conditions, the

treatment differed in that incorrect responses were addressed by prompts. A second prompt was offered after three seconds if the word was not attempted or was still wrong. If the word was again wrong, the E proceeded to the next word.

In this experimental design, results indicate that the modeling feedback was more effective in teaching sight word recognition to LD students than prompting feedback. Improvement in reading sight words was still effective three months after the treatments ceased. As in the previous study (Perkins, 1988) a salient feature of the modeling feedback is that the S is immediately given the correct answer thereby eliminating guesses or reinforcement of incorrect responses.

The relevance of these investigations to the present study is the impact that modeling feedback contributes to LD learners' skill development. However, the effects of immediately correcting incorrect story grammar elements to improve reading comprehension is not evident in the literature. It is the interest of this study to investigate this effect with learning disabled students.

The goal of this study was to improve the reading comprehension skills of LD students through instruction in a cognitive strategy, story grammar. Training in self-regulatory behaviors and modeling feedback were added to the story grammar instruction individually and jointly to

explore the effectiveness of these variables on the reading comprehension of LD students. The influence of these experimental conditions on the students' self-efficacy beliefs regarding their story grammar skill and reading comprehension abilities was examined as well as the value that these students place on the strategy instruction following the treatments.

Hypotheses

The following hypotheses were investigated in this study. The first group concerns the effects of the treatment on the dependent variable, story grammar.

Hypothesis 1. LD students, who are administered any of the treatment conditions, namely, 1) story grammar that incorporates metacognition [(story grammar/metacognition) SG], along with self-regulated behavior training (SR) and modeling feedback (MF), (SG+SR+MF]; 2) story grammar/metacognition plus self-regulated behavior training (SG+SR); 3) story grammar/metacognition plus modeling feedback (SG+MF); and 4) story grammar/metacognition (SG) will identify more story grammar elements from a narrative than learning disabled students in a control group.

Hypothesis 2. Learning disabled students in the SG+SR+MF treatment will identify more story grammar elements from a narrative than LD students in the SG+SR or SG+MF or SG groups.

Hypothesis 3. Learning disabled students in either the

SG+SR, SG+MF or SG groups will identify more story grammar elements from a narrative than LD students in the SG treatment group.

The second set of hypotheses examines the effects of the treatments on the LD students' self-efficacy.

Hypothesis 4. Learning disabled students who are administered any of the treatment conditions (SG+SR+MF, SG+SR, SG+MF or SG) will demonstrate increased self-efficacy when compared with a group of LD students in a control group.

Hypothesis 5. Learning disabled students who participate in the SG+SR+MF treatment will demonstrate greater self-efficacy when compared with LD students in the SG+SR, SG+MF or SG treatment.

Hypothesis 6. Learning disabled students in the SG+SR or SG+MF groups will show an increase in self-efficacy when compared with LD students in the SG after treatment.

The last set of hypotheses investigates the effects of the treatments on the LD students' likelihood of attributing the strategy to improvements in identifying story grammar elements in a narrative.

Hypothesis 7. Learning disabled students who receive any treatment condition (SG+SR+MF, SG+SR, SG+MF, SG) will attribute improvements in identifying story grammar elements from a narrative to the strategy when compared with LD students in a control group.

Hypothesis 8. Learning disabled students who receive the SG+SR+MF treatment will attribute their increased ability to identify story grammar elements from a narrative to the strategy when compared with LD students in the SG+SR or SG+MF treatment conditions.

Hypothesis 9. Learning Disabled students in the SG+SR or SG+MF treatment conditions will show a significantly greater ability to attribute improvements in identifying story grammar elements from a narrative to the strategy when compared with LD students in the SG treatment.

CHAPTER III

Method

Pilot Study

A pilot study was conducted prior to the investigation in May and June, 1995. Eight graduating LD students (7 boys, 1 girl) from two elementary schools participated. Each was administered the story grammar pretest and posttest, the Self-Efficacy Questionnaire at the pre and post testing, the Attribution Questionnaire at the post testing as well as the SG+MF+SR treatment. Two groups of 5 and 3 students were formed.

Several observations were made from this study. First, the students read the narratives with relative ease. However, some character names were unconventional (i e., Milos, Clay) and seemed to detract from story comprehension. More common names such as Mark, Tommy and Amy were substituted for less familiar ones. Additionally, certain vocabulary required detailed explanations which became lessons unto themselves and compromised strategy instruction.

The pilot study was helpful in identifying narratives in which various story grammar elements were either missing or not easily discernible. These narratives were revised accordingly. Additionally, two narratives (Appendixes B, G) were shortened as the students appeared to lose some interest in the added details of those stories.

The pilot study provided an opportunity to incorporate examples into the training sessions that were relevant to these students' experiences. By recording their responses to examples of various tools, tv, movie and story characters or other open ended questions, the lesson contents were updated and made more comprehensible. Finally, the self-efficacy and attribution questionnaires were revised. A series of facial expressions which represented opinions on self-efficacy and attribution along a continuum were replaced with phrases denoting the same ideas. It was noted that the students demonstrated no difficulty following the directions or understanding what was expected of them.

Present Study

The current study was begun in February, 1996 and continued through May, 1996. A description of this investigation follows.

Subjects

Ninety-one learning disabled students, aged 9.1 to 12.5 years participated in this study. The students' ethnicity reflects the large urban neighborhood in which they reside and attend school. It is considered an area where the residents are primarily of a low socio-economic-status and is accounted for by the fact that the majority of the students in each school are eligible for free lunch. Additionally, each school is eligible for Title I funds, which again is based on economic need and low reading

scores. This neighborhood is an area composed of American Blacks, Caribbean Blacks, Hispanics and Black Hispanics. Seventy nine of the LD students are American or Caribbean Black, 5 are Hispanic Black and 7 students are Hispanic. All students in this study were English dominant.

All 67 boys and 23 girls were classified as learning disabled and recommended for a special education class by a multidisciplinary team according to the Regulation of the Commissioner of Education (New York State), Part 200 - Handicapped Children, Effective February 26, 1987 as follows:

> A pupil with a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken, or written, which manifests itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, neurological impairment, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural or economic disadvantage. A child who exhibits a discrepancy

> of 50 percent or more between expected achievement and actual achievement determined on an individual basis shall be deemed to have a learning disability.

The multi-disciplinary team consists of a Social Worker, School Psychologist and Educational Evaluator who review various reports, including but not exclusive of a Social History, Psychological and Educational evaluations, classroom observations, teacher evaluations and school records to determine a classification and recommendation.

All of the students in this study attend self-contained classes, where the student/teacher ratio is no greater than 15:1. Each of the nine classes in the study are considered ungraded although each class was informally graded and contained either fourth or fifth graders.

At the time of the recommendation for the self-contained class, there was at least a 50% discrepancy between expected and actual achievement. For this information, the students' special education records were reviewed. All reported scores were obtained within the last three years as all students in special education are automatically re-evaluated triennially.

Expected achievement was determined by the administration of an individual Intelligence Quotient (IQ) test. The IQ scores of the participants were obtained through administration of The Wechsler Intelligence Scale

for Children, Third Edition (WISC III) or The Stanford Binet, Fourth Edition, (S-B IV). Scores ranged from 80 to 93.

Actual achievement (in Reading and Math) was determined through administration of an individualized standardized achievement test. These tests include The Woodcock Johnson Revised (WJ-R), Kaufman Test of Educational Achievement (KTEA) or the Wechsler Individual Achievement Test (WIAT). Standard scores were used to compare reading skills from the three measures. These scores ranged from 59 to 85, with a mean of 72.78 and a standard deviation of 8.15.

Additionally, each teacher was asked to approximate each student's level of instruction (Teacher Estimates), as the LD students may have progressed since entering the program. Teacher estimates ranged from 1.0 to 4.5 g.l. Table 1 summarizes the means and standard deviations of the ages, IQs, standardized reading scores and Teacher Estimates of the participants in this study.

Table 1

Means and Standard Deviations of Participant Characteristics (N = 91)

Variable	M	SD	Ranges
Age (in years)	11.12	.62	9-1 to 12-5
IQ	85.33	3.45	80 - 93
Reading Score			
SS	72.78	8.77	59 - 85
Teacher Estimate			
(g. l.)	2.90	.71	1.0 - 4.5

Key: Reading Score = Individually Administered Achievement Test; SS = Standard Score; g. l. = grade level.

All of the students in this sample have, or had, severe reading difficulties that impacted on progress in all content areas. As students show progress, mainstreaming is recommended as a transition to regular education. Four students were mainstreamed in Reading.

While the New York State Commissioner's Regulations, Part 200 defines LD, it does not specify that a Reading and/or Math disorder be distinguished. However, math achievement was determined during the individualized achievement test. For this sample, Math scores were also very weak, although nine students were mainstreamed for

math.

The referral statement is extremely helpful in understanding the particular difficulties that the student experiences in regular education. Referrals are usually generated by classroom teachers and/or parents. The referral statement provides a base upon which evaluations are selected and eventually, recommendations for services are made. In this sample, one student was referred for severe reading difficulties; 59 were referred for reading and math weaknesses; 29 exhibited reading and math weaknesses plus mild behavioral difficulties and 2 demonstrated moderate behavioral difficulties in addition to the academic weaknesses.

Mild behavioral difficulties are common when students experience academic difficulty. However, these difficulties are usually related to the learning problem and decrease or even disappear once the student has adjusted to the new setting and has begun to improve academically. Such behaviors are generally viewed as poor social skills and are commonly typified as crying, limited persistence at a task, calling out or silliness. More aggressive behaviors such as kicking or hitting were also noted on referrals, although less often. These behaviors, too, were also viewed as a function of the learning difficulty and were not considered the primary difficulty. Often, counseling was recommended to change the nonproductive behaviors; 37 LD students

received this service.

It was stated that two of the students demonstrated more severe behavioral difficulties at the referral. One young student, who was around 7 years of age, appeared to be reacting to a serious diabetic illness which resulted in the amputation of a leg. According to recent records, he has adjusted now. Another student was referred shortly after beginning the LD class due to behavioral difficulties. However, he was given an extra period of counseling and has been maintained in this setting for three years.

Special education teachers have the option to refer a student for an evaluation when additional services or a new program are needed. Within the 1994-95 and 1995-96 school year, none of these LD students were referred for a different setting due to behavioral difficulties.

After reviewing the LD students' records, it does not appear that any of these students exhibit criteria that would warrant comorbidity. The behaviors that are associated with a Conduct Disorder (CD) or Oppositional Defiant Disorder (ODD) as defined in the Diagnostic and Statistical Manual IV (DSM IV), (American Psychiatric Association, 1994, pp. 85-94) are more extreme than has been demonstrated by any of these students over a consistent period of time. These participants have not shown a strong disregard for the wellbeing of others, deliberately destroyed or taken the property of others, nor have they

exhibited a pattern of negative and aggressive behaviors over a period of at least 6 months (DSM IV, 1994). Students who present with these symptoms would require a class setting that provides greater adult supervision and perhaps, a more specialized program that separates these students from the mainstream on a daily basis and educates the students for the entire year.

The records of the LD students in this study were reviewed for the presence of Attention-Deficit/Hyperactive Disorder (ADHD). While inattention and impulsivity were often used to describe the students' difficulties before special education, these behaviors did not appear to persist once the students were in a special class. However, two students in the sample were taking ritalin, which was prescribed by pediatricians.

The following table, Table 2, summarizes the initial reasons for referral to special education; the number of students with ADHD symptoms and on medication for ADHD; the presence of behavioral symptoms; the number of students mainstreamed in Reading or Math; and the number of students who receive counseling.

Table 2

A Summarization of the Referral Reasons, Comorbidity, and Special Services of the LD Participants (N = 91)

Descriptors	N
Referral Reasons	
Reading	1
Reading/Math	59
Reading/Math/Behaviors	
Mild	29
Moderate	2
ADHD	
Symptoms	2
Medicated	2
Behavioral Issues	
CD	0
ODD	0
Mainstreamed	
Reading	4
Math	9
Related Services	
Counseling	37

Key: ADHD = Attention Deficit Hyperactive Disorder; CD = Conduct Disorder; ODD= Oppositional Defiant Disorder.

Lastly, the participants attended nine classes in four neighborhood schools. Class registers were often dependent upon the size of the classroom and ranged from 10 to 15 students. The various classes were combined to form 5 groups of 15 to 20 Ss.

All of the nine teachers cooperated with the investigator by introducing the instructor to their respective class and stressed the importance of the lessons. Each teacher remained in the classroom while the lessons were conducted. The majority of the students were very cooperative and participated fully in the lessons. They eagerly responded to questions, volunteered to read and offered to identify the various story grammar parts after reading a story. There were some students, perhaps 6, who were not interested in the group activities. The instructor had brief motivational chats with them, and whenever possible, worked more individually with them. The teachers also addressed them, but they remained less enthusiastic and compliant than their classmates. They did complete the written assignments but with considerably less gusto.

In general, the students appeared able to follow the lessons, read the narratives with relative ease and understand what was expected of them in completing the story grammar worksheet, self-regulation checklists and goal chart. The groups that were trained to use the self-regulation checklist and goal chart did appear a bit

overwhelmed. However, students who grasped these directions more readily helped their neighbors. In general, the students were very receptive to the instructor and to the strategy training.

Treatment and Control Groups

Each group was randomly assigned to one of the four treatment conditions or to the control situation. The treatments were 1) story grammar/metacognition strategy instruction (SG); 2) story grammar/metacognition plus self-regulatory behavior training (SG+SR); 3) story grammar/metacognition plus modeling feedback; 4) story grammar/metacognition plus self-regulatory behavior training plus modeling feedback (SG+SR+MF); and 5) the control (C). A description of each treatment follows with the lesson plans (Scripts) included in the Appendix. It should be noted here that the scripts of the SG introductory and review lessons are presented in their entirety as these lessons form the base for the other treatment instructions. As each paragraph is numbered, the scripts for the SG+MF and SG+SR treatment lessons synthesize pertinent SG paragraphs with the details of the modeling feedback or self-regulatory training which are presented in full. Similarly, the scripts for the SG+MF+SR lessons blend the aspects of the SG, SG+MF and SG+SR lessons that combine to form this last treatment.

Story grammar/metacognition instruction (SG).

All of the LD students in this condition were instructed in a story grammar/metacognition training session that lasted approximately 35 minutes (Script for Story Grammar/Metacognition, Appendix A). The lesson opened with an introduction that linked strategies to tools that simplify daily chores and activities and then presented story grammar as a strategy (or tool) designed to improve reading comprehension. Each story grammar element, as defined by Stein and Glenn (1979), was listed and examples were given to clarify the concept. A group practice followed and included reading a narrative (Appendix B) and completing a worksheet (Appendix C) that was adapted from Newby, Caldwell and Recht (p. 376, 1989). An independent work session that entailed reading a narrative (Appendix D) and completing the worksheet without instructor supervision was the last activity in this lesson.

In addition to the story grammar instruction, this introductory lesson contained attribution statements such as:

> "Story grammar helps us to remember a story that we read as we are reading it. Who can tell us the name of the strategy that we are learning? How does this strategy help us? (Elicit a statement linking story grammar to better reading

comprehension).

that repeatedly linked the story grammar strategy to improvement in reading comprehension throughout. Charts (36" x 24") were displayed to visually identify the story grammar elements, selected narrative vocabulary and the story grammar worksheet. Additionally, the students were reminded to concentrate on the story grammar elements and to recite them frequently. Attribution remarks concluded the story grammar/metacognition lesson.

Before reading the narratives, the students were exposed to vocabulary that was conceivably unfamiliar to them. The words were introduced to facilitate the reading of the story; only when their meaning was not immediately clear was further elaboration offered.

The narratives were fictional stories, composed of 130 to 250 words. The story grammar worksheet identified each story grammar element and provided space for the student to write in the illustration from the story.

Two review lessons (Appendixes E, F), each given one week apart, followed the initial instruction. The review lessons, written in detail, reinforced: 1) the utility of a reading strategy to improve reading comprehension; 2) the identification of story grammar as a reading strategy; 3) the development and review of each story grammar element; 4) a group practice session, consisting of the reading of a narrative (Appendixes G, H, respectively) and the completion

of a Story Grammar Worksheet (Appendix C); 5) an independent work session during which the students read a narrative (Appendixes I, J, respectively) and completed a worksheet by themselves.

Story grammar and self-regulation training (SG+SR). In this treatment, the story grammar/metacognition lesson that was just described was coupled with self-regulation training (Appendix K). The aim of this treatment was to enhance the story grammar/metacognition instruction through explicit instruction in goal setting and self-monitoring in assessing students' own ability to identify and employ the story grammar components when reading a story. In self-monitoring, the LD students were instructed to use a checklist (Appendix L) to practice recalling the story grammar elements and to mark the story grammar parts that they can identify from the narratives as they read. In setting goals, the LD students predicted how many of the story grammar parts they can identify and marked an individual graph (Appendix M) to record their predictions. Chart-size (36" x 24") replicas of the Self-monitoring Checklist (Appendix L) and Goal-setting graph (Appendix M) were used as visual aids to ensure that the students are following the instructions.

In the ensuing two review lessons (Appendixes N, O, respectively), the students were exposed to a review of the story grammar/metacognition lessons as previously described

in the section under Story Grammar/Metacognition. These review lessons varied from the story/grammar metacognition review prototype to include a review of use of the Self-regulation Checklist (Appendix L) and the Goal-Setting Graph (Appendix M). The students were also given global statements on how the group was faring in learning the various story grammar elements. Additionally, before the independent reading of the narrative and completion of the story grammar worksheet, the LD students were given an opportunity to review their predictions from the previous week. They were instructed to use this information to focus on weak areas when reading the narrative and completing the worksheet. Assistance was given to help the students assess their predictions by utilizing the 'actual' feedback to set goals.

Story grammar/metacognition and modeling feedback (SG+MF).

This treatment included the story grammar/metacognition lesson as a base but diverged with a segment on modeling feedback to augment the learning of the reading strategy, story grammar (Appendix P). In this treatment, greater emphasis was placed on the instructor to 'model' or dramatize: 1) memorizing and reciting the story grammar parts; and 2) self-questioning during the reading of the narrative (i.e., Do I know the main character yet? or Have I found the setting?).

Additionally, after the individual practice session had ended, the instructor modeled reciting the story grammar elements, reading the narrative and peppering the reading with self-questions regarding the various story grammar elements. After the narrative was read, the instructor reviewed the story grammar worksheet and then used pointed questions to refer students to the narrative to determine each story grammar element. Finally, a chart was displayed, showing the correct responses and was read by the instructor.

The review lessons (Appendixes Q, R, respectively) for this treatment condition followed the same format as the story grammar/metacognition review lesson but additionally incorporated aspects of modeling feedback, just previously detailed. However, at the beginning of each review lesson, the students' examined the worksheet they completed independently the previous week, which had been marked by the instructor. Each worksheet was read and corrected when necessary by the Instructor. The returned worksheets indicated a star next to a correct response or "not quite right" next to an incorrect response that was followed by the correct response, written in red ink. A few minutes were given to this review opportunity and any student questions were answered.

Story grammar/metacognition with modeling feedback and self-regulation training (SG+MF+SR).

This final treatment incorporated all aspects of each of the previously detailed treatments and are detailed in the Scripts for Story Grammar/Metacognition with Modeling Feedback and Self-Regulation Training (Appendices S, T, U, respectively).

Control Group (C).

The LD students in this group were administered a pretest (Appendix V), posttest (Appendix W) and Self-Efficacy Questionnaire (Appendix X) four weeks apart. The Attribution Questionnaire (Appendix Y) was administered only at the posttest. Instructions for the pretest and posttest sessions were detailed in scripts (Appendixes Z, AA, respectively). None of the LD students in this group were exposed to any of the treatment conditions that have been detailed in this research.

The following table, Table 3, describes the salient features of the various treatment/control conditions that have just been described.

Table 3

Research Phases for Strategy Instruction Conditions

Research Phases	SG	SG+SR	SG+MF	SG+SR+MF	C
Pretest	+	+	+	+	+
Strategy goal	+	+	+	+	-
Story grammar elements	+	+	+	+	-
Self-instruction (chart)	-	+	-	+	-
Self-instruction (worksheet)	-	+	-	+	-
Goal setting	-	+	-	+	-
Modeling feedback	-	-	+	+	-
Group practice	+	+	+	+	-
Individual practice	+	+	+	+	-
Posttest	+	+	+	+	+

Key: SG = Story Grammar; SG+SR = Self-regulating strategy; SG+MF = Modeling; C = Control; + = included; - = not included.

Measures

For the pretest and posttest, all students read a narrative (Appendixes V, W, respectively) that was adapted from children's stories or basal reader workbooks and was

comparable to the stories read during the treatments. After reading the narrative, the Ss completed a story grammar worksheet (Appendix C) that was adapted from Newby, Caldwell and Recht (1989) and assessed their performance in identifying the main character, setting, problem, events and solution in the narratives. The worksheet was used in the Newby et. al. study (1989) with students aged 8-6 years to 10-8 years although it was not further validated. The worksheet provided the students with an outline of the story grammar elements in the order in which they were taught and reviewed. Additionally, ample space was provided for written responses.

Self-efficacy was measured using a questionnaire (Appendix X) adapted from the self-efficacy measured designed by Graham and Harris (p. 1989, p. 343) in a study that explored the effects of strategy instruction on LD students' written compositions and self-efficacy. Coefficient alpha for the prototype was found to be .80 among normally achieving students prior to that study and .76 among the 22 LD students participating in that study. This questionnaire is composed of 5 statements which query the students' confidence in their ability to find each story grammar component in a narrative. Responses to the questionnaire are provided in a Likert-type scale which provides five choices in which to respond to a statement and include; 1) very well; 2) pretty well; 3) somewhat; 4) not

very well; and 5) not well at all.

An Attribution questionnaire (Appendix Y), modeled after the aforementioned self-efficacy questionnaire (Graham & Harris, 1989), assessed the degree to which these students credited story grammar with helping them find the main character, setting, problem, events and solution in stories they read although it was not validated for attribution. However, the questionnaire was presented during the pilot study and was observed to be readily understood by the students as to what was expected of them in completing it. Additionally, during this trial period, a series of facial expressions, ranging from a very happy face to a very sad face, were replaced with phrases, varying from very well to not very well at all, to depict the student's sense of how well the story grammar strategy impacted on their ability comprehend stories more readily. The attribution questionnaire is also a Likert-type scale of the same design as the Self-Efficacy Questionnaire. Scoring was accomplished in the same manner as was the scoring for the Self-Efficacy Questionnaire.

Scoring Procedures

The pretest and posttest story grammar worksheets were scored by an independent rater unfamiliar with the study and with no knowledge of any of the students in this study. Each story grammar component was given a maximum score of 10, allowing a range of 0 to 50. Responses to the **main**

character, **setting**, **problem**, and **solution** on both the pretest and posttest were relatively straightforward and generally received a '0' or '10' score. The answers to the **events** component were treated differently, as this component required the inclusion of more than one idea to earn a score of 10. Specifically, the pretest narrative (Appendix V) contained 4 such ideas, each earning 2.5 credits, while the posttest narrative (Appendix W) contained 5 ideas, with each carrying 2 points.

To control for scoring accuracy, a second rater was trained to evaluate the responses. Both raters have taught Special Education students. The raters were familiarized with the principles of story grammar and given examples to score. When it was clear that they were familiar with the scoring procedures, the scoring was undertaken.

The self-efficacy and attribution questionnaires were scored identically. The scoring procedures were modeled after scoring that was implemented by Graham and Harris (1989) on questionnaires from which these were developed. Each choice, **very well, pretty well, somewhat, not very well, not well at all**, was given a numerical value of 80, 60, 40, 20 and 10, respectively and added for a final score. The scores were tallied by the Investigator with ranges of 50 to 400. For the purposes of reporting data, the final scores were divided by 5, which then indicated a mean that was representative of the choice responses.

Attribution was determined in the same manner as Self-Efficacy. Each student completed an Attribution Questionnaire post treatment. Responses to the Likert-type questionnaire were ascribed a value of 80, 60, 40, 20, 10 to each response choice (very well, pretty well, somewhat, not very well, not well at all, respectively). Values were added and ranged from 50 to 400. As with the Self-Efficacy Questionnaire, the mean values were divided by 5 to arrive at a numerical figure that was representative of one of the choice responses.

Experiment Procedures

Prior to the pretest administration, permission slips (Appendix BB) were distributed to the various classes and those who returned the slips were included in the study.

The pretest and Self-Efficacy Questionnaire were presented one week before introducing the treatment conditions. The posttest, Self-Efficacy Questionnaire and Attribution Questionnaire were administered one week after the last review lesson. The Control group received the pretest story grammar worksheet and self-efficacy 4 weeks before completing the story grammar posttest, self-efficacy questionnaire and attribution questionnaire.

Each treatment condition was administered over three sessions to groups of 10 to 15 LD students, approximately one week apart. On a few occasions, two weeks lapsed due to special assemblies, inclement weather resulting in poor

attendance, teacher absence, excessive student absence or the winter and Easter vacation. The SG lessons lasted, on average, 35 minutes. The SG+SR and SG+MF conditions lengthened the treatment time to approximately 45 minutes while the SG+SR+MF treatment condition lasted 45 to 50 minutes. Table 4 presents the time periods over which each class was received the pre or post testing or a treatment.

Table 4

Time line for treatments by class

	Months															
	Feb.				Mar.				Apr.				May			
week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Class 1	PR	L1		L2	L3	P										
Class 2	PR	L1		L2	L3	P										
Class 3		PR		L1	L2	L3	P									
Class 4				PR	L1	L2		L3	P							
Class 5				PR		L1	L2		L3	P						
Class 6								PR	L1			L2	L3	P		
Class 7		PR		L1		L2		L3	P							
Class 8										PR	L1		L2		L3	P
Class 9				PR					P							

Key: PR = Pretest measures; L = Lesson; 1,2,3 = the lesson number; P = Posttest measures.

Data Analysis

Data was gathered from 91 learning disabled students. At both the pre and post test, each student identified story grammar parts from assigned narratives. These written responses were scored and analyzed for statistical significance. The Self-Efficacy Questionnaire was completed at both pre and post testing and scored. The

Attribution Questionnaire was completed at the posttest.

Statistics.

An analysis of covariance (ANCOVA) was computed to statistically analyze the between-group treatment effects on post story grammar scores and post self-efficacy scores. In each analysis, the covariate was the respective pretest. An analysis of variance (ANOVA) was used to assess between-group differences for attribution scores.

Further analyses were conducted to investigate the findings of the ANCOVAS. Gain scores for story grammar and self-efficacy beliefs were established by subtracting pretest from posttest story grammar and self-efficacy scores. T-tests were computed to determine within-group differences. ANOVAs were run to determine if any treatment condition or the control condition was significantly effective in raising scores. The Tukey Honestly Significant Different (HSD) post hoc analysis was computed to determine the presence of significant differences between groups. Correlation matrixes were computed to determine if other variables were operating to predict the story grammar and self-efficacy scores.

An inspection of the data indicated that high pretest story grammar scores might have adversely affected the treatment effects. Conceivably, students who scored higher initially would be limited in the gains they might make after training, thus creating a 'ceiling effect'. To

explore this supposition, a criterion score was established and the scores of students above the criterion were removed from the sample. T-tests were computed to analyze the gain scores of the revised groups for story grammar and self-efficacy beliefs. ANOVAs were run to determine between group differences in gain scores for the lower scoring students. Post hoc analyses were conducted to determine between group differences. Correlations were computed to determine if any variables were operating to predict gain scores.

Finally, a kappa was computed to assess the agreement in rater scoring. The ratings of each story grammar item (main character, setting, problem, events, solution) and the total scores for pretest and posttest scores were correlated.

CHAPTER IV

RESULTS

Hypotheses Analyses

ANCOVA Analysis

An analyses of covariance (ANCOVA) was computed to determine the effects of the treatments on the posttest story grammar scores of the learning disabled students in this study, using pretest scores as a covariate. Table 5 presents the means and standard deviations of the Pretest and Posttest scores. Despite random assignment of classes to the treatment or control conditions, there were substantial differences in pretest scores.

Table 5

Means and Standard Deviations Of Pretest and Posttest Story Grammar Scores by Group

		Scores			
		Pretest		Posttest	
Group	N	M	SD	M	SD
SG	19	12.95	13.43	32.68	18.60
SG+MF	17	13.88	9.81	34.06	10.48
SG+SR	16	28.31	11.67	36.31	8.49
SG+MF+SR	22	23.23	13.02	36.54	7.68
C	17	22.29	14.83	33.00	13.06
Total	91	20.05	13.71	34.57	12.15

Results of the ANCOVA for group differences in story grammar are presented in Table 6.

Table 6

ANCOVA Results for Group Differences in Story Grammar Posttest Scores

Source of Variation	SS	df	MS	F	P
Covariates					
Pretest	2763.83	1	2763.83	22.92	.001**
Main Effects					
Group	266.71	4	66.68	.55	.697
Residual	10251.75	85	120.61		
Total	13282.29	90	147.58		

** Significant at the .001 level or greater.

The results of the ANCOVA for group differences were not significant and do not support Hypothesis 1. Recall that this hypothesis stated that LD students, given any of the four treatment conditions would identify more story grammar elements from a narrative than a control group of learning disabled students.

Hypothesis 2 predicted that LD students who received SG+MF+SR would also identify more story grammar elements than LD students who received the SG instruction or SG with MF or SR. This, too, was not supported by the data analysis.

The third hypothesis stated that LD students who received SG training along with either MF or SR training would know more story grammar elements on a posttest that LD students who had just received the SG training. This hypothesis, too, was not supported by data analysis.

An ANCOVA was also used to determine the effects of the story grammar training on the self-efficacy beliefs of the LD students who participated in this study. Table 7 shows the means and standard deviations of the pretest and posttest Self-Efficacy scores for each training group. In this table, the means and standard deviations have been divided by 5, the number of Self- Efficacy items (5). These transposed scores represent the mean response choice of the LD students on the Questionnaire. Response choices ranged from very well (score of 80) to not well at all (score of 10).

Table 7

Means and Standard Deviations of Self-Efficacy Pretest and Posttest Mean Response Scores by Group

		Scores			
		Pretest		Posttest	
Group	N	M	SD	M	SD
SG	19	54.84	13.62	57.43	7.37
SG+MF	17	50.94	17.50	59.79	15.20
SG+SR	16	52.75	16.84	66.62	12.55
SG+MF+SR	22	56.18	17.36	62.91	13.95
C	17	55.50	15.43	58.82	17.12
Total	91	54.04	16.15	61.11	13.24

Key: Mean response choices denote: 40 = Somewhat; 50 = Pretty Well/Somewhat; 60 = Pretty Well.

The results of the ANCOVA regarding group differences in LD students' self-efficacy are shown in Table 8.

Table 8

Results of ANCOVA for Group Differences in Posttest Self-Efficacy Mean Response Scores

Variation	SS	df	MS	F	P
Covariates					
Pretest	66322.33	1	66322.33	17.76	.001**
Main Effects					
Group	29720.88	4	7430.22	1.99	.103
Residual	313692.08	84	3734.43		
Total	409735.29	89	4603.77		

** Significant at the .001 level or greater.

The results did not support the hypotheses that related to improvement in self-efficacy beliefs as a result of exposure to any of the treatment conditions. Hypothesis 4 stated that LD students who received any of the treatment conditions (SG, SG+MF, SG+SR, SG+MF+SR) would demonstrate improved self-efficacy beliefs than LD students who had not received any treatment exposure.

Similarly, Hypothesis 5 predicted that self-efficacy beliefs would be greater among LD students who received the basic strategy plus both of the supplemental strategies than among LD students receiving the basic training alone or with one of the added strategies. This hypothesis, too, was not

supported by the statistical analysis.

Hypothesis 6 predicted that LD students' self-efficacy beliefs would be higher when given the basic training plus one of the additional strategies when compared with LD students who received only the SG treatment. Again, this hypothesis is not supported by the data analysis.

The last set of hypotheses concerned the likelihood that the LD students in this study would attribute the story grammar strategy to remembering the main character, setting, problem, events and solution in stories that they read. Table 9 presents the means and standard deviations of the LD students responses' to the Attribution Questionnaire. These means have been transposed by dividing the means and standard deviations by 5, the number of items on the Attribution Questionnaire. This transposed number reflects the 'choices' that were made by the LD students. For example, a mean of 60 indicates that the LD students credit the story grammar strategy 'pretty well' with helping them remember important story details.

Table 9

Transposed Means and Standard Deviations of Attribution Mean Response Scores by Group

Group	N	M	SD
SG	19	58.27	11.74
SG+MF	17	61.41	16.30
SG+SR	16	64.00	14.79
SG+MF+SR	22	61.45	14.25
C	17	57.41	14.68
Total	91	60.47	14.23

Key: Mean Responses: 40 = somewhat; 50 = somewhat/pretty well; 60 = pretty well.

As can be seen from the transposed means for each group, the scores cluster around the "pretty well" choice on the Likert-type Attribution Questionnaire. Despite the close clustering, an ANOVA was computed to determine if differences in attribution strategies between groups was significant. Table 10 shows the ANOVA results by group.

Table 10

Results of ANOVA for Group differences In Attribution Scores By Group

Source	SS	df	MS	F	P
Between	12160.63	4	3040.16	.59	.67
Within	443422.67	86	5156.08		
Total	45583.30	90			

Key: SS = Sum of Squares; MS = Mean Squares

Hypothesis 7 stated that LD students who received any treatment condition would more likely acknowledge that the story grammar strategy helped them to remember story details when reading than LD students who had not received any treatment. This hypothesis was not confirmed by the statistical analysis.

Likewise, Hypothesis 8 predicted that LD students in the SG+MF+SR treatment would more likely respond that the story grammar strategy helped them recall important details of stories when compared with LD students in the SG+MF, SG+SR or SG treatments. This prediction was not supported by the statistical analysis.

Finally, Hypothesis 9 stated that LD students in the SG+MF or SG+SR conditions would more likely attribute the reading strategy to recall of story details than LD students

in the SG treatment. This hypothesis, too, was not supported by the statistical analysis.

Additional Analyses

As was reported, data analysis did not reveal significant differences in improvement among the treatment and control groups in posttest story grammar, self-efficacy and attribution scores. However, further analyses were undertaken to check for significant differences in gain scores in both story grammar and self-efficacy beliefs. Within each treatment and the control condition, t-tests were computed for story grammar and self-efficacy gain scores. Additionally, correlations matrixes were run to assess independent variables that might predict story grammar and self-efficacy gains.

Gain Scores Analyses for Story Grammar

Table 11 shows the means and standard deviations for story grammar pretest, posttest and gain scores in each condition.

Table 11

Means and Standard Deviations for Pre, Post and Gain Story Grammar Scores by Group with T-test Significance

		Scores					
		Pretest		Posttest		Gain	
Group	N	M	SD	M	SD	M	SD
SG	19	12.95	13.43	32.68	18.60	19.74**	14.97
SG+MF	17	13.88	9.81	34.06	10.49	20.18**	11.94
SG+SR	16	28.31	11.67	36.31	8.49	8.00**	14.13
SG+MF+SR	22	23.23	13.02	36.55	7.68	13.32**	11.69
C	17	22.29	14.83	33.00	13.06	10.71**	12.05

Key: **p < .001.

Results indicate that each training group, as well as the control group, improved significantly from pretest to posttest. Thus, while, each training condition was effective in improving the LD student's ability to recall and record significant details from stories they read, the control group also made significant gains on story grammar.

Although the gains were not significant between groups, the SG+MF and SG treatment groups achieved the largest gains. The smallest gain was observed in the SG+SR

treatment group.

Differences in gain scores were next analyzed to determine if any group improved significantly over another. An ANOVA was computed to determine between group effects on story grammar gain scores. Table 12 presents these results.

Table 12

Results of ANOVA for Gain Story Grammar Scores By Group

Source	df	SS	MS	F	P
Between	4	2020.27	505.07	2.00	.02*
Within	86	14498.46	168.59		
Total	90	16581.73			

* Significant at the .05 level or greater.

The results of the ANOVA indicate differences among groups in gain scores. Post hoc analysis (Tukey Honestly Significant Different), however, revealed no significant differences among group differences at the $p < .05$ level. Thus, despite improvement within each group, neither a training condition nor the control group gained significantly over any other group. However, between group differences did approach significance.

Correlation of Variables for Story Grammar

A second set of analyses were performed to determine what, if any, aspects of the LD students' characteristics,

achievement and/or the teacher's judgment could conceivably influence gain scores. Of the variables, age, gender, IQ, standardized reading score, Teacher Estimate, Pre and Post Self-Efficacy scores and Attribution scores were correlated for effectiveness in predicting story grammar gain scores. A correlation matrix was computed to determine the influence of these variables on the gain scores. Table 13 shows the correlation matrix comparing story grammar improvement with these variables.

Table 13

Correlations of Student Variables and Teacher Estimate with Gain Scores in Story Grammar (N= 91)

	Correlations							
	Age	Gend	Read	T-Est	IQ	Preeff	Posteff	Attrib
Gains	.12	.01	.04	.25*	.12	.14	.09	.01

Key: Gend = Gender; Read = Standardized Reading Score; T-Est = Teacher's Estimate; Preeff = Pre Self-Efficacy score; Posteff = Post Self-Efficacy score; Attrib = Attribution score; *p < .01.

Data analysis shows that the Teacher's Estimate was a significant predictor at the p < .01 level. In this study, then, the teacher's estimate of the student's functional

reading skills is correlated with the LD students' ability to improve their reading comprehension after instruction in a reading strategy.

Modified Sample Analyses

Next, the sample was examined to determine the effects of high story grammar pretest scores on group means. It was possible that students who had more story grammar knowledge at pretest might show less improvement at the posttest because there was less room to improve. Conceivably, these smaller gains could confound larger gains made by the students with poorer pretest story grammar scores. Therefore, a criterion was established to determine high scores. This criterion, a score above 38, was established after reviewing the pretest scores and observing that these higher scoring students earned full credit on at least 3 story grammar components and at least partial credit on the **events** scores. (Students generally earned no credit on this component).

The following section details the data analysis for gains when students with high scores have been removed. T-tests were computed to assess gains from pre to post story grammar scores within each group. Table 14 presents the means and standard deviations of the pre, post and gain story grammar scores for lower scoring students.

Table 14

Means and Standard Deviations for Pre, Post and Gain Story Grammar Scores for Students with Lower Scores By Group with t-test Significance (N = 79)

		Scores					
		Pretest		Posttest		Gains	
Group	N	M	SD	M	SD	M	SD
SG	18	11.50	12.20	32.17	18.99	20.67**	14.82
SG+MF	17	13.88	9.81	34.06	10.49	20.10**	11.94
SG+SR	12	23.75	9.56	34.50	9.12	10.75*	15.37
SG+MF+SR	18	19.00	10.24	35.39	8.01	16.39**	10.60
C	14	18.29	13.06	30.21	12.68	11.93**	13.01

*p < .05; **p < .005

The data analysis indicates that there are significant differences in improvement in each group when higher scores are removed. These group gain score results parallel those found when the entire sample were analyzed. However, several group means (SG+SR, SG+MF+SR, C) increased in size.

Next, an ANOVA was computed to determine if the gains between the treatment groups and the control group were significantly different. Table 15 presents these ANOVA results.

Table 15

Results of ANOVA for Gain Scores in Story Grammar By Group For Students with Lower Scores

Source	df	SS	MS	F	P
Between	4	1231.74	307.94	1.79	.14
Within	74	12727.93	171.99		
Total	78	13959.67			

As demonstrated by the results of the ANOVA, no training condition significantly increased the gain scores over the others. Although between group differences were significant when the entire sample was analyzed, this was not the case when higher scores were removed.

For this low-score sample, the largest gains were again seen in the SG+MF and SG treatments. Again, the SG+SR treatment evidenced the smallest gains from pre to post test for story grammar scores. When the high scoring students are removed from the sample, the students receiving both supplemental strategies benefitted more than the entire sample did from exposure to both treatments.

Correlation of Variables for the Modified Sample for Story Grammar

To determine if other variables were predictive of the gain scores, a correlation matrix was computed. The same

variables that were considered for the entire sample were analyzed here for their potential to predict gain scores. These results are shown in Table 16.

Table 16

Results of Correlations for Story Grammar Gains for Students With Lower Scores (N = 78)

	Correlations							
	Age	Gend	Read	T-Est	IQ	Preeff	Posteff	Attrib
Gains	.15	.01	.06	.10	.08	.06	.14	.18

Key: Gend = Gender; Read = Standardized Reading Score; T-Est = Teacher's Estimate; Preeff = Pre Self-Efficacy score; Posteff = Post Self-Efficacy score; Attrib = Attribution score.

Results of the correlation matrix indicate that when high scores are removed from the sample there are no significant predictors of gains in story grammar scores. Note also that with the high scores removed, the Teacher's Estimate is no longer a significant predictor of gains in story grammar scores. It seems, then, that the teacher's predictive powers decrease when estimating the weaker students abilities.

Gain Scores for Self-Efficacy

Gain scores in self-efficacy beliefs were computed for each group and were analyzed for effectiveness from pre to posttest. The means and standard deviations for pre, post and gain scores in self-efficacy beliefs with t-test significance are shown in Table 17. Note that the scores have been transformed by dividing the means and standard deviations by 5 (the number of items in the Self-Efficacy Questionnaire).

Table 17

Mean Response Scores and Standard Deviations for Pre, Post and Gain Scores in Self-Efficacy Beliefs by Group with t-test Significance (N = 90)

		Scores					
		Pretest		Posttest		Gain	
Group	N	M	SD	M	SD	M	SD
SG	19	54.84	6.81	57.43	7.37	2.59	9.93
SG+MF	17	50.94	17.50	59.79	15.20	8.85*	14.59
SG+SR	16	52.75	16.84	66.63	12.56	13.88*	17.63
SG+MF+SR	22	56.18	8.68	62.91	13.95	6.73	16.53
C	17	55.50	15.43	57.50	16.76	2.00	11.24

Key: Mean Responses: 40 = somewhat; 50 = somewhat/pretty well; 60 = pretty well; *$p < .05$.

Results of the t-tests indicate that gain scores in self-efficacy beliefs were significant at the $p <. 05$ level for the SG+MF and SG+SR training conditions. Although not significant, the treatment condition that implemented both additional strategies, showed gains that were higher than the SG and C groups. To determine if between group

differences were significant, an ANOVA was computed. Results of this analysis is shown in Table 18.

Table 18

Results of ANOVA for Gain Scores in Self-Efficacy Beliefs by Group (N = 90)

Source	df	SS	MS	F	P
Between	4	39413.11	9853.28	1.92	.12
Within	85	436980.85	5140.95		
Total	89	476393.96			

Results of the ANOVA did not reveal significant differences between the treatment groups and the control group for gains in self-efficacy beliefs, despite significant gains within the SG+MF and SG+SR treatments.

The next analyses explored the relationship between improvement in self-efficacy beliefs when higher pretest story grammar scores are removed from the sample. The means and standard deviations for pre, post and gain scores for self-efficacy beliefs with t-test significance scores are presented in Table 19.

Table 19

Means and Standard Deviations for Pre, Post and Gain Scores for Self-Efficacy for Students with Lower Scores by Group with t-test Significance (N = 78)

		Scores					
		Pretest		Posttest		Gain	
Group	N	M	SD	M	SD	M	SD
SG	18	54.77	07.00	57.07	7.41	2.29	10.13
SG+MF	17	50.94	17.51	59.79	15.21	8.85*	14.60
SG+SR	12	49.83	16.26	65.50	13.91	15.66*	15.97
SG+MF+SR	18	56.00	9.60	60.00	13.41	4.00	16.86
C	14	52.00	14.12	54.62	15.90	2.62	12.31

*$p < .05$

Results of the t-tests indicate significance for gain scores in self-efficacy beliefs for the SG+MF and SG+SR treatment conditions when higher story grammar scores are removed. These same two groups were significant for within group differences when the between scores for the entire sample was analyzed. In this sample, with the high scoring students removed, the SG+MF+SR training produced smaller gains than for the entire sample.

Differences between treatment groups and the control

groups were analyzed for significance by an ANOVA. Table 20 presents the ANOVA for between group differences in gains in Self-Efficacy beliefs by group for low scores.

Table 20

Results of ANOVA for Gain Scores in Self-Efficacy Beliefs by Group for Students with Lower Scores (N = 78).

Source	df	SS	MS	F	P
Between	4	16913.84	4228.46	.93	.45
Within	74	336277.66	4544.29		
Total	78	353191.49			

Results of the ANOVA did not reveal significant effects between groups when high scores were removed, even though the SG+MF and SG+SR treatment conditions were significant from pre to post test. Therefore, even when high scores were removed, no treatment condition or control group demonstrated higher gain scores in self-efficacy beliefs.

Interrater Reliability

A kappa was computed to assess the correlation between the two rater's scoring for each story grammar item and the total score. Table 21 reports these results for pre and post story grammar scores.

Table 21

Kappa Results of Interrater Reliability for Pre and Post Story Grammar Scores for Each Story Grammar Component (N = 89)

	Pre	Post
Component	Kappa	Kappa
Main Character	.99	.97
Setting	.97	.96
Problem	.96	.94
Events	.89	.93
Solution	.99	.97
Total	.98	.98

The Kappa results indicate good interrater reliability results. It appears that the correlations are high because the students were consistent in either knowing or not knowing the correct response for the story grammar component. Full credit (10 points) or 0 credit were given consistently for the **main character**, **setting**, **problem** and **solution**. This invariable agreement contributed to the high correlations. Only on the **events** responses was there some variability in responses and an opportunity for flexibility in scoring. However, even here, the raters were of one mind

in the scores they assigned to the responses.

Summary

The present study explored the effects of strategy training on LD students' ability to identify more story grammar elements after reading a narrative as compared to LD students who did not receive any treatment. The study also introduced two supplemental strategies (modeling feedback and self-regulation training) to enhance the understanding and use of the story grammar strategy. It was also predicted that the LD students who received one or both of these added strategies would show more strategy improvement when compared with students who were given less training. Data analysis, however, did not support the hypotheses.

This study also hypothesized that LD students in any of the treatment groups would show an increase in self-efficacy beliefs when compared with LD students who were not trained in story grammar. It was further predicted that the LD students who were part of the groups receiving one or both of the additional strategies would display an increase in self-efficacy beliefs than LD students who were given the strategy alone or in combination with only one strategy. Here, too, an analysis of covariance did not show significant differences between groups.

Finally, the effects of the strategy on attribution remarks were explored. It was hypothesized that LD students who received any training would attribute improved memory of

story details to the story grammar strategy than LD students who received no treatment. Similarly, it was hypothesized that LD students who received greater amounts of strategy training would attribute greater success with reading than LD students who were given less training. The results of the ANCOVA did not support these hypotheses.

Although data analysis did not indicate significant differences between treatments, gains from pre to post story grammar were observed and examined. Significant gains in each treatment group and the control were found. However, differences between the groups were significant at $p. < .05$ level but were not significant when post hoc analyses were undertaken. Correlations were computed to determine if any independent variables were predictors of story grammar gain scores. The Teacher's Estimate was found to be a significant independent predictor.

To determine if the scores of students with high pretest scores confounded treatment effects, a sample of students with low scores was formed and their scores were statistically analyzed. Data analysis again supported the trend just described that within-group gains for each treatment and the control were significant, although between-group differences were not. Correlation analyses were computed to determine if any independent variables would predict gains in story grammar. Data analysis revealed no significant predictors. Unlike the results

found when the entire sample was included in the correlation, here, Teacher Estimate was not a predictor of gain scores.

Changes in self-efficacy beliefs were also explored in relation to story grammar gain scores. Results indicated that gains were significant within the SG+MF and SG+SR treatment conditions. However, neither treatment significantly improved self-efficacy beliefs over any other treatment condition or the control. These results were found when both the entire sample and the students with lower scores were analyzed. In general, the LD students rated themselves as relatively confident in their abilities to recall important story details at both the pre and posttest. The training conditions appears to have little impact on the self-confidence of these students regardless of high or low pretest story grammar scores.

CHAPTER V

DISCUSSION

Introduction

This study investigated the effects of teaching a reading strategy, story grammar, to LD students. In addition, it examined the effects of supplementing the reading strategy with modeling feedback and self-regulation training. Five groups were formed to test the hypotheses. One group received only the story grammar strategy. A second and third group received the story grammar strategy with the modeling feedback or the self-regulation training, respectively. A fourth group received the story grammar strategy with both supplemental strategies. The fifth group was a control group.

It was hypothesized that the effects of the treatments would: 1) improve reading comprehension by facilitating the LD students' ability to locate the main character, setting, problem events and solution (major story details) in narratives; 2) increase self-efficacy beliefs as a result of increased reading comprehension; and 3) increase attribution statements to the strategy. With respect to each individual hypothesis, it was further predicted that LD students who received any treatment would demonstrate increased story grammar skill, self-efficacy beliefs and attribution statements than the LD students in the control group. It was hypothesized that the LD students who received the story

grammar strategy with both supplemental strategies would demonstrate increased story grammar skill, self-efficacy beliefs and attribution statements when compared with LD students who received the basic strategy training alone or with only one supplemental strategy. Finally, it was predicted that the LD students who were trained with the story grammar strategy and one supplemental strategy would demonstrate greater story grammar ability, self-efficacy beliefs and attribution statements than LD students who received only the story grammar strategy. The data analyses did not support any of the hypotheses.

The focus of this chapter, then, is threefold. First, it will interpret the findings of the hypotheses and offer suppositions for the outcomes. In the second section of this chapter, the aim is on reviewing and interpreting the results of the additional findings, namely gain scores and ceiling effects. In the final section of this chapter, the strengths and weaknesses of the present study are examined. Implications for the usefulness of this study are explored.

Interpretations of the Hypotheses

Story Grammar Hypotheses

The first set of hypotheses examined the effects of the various training conditions on story grammar scores. Recall that it was hypothesized that LD students who were trained in story grammar would demonstrate significantly improved story grammar scores when compared with LD students who did

not receive strategy training. Further, it was predicted that those LD students whose strategy instruction included one or both of the supplemental strategies would have an advantage in achieving higher reading scores than LD students whose training was less extensive. Data analysis, however, did not support any of the hypotheses. These findings are now considered with reference to the complexity of the strategy that was presented, the introduction of supplemental strategies taught concomitantly with story grammar, the very short period of time in which instruction was proffered and the writing skills of the LD students in the sample.

Strategy complexity.

Simmonds (1990) found that LD students quickly learned an 'efficient questioning' technique when given appropriate instruction. In this study, the observation of a model using the strategy was sufficient to teach the strategy and a similar group of LD students did not benefit significantly when a 'verbalization' supplement (specific and consistent instruction) was added to the training. The author suggested that the simplicity of the strategy and the consistent use of the strategy were sufficient to insure the learning of a strategy (Simmonds, 1990). The findings of the present study parallel the results of the Simmonds study when simplicity and consistency were considered.

As was found after additional data analyses were

computed, each treatment group plus the control group, demonstrated significant gains from pre to post testing. However, no treatment was more effective than another in improving story grammar scores. The basic story grammar training (SG) and the SG+MF condition produced the largest gains from pre to post test. These two treatment conditions focused solely on the strategy instruction and were perhaps the most simple and direct of the treatments. This finding parallels Simmonds' (1990) conclusions that LD students can successfully learn a strategy if instruction is direct and simple. Unfortunately, the control group also improved. However, the gains for this group were the smallest, and as will be discussed later, may have occurred as a result of intensive training for the standardized Citywide Reading Test, due to familiarity with the exercise at post testing, or of statistical regression toward the mean.

The training lessons consistently implemented and reinforced the story grammar strategy and very likely contributed to the gains the LD students exhibited from pre to posttest. However, story grammar is a very involved strategy and its complexity may have weakened the benefits of the reinforcement, especially in teaching the five story grammar components at once. Observations by this investigator during the training sessions indicated that the students learned the **main character** and **setting** components easily. However, each group needed considerable prodding

during the group practice to develop concepts for the **problem**, **events** and **solution**, indicating, perhaps, that more instruction was needed to develop the constructs. Greater gains may have been realized if the story grammar components been taught over several lessons, perhaps five to six, where one component was emphasized and reinforced over the others. Reinforcement of the constructs would also have necessitated at least five more sessions if the students were to demonstrate a more integrated understanding of these components. This longer training session might also have effected an increase in self-efficacy beliefs and attribution statements as changes in behavior occur when an intervention is implemented over a period of time

Also, in three treatment conditions, supplemental strategies were introduced and taught along with the strategy instruction. Very conceivably, this inundation of information at one time may have overwhelmed the students and confounded the expected benefits of the training. For example, just after the story grammar strategy was introduced, the students in two treatment groups (SG+SR, SG+MF+SR) were expected to learn to use two visual aids, a self-regulation checklist and a bar graph, to predict and record their progress. Conceivably, greater treatment effects may have been hampered by the fact that these two groups of LD students were overwhelmed with strategy instructions and perhaps confused and/or distracted by the

visual aids. Perhaps, this supplemental strategy (SR) might have been more effective if it had been presented and reinforced in an unrelated activity and then transferred to the story grammar strategy.

Of interest here is the observation that the SG and SG+MF groups showed the greatest gains in posttest scores, albeit non-significant. For in the SG and SG+MF treatments, the training focused solely on the reading strategy. Additionally, the supplemental training, the modeling component, reinforced the story grammar through a concentrated verbal emphasis (or dramatization) on the part of the Instructor to recite the story grammar elements, to self-question and to identify the story grammar elements. For the learners, this exercise in modeling feedback concentrated solely on story grammar and involved a strong auditory component. A key factor, then, in increasing story grammar scores for LD students may be related to instruction that is introduced and reinforced through auditory processes.

The training groups that included self-regulatory training (SG+SR, SG+MF+SR) may have been less effective in increasing gain scores because a second, unrelated strategy (self-regulation training) was taught along with the story grammar strategy. For these LD students, the introduction of the two strategies during the same lesson may have resulted in diminished effects because too much information

was offered at once. Additionally, the self-regulation training involved the students' use of visual aids (a self-regulation checklist and goal setting chart). These visual cues may have distracted the students further as they put forth effort: 1) to read; 2) to mentally recall the story grammar strategy and to note the major story details as they read; and 3) to check off their progress on the self-regulation checklist. In essence, these students were expected to master a second strategy in the same time frame as the SG and SG+MF learned one strategy. Consequently, their poorer scores may reflect both this inundation of information and an inadequate time frame in which to master either strategy. It is unclear how effective the two strategies would have been if the self-regulation training had been taught first in another context.

Although the SG+MF+SR enjoyed the benefit of the intensive modeling of story grammar, this influence appears to have been weakened when the self-regulation training was introduced along with the story grammar strategy. It seems as though the LD students in this study made the greatest gains in story grammar improvement when the lessons focused exclusively on the strategy. Again, the effects of the self-regulation training remain ambiguous because the strategy was not taught separately and applied to this context.

Training time and group size.

The relatively brief training period coupled with the size of the groups may have contributed to the lack of significance between treatment effects in this study. In a study designed by Newby, Caldwell and Recht (1989), elementary age students with reading difficulties showed significant improvement in reading comprehension after receiving 7 weekly individual tutoring sessions that lasted 70 minutes each. In a second research study (Gurney et. al., 1990), 7 High School aged LD students were taught to use the story grammar structure in a basic Literature course in groups of 2 over a 9 week period (Gurney et al., 1990). Both studies were successful, but the conditions of these studies vary from the present research in group size and duration of treatment. In the current study, only three training sessions were conducted, which, in comparison to the Newby, Caldwell and Recht study (1989) seems an inadequate time frame in which to introduce a new strategy and also provide appropriate practice time. As has been previously suggested, a longer training period might have effected different results. Additionally, the training was given to classes where registers ranged from 8 to 13 students. In each of the studies cited above, the training was given to no more than 2 students. Perhaps smaller groups would have provided opportunities for more individualized attention during the training. This greater

focus on each student might have increased the students' concentration and perhaps resulted in treatment effects.

It was also observed that the posttest scores of the control group showed a mild improvement over pretest scores. This may have been influenced by the intense preparation for the Citywide Reading Test that was apparent in each class during the training phases. This earnest rehearsal may have assisted the control, as well as the other groups, in demonstrating improvement. While the 'story grammar' strategy was not taught in any of the control classes, emphasis in daily reading instruction included parts of this strategy, often under another title, such as 'plot' for events and 'ending' for solution. Additionally, practice may have improved the scores, especially for the control, because the posttest format was identical to the pretest.

One last explanation for the gains shown by the control group addresses the 'regression effect'. Here, the students would be expected to show gains as a natural progression toward the mean. While the environmental conditions (practice for the standardized reading test) may have caused the noted gains, the regression toward the mean is also a sound explanation for the improvements.

Writing skills.

It was also conjectured that the failure to find significant differences between treatment groups in improving story grammar skills was affected by the weak

writing skills of the LD students. First, there is support in the literature that LD students can learn story grammar (Griffith, Ripich & Dastoli, 1986; Newby, Caldwell & Recht, 1989; Pressley et al., 1989) and that its use leads to improved reading comprehension. However, improvement in story grammar skill has frequently been measured by verbal recall of the story grammar elements (Griffith, Ripich & Dastoli, 1986; Gurney et. al., 1990; Newby, Caldwell & Recht, 1989; Pressley et al., 1989). In the current study, knowledge in the story grammar strategy was not measured from verbal responses but from written responses. Conceivably, the writing skills of this group of LD students were weak and perhaps obscured improvement due to weak writing ability rather than weak story grammar knowledge.

Laughton and Morris (1989) have reported that only 50% of LD students are able to write a simple story that follows a story grammar schema by age eleven whereas their non-learning disabled peers can accomplish this task by the same age. Considering that the mean age of the LD students in the current research was 11 years 1 month, this sample of LD students very likely exhibited weak writing skills. Further, LD students usually write partial stories or unrelated idiosyncratic responses (Laughton & Morris, 1989).

In this study, two story grammar components (main character and setting) required either one word or small phrase answers. By the post test, most of the LD students

in this study earned full credit for these two components. The problem, events and solution components, however, required first, reflection and then skill, in transforming ideas into written language. Conceivably, some students' written responses may have reflected this poor ability rather than poor reading skills and may have masked improvements in story grammar instruction. An outcome measure that was more sensitive to detecting the student's grasp of the story grammar components, other than through written expression, might have been more effective in yielding significant results. For example, taped verbal responses or the dictation of their answers might have yielded higher posttest scores and controlled for the added effects of weak writing skills.

Interpretation of the Self-Efficacy Hypotheses

This study also examined the effects of the various treatments on the self-efficacy beliefs of the LD students. Again, it was hypothesized that LD students who were given any training condition would demonstrate increased self-efficacy beliefs when compared with LD students who received no training. Additionally, it was predicted that the LD students who received the more extensive training would show greater self-efficacy than LD students who received less training. Statistical analyses did not support these hypotheses. Inflated pre self-efficacy scores and inadequate feedback regarding the students' progress are

discussed as possible deterrents to main effects between groups.

Inflated pre self-efficacy scores.

Recall that the students rated their confidence in their ability to find story grammar elements by way of a Likert-type scale. Response choices ranged from 'very well' to 'not very well at all'. By transposing the pretest group means, these students rated their self-efficacy beliefs on the confident end. Although responses fell between 'somewhat' (the mid response) and 'pretty well' (the second highest rating), they were closer to 'pretty well'. In actuality, the students started out with fairly strong confidence in their ability to recall the major details of a story. In light of their weak pre story grammar scores, these LD students appear to have overrated their competence in locating story grammar elements, especially the problem, events and solution.

At the posttest, the total group mean for self-efficacy beliefs had shifted to the 'pretty well level'. At this time, too, the LD students' showed significantly improved within-group story grammar scores. The post self-efficacy scores, then, are more prudent. However, in inspecting the 'events' responses, these LD students again overrated their abilities on this component. In reality, nearly all of the students needed to master this component and yet they responded that they were able to identify this component

with relative ease. The lack of significant improvement in self-efficacy beliefs between treatment groups and the control group may lie in inflated pre self-efficacy scores, which is not uncommon among LD students.

The literature has shown that LD students often inflate their estimation of what they can accomplish (Alvarez & Adelman, 1986; Clever, Bear & Juvonen, 1992; Dunlap & Dunlap, 1989; Gresham, Schwartz & MacArthur, 1993). This exaggerated self-efficacy may provide protection against perceptions of low ability or may shield the LD students from interventions that may be designed to help them (i.e., extra tutoring or a buddy system) (Alvarez & Adelman, 1986). Except for a few students in one class, the LD students in this study did not know the instructor and they may have wanted to make a good impression. Or, possibly, they did not understand what was expected of them and opted for the more positive responses.

Inadequate feedback.

Another explanation that may account for the lack of significant differences in post self-efficacy beliefs between-groups concerns feedback that was given to the students during the training sessions regarding their progress. Since the overall feedback to the LD students in this study was general in nature, the students may not have been provided with a clear criterion upon which they could adequately judge progress or lack of it. For example, all

lessons contained global references to areas that the students improved on as well as those that required greater effort. Although generally positive remarks were offered regarding progress, there were also repeated calls to "try harder". Therefore, it is conceivable that the students were unenlightened regarding their progress. Consequently, their post training ratings of their ability to find story grammar details may reflect this naivete.

It is interesting to note here, however, that when the gain scores of self-efficacy beliefs were analyzed, the SG+MF and SG+SR treatment groups showed significant improvement from pre to post test. In each of these treatment conditions, more explicit feedback was provided. Recall that in the SG+MF groups, the students reviewed their written responses after corrections were made. In the SG+SR group, the students predicted their skill and were apprised of their projections in writing. In either treatment condition, reviewing marked predictions or written responses, rather than listening to global progress reports, may have reinforced their perceptions that they could select and execute activities that will result in a desired outcome (Zimmerman, 1989).

Of importance here is 'performance accomplishment', one of four sources of information identified by Bandura (Gresham, Evans & Elliot, 1988, p. 231-232) where repeated successes in any situations intensify self-efficacy and

repeated failures deepen low self-efficacy. In providing more explicit feedback regarding their progress, the LD students in these two treatment conditions significantly increased their self-efficacy beliefs from pre to post testing. There appears to be a positive effect when students are explicitly, rather than globally, apprised of their progress. Although these supplemental strategies were effective in increasing self-efficacy beliefs from pre to post testing, the coupling of the two supplemental strategies did not produce significant results. As has been stated before, LD students seem to fare best when their instruction in less complex.

Interpretation of the Attribution Hypotheses

The attribution hypotheses concerned the student's ability to impute improved skill in identifying story grammar elements to the story grammar strategy. It was again hypothesized that LD students in any of the treatment conditions would be more likely to attribute increased skill in locating the major details of a narrative to story grammar than LD students who received no treatment. Similarly, LD students who received more extensive training were expected to make more attribution statements to the strategy than LD students who received less training. As before, the data analysis did not find differences among the treatment groups and the control group.

As was the case with the ratings for self-efficacy

beliefs, the students completed a Likert-type questionnaire to account for strategy attribution statements. After the mean scores were transposed, the total mean score was 60, which represents a choice of 'pretty well'. This overall score suggests that the students rather confidently attributed their reading skill to the strategy.

Each of the strategy lessons repeatedly emphasized a connection between the story grammar strategy and improved reading. Apparently, this was successful in helping the students associate the strategy to reading improvement. However, none of the treatment conditions resulted in increased attribution statements to the strategy over the others. An inspection of the data shows that the treatment groups with the supplemental strategies demonstrated higher scores (SG+SR: 64.00; SG+MF+SR = 61.45; SG+MF: 61.41) in making strategy statements. The SG and C conditions produced lower scores. In this study, the more extensive the training, the more likely the students were to make strategy attribution statements. This is in contrast to the story grammar scores where higher scores occurred where the training that focused primarily on the story grammar strategy.

Observation of the data suggests that training the LD students to self-regulate and self-monitor (SR) along with the story grammar strategy slightly elevated the group's perception that the story grammar strategy effectively

helped them improve their reading performance. Recall that this group learned to set goals visually and later reviewed their predictions. This activity may have helped these students distinguish their strengths and weaknesses through a self-regulation checklist which provided a visual reminder for recalling story details while also serving as a reminder of where to focus effort. Perhaps these visual aids reinforced the students' efforts and facilitated an association of training to reading improvement.

Additional Findings

Gain Scores

Although between-group data analysis did not support the proposed hypotheses, a closer inspection of the pre and post story grammar scores indicated changes in each treatment condition and the control group as well. Indeed, significant differences from pre to post testing (gain scores) for story grammar were found within each treatment condition. Additionally, between-group effects for the gain scores were found to be significant at $p < .05$ level. Post hoc analyses, however, did not show significant differences in gain scores between any groups.

One other comment needs to be made regarding the story grammar gain scores. Although significant within-group improvement was found, the post mean scores for each group ranged from 32.68 to 36.55. These scores represent a mastery of 3 of the 5 story grammar components (at 10 points

for each correct component), indicating that there is still room for improvement. A longer training period where the more difficult components were given more emphasis, greater reinforcement and perhaps smaller groups might have brought about gain scores that indicated mastery of 5 components by a larger number of the sample.

In each training condition, the common denominator was the SG treatment, suggesting at least that this training is effective in improving LD students' capacity to recall major details in stories they read. This finding corresponds with the literature reporting that LD students are capable of learning story grammar and of subsequently improving reading skills (Griffith, Ripich & Dastoli, 1986; Gurney et. al., 1990; Newby, Caldwell & Recht, 1989; Pressley et al., 1989).

Additionally, the differences in gain scores, albeit not significant, among the groups may be related to the training procedures. The largest mean gain scores were observed in the SG+MF and the SG groups (20.18 and 19.74, respectively). The SG+MF training condition essentially reinforced the SG strategy through intensive language instruction. In many ways, this method of instruction is more representative of early childhood rather than late elementary age instruction. At that earlier stage, there is a great emphasis on verbal interaction between the teacher and the students during lessons. As students mature, the teacher is less dominant and the student begins to exert

more control over his/her learning. For these LD students, the importance of language and the stronger instructor presence appear to have effected stronger results.

The remaining treatment groups, SG+SR and SG+MF+SR, demonstrated smaller mean gains (8.00 and 13.32, respectively). It appears that the SR treatment has the least effect on improving the LD students' skill in detecting main details in stories. Recall that this training required the students to self-monitor by checking off steps that were completed as they read and by noting their progress from lesson to lesson. Although it was suggested earlier that the self-monitoring may have distracted the students and decreased their attention to the strategy training, it is as likely that these LD students have not yet developed the internal maturation that facilitates self-regulation. Rather, as was demonstrated in the higher scores observed in the SG+MF training, the LD students in this sample appear to be academically more responsive to lessons that have a stronger teacher/language involvement. Achievement for these students, then, may involve more emphasis on teacher dominated lessons. Development of self-regulating behaviors for these students may involve training and practice opportunities in a separate context initially. Once the self-regulating behaviors have been instilled and transferred to the story grammar instruction, the impact of the training on the story

grammar scores can be understood more clearly.

A correlation matrix was calculated to determine independent variables that could predict gain scores in story grammar improvement. Although the teacher's estimate of the LD students' reading ability is a significant predictor of gains in story grammar scores when the entire sample is analyzed, this result was not born out when the high scoring students were removed from the sample. With students who represent the middle and lower end of a class, the teacher's ability to estimate the students' level of reading instruction diminishes. This was disappointing since it is the teacher who interacts with the students over the school day in a variety of lessons and would seem to be a likely resource in assessing his/her students' functional academic levels.

Additionally, it had been hoped that other independent variables, such as IQ or Reading score, would have been predictors of story grammar scores. For this sample, and for the sample that omitted the high scoring students, none of the other variables provided any significant understanding of this population in regard to story grammar.

Ceiling Effects

An additional inquiry focused on the effects of the LD students who achieved high story grammar scores at the pre test. It was speculated that students with high pretest scores might have compromised the overall treatment effects

since these students would have a smaller range in which to improve.

After removing the students with high scores, significant differences in gains in story grammar were found within each treatment as well as the control. However, no significant differences between treatment conditions were observed. Removing the high scoring students did not distinguish treatment differences.

In general, statistically analyzing the data that was obtained after removing the high scores paralleled the results that were shown for gain scores for the entire sample. Again, the SG and SG+MF treatments generated the largest gain scores, albeit nonsignificant. The mean gain scores for each group increased mildly, if at all. The high scoring students, then, did not necessarily detract from the effects of the story grammar strategy within each group.

It would be interesting to look at ceiling effects with another possible interpretation which emanates from an inspection of the points earned for each story grammar component. This inspection actually indicates that a large number of the LD students in the sample obtained mastery (full credit) on the easier items, main character and setting. Conceivably, then, the tallying of the points earned for each story grammar element and the determination of a criterion score above which high scoring students were removed from the sample, may in effect, have obscured

'ceiling effects' for individual components.

Reviewing each of the 5 story grammar scores separately might have identified those items that were mastered. Subjecting such information to data analysis might have weakened the significant within-group gains that have been noted. However, such information might have given a more realistic picture of where the gains were actually made and where reinforcement was still needed.

Additionally, a review of the pre test story grammar scores might also have indicated those story grammar items that were more easily grasped. This information would have been invaluable in perhaps altering the instruction plan. More emphasis then might have been given to the more difficult story grammar items with less instruction given to the easier items. In this way, mastery of more story grammar items might have been observed post treatment.

Gain scores in self-efficacy beliefs were also analyzed for within and between group differences when the high scoring students were removed from the sample. The results again parallel the data observed for the entire sample. Significant within-group gain scores were observed in the SG+MR and SG+SR training conditions. Adding one supplemental strategy to story grammar appears effective in increasing the LD students' beliefs that he/she can find the major details of a narrative. In both the SG+MF and SG+SR training groups, the students were given direct feedback on

their progress. This may have helped the students recognize their skill ability and rate it more positively. Here the SG strategy by itself or in combination with both supplemental strategies did not produce even within group effects. The SG training group was not given direct feedback regarding progress, The SG+MF+SR may have been given too much feedback to realistically appraise. Very likely, these LD students can absorb just so much information at once before it becomes meaningless. Too little information seems as equally ineffective as overwhelming the students with too much feedback.

Although the between-group story grammar and self-efficacy gains were not significant, some trends emerged. Large gains in story grammar and self-efficacy beliefs were noted in three treatment conditions. The SG+MF treatment yielded large gain scores in both story grammar and self-efficacy. Based on this observation, the SG+MF training appears to have had the most effect of all treatments. Essentially, this supplemental training displayed three unique features. First, it reinforced the basic SG strategy through modeling the strategy just after the students had practice the strategy as a group and by themselves. Secondly, the modeling utilized an intense language-based instructional approach. Finally, it provided the students with written feedback regarding their efforts. These features emerge as beneficial in increasing strategy

development and the LD students' confidence in their ability to use a strategy to improve reading skill.

Additionally, it appears that combining both supplemental strategies did little to increase strategy skill and self-efficacy beliefs. As has been stated previously, all strategies were taught simultaneously. It is not clear how effective these supplemental strategies would have been if they had been taught prior to the strategy and then implemented.

General Observations

Strengths and Limitations

There were a number of factors that might have contributed to results of this study. On the positive side, all students were very cooperative and willingly participated in each lesson. Additionally, they rose to the occasion and appeared to expend sufficient energy and effort.

Despite the motivation and cooperation of the students and teachers, there were weaknesses in the design that may have contributed to the lack of statistical significance. First, there were only three lessons presented to introduce and review a complex reading strategy that in retrospect appeared to require a longer instruction period and more practice. This is especially true in that LD participated in this investigation. These students, by the very nature of their disability, require more reinforcement rather than

less. The story grammar strategy comprises five elements that vary in difficulty. All components were introduced at the first lesson and thus there was less opportunity to focus on the more complex components.

In addition to the short time allotted to learn the reading strategy in this study, 55 students were presented with an additional strategy, (the modeling feedback and/or self-regulation training), meant to enhance the story grammar instruction during the same lessons. While the SG+MF training appears to have been valuable for producing within group effects, the self-regulation strategy appears to have been considerably less effective. This may have occurred because the students in these groups (SG+SR, SG+MF+SR) were actually required to concentrate on an excessive amount of information at once and may have been unable to process it all at once. Perhaps, the effects of the strategy were compromised by this condition. It is possible that the self-regulatory supplemental strategy might have been more productive if it had been introduced and practiced separate from the strategy instruction.

One last factor needs consideration. The writing skills of this sample appeared very weak. Therefore, measuring improvement might have demonstrated increased results if the outcome measure had taken account of the weak writing skills of this group of students.

Implications

This study demonstrated the merits of teaching LD students a strategy to improve reading comprehension. All students were beginning to master the less complicated components of story grammar and with additional time for instruction and practice opportunities might have mastered all five components. The supplemental training that appeared to facilitate the strategy instruction most was modeling feedback. This provided the LD students with an intensive language based instruction, similar to that used in early childhood education, and strong instructor involvement.

The training in the self-regulation strategy seemed less effective in improving story grammar scores. This may have resulted from the inundation of information that the students were given in each sitting. Also, these students appeared to exhibit less developmental readiness for monitoring their work habits. Instruction for this type of student may require intensive teacher directed/modeling instruction until the concept is well understood. Opportunities for practice that involves a movement toward directed self-monitoring behaviors would follow. With reference to the supplemental strategies used in this study, only one should be presented in a lesson when the population is learning disabled.

For school psychologists, the misconceptions that LD

students frequently entertain regarding their self-efficacy beliefs is an area to be explored with these students. Additionally, it is important that teachers recognize that LD students often inflate their self-efficacy beliefs to avoid embarrassment, exposure and/or the addition of unwanted interventions. With these self-views, these students may refrain from asking questions to clarify misunderstood concepts and may also impede their own academic progress by reducing their participation in group lessons. It is important that school psychologists consult with teachers and share this information. Additionally, it is important that school psychologists help LD students appraise their assessments of their ability to complete various tasks more realistically. In so doing, these students can learn to develop achievable goals and enjoy the satisfaction that can be experienced when goals are reached. Further, realizing attainable goals may then motivate these students to take additional risks and expand their fund of knowledge, as well as increase their strategy skill.

Finally, the results of this study suggest that LD students need to recognize the importance and usefulness of strategies. School psychologists can help LD students grasp this concept through individual interventions or class lessons. It is also essential that the parents and teachers of these LD students also understand the importance of guiding these students to develop various strategies and to

know when and where to use the strategies. Here, the school psychologist can serve as the consultant who imparts this valuable information.

Summary

A story grammar strategy was taught to LD students to improve their skill at locating the main character, setting, problem, events and solution in stories as they read. This strategy instruction was also predicted to increase self-efficacy beliefs and strategy attributions. Modeling feedback and self-regulation training strategies supplemented the basic reading strategy. These were added to assess their effects in improving story grammar skill, self-efficacy and strategy attributions. Data analysis found no significant differences between groups.

Significant results were found, though, for gains in story grammar within each treatment condition as well as the control group. However, improvement scores were not significant between groups. Ceiling effects for story grammar were analyzed by removing the high scores from the sample. Again, significant within group differences were found but no significant between-group differences were found. For gain scores, the SG and SG+MF treatments yielded the largest increases in both the entire sample and in the sample of lower scoring students, although significance for these observations were not found.

Data analysis did not show significant differences in

self-efficacy beliefs between the treatment and control conditions after training. However, when within-group gain scores for the entire sample and for the sample of lower scoring students, only the SG+MF and SG+SR groups improved significantly. The failure to achieve significant main effects may be related to inflated pretest self-efficacy beliefs. Inflated self-efficacy beliefs are common with LD students and are usually explained as occurring because the students may wish to avoid exposure to embarrassment or to avoid interventions designed to improve weaknesses. The post training self-efficacy belief scores were mildly improved. These later assessments were perhaps a more realistic assessment of their abilities.

Attribution scores were relatively high for these students. The transposed means for each group indicated that these students attributed their ability to locate the various story grammar components in a narrative to the story grammar strategy quite confidently. It is conceivable that this occurred because the treatment lessons reinforced this idea.

From the additional analyses, it is clear that each treatment group, as well as the control group, learned the story grammar strategy. It also appears that the story grammar and modeling feedback focused the students auditorially on the strategy and may have contributed to the significantly higher gains from pre to post testing.the

visual aids (self-regulation checklist and self-regulation goal chart) introduced in the SG+SR and SG+MF+SR groups may have detracted from the strategy instruction by overwhelming the students with too much detail. Conceivably, too, these LD students may not yet have developed the maturation needed to self-regulate their reading strategies and may require greater practice opportunities before they can use it expeditiously. From these results, then, it seems that the most effective way to teach LD students a strategy is to concentrate solely on the strategy through intensive language use and to eliminate any visual aids that compete for the students' concentration and attention.

Appendix A

Script for Story Grammar/Metacognition

Lesson 1

1. Good morning. I am very happy to see you again. As I told you last week, I will come to your class three times to teach you about a reading strategy called story grammar. Before we begin, I'd like to tell you that my name is Ms. Rooney and I would like you to tell me your names again just as you did last week. (Have each child identify him/herself).

2. Today we will learn about a strategy that will help us be better readers. (Show the word "strategy" on an 8" x 14.5" oaktag card). A strategy is a tool. Hmmmm. Now just what is a tool? Who can name a tool? (As children suggest tools, ask them to identify the tool's use). If none are given, suggest:

scissors (help us cut easier)

hammer (helps us pound in nails)

electric can opener (makes can opening easy)

stapler (keeps papers together).

3. All of the tools that you have suggested help us in some way. I will teach you about a strategy today that is like a tool because it will make reading easier. The strategy is called story grammar. (Write on the board: Story grammar is a reading strategy. Have one or two volunteers read the sentence).

4. Story grammar helps us to remember a story that we read and also helps us to understand what the story is about as we are reading it. Ask: Who can tell us the name of the strategy that we are learning about today? How will it help us to know this strategy? (Have more than one student respond i.e., ask: who heard what he(she) just said? Can you repeat what he/she just said?).

5. (Display a chart with the story grammar elements visible. Point to Main Character). Say: The main character has the most important part in the story. The main character is who the story is about. For example, the main character can be a person, like a boy or a girl. It could also be an animal or something that is made up. The main character is the "star" of the story. The lion is the main character in the movie "The Lion King". Who can think of other main characters in books or stories you have read or that you have seen in movies or on tv? (Have a brief discussion of main characters that could include "Power Ranger", "Barney", "Corduroy", "Clifford" or "Curious George".

6. (Point to Setting). Say: The setting is important in the story because it helps us to know where the action takes place. The setting also helps us to remember when the story takes place.

If you saw "The Lion King", where does the story take place? Who remembers "Little Red Riding Hood"? Where does

that story take place? What other settings could you suggest for a story? (Possible suggestions are: a playground, at home, in school, at a basketball game, in the woods).

7. (Cover the story grammar chart and ask children to identify the story grammar elements that have been presented so far).

8. (Point to Problem). Say: This is the third story grammar part. Every story has a problem that involves the main character. It is very important to know what the main character has to do or wants to do in the story. Here is an example of a problem: Bobby went to the store for his mother to buy some milk, bread and cookies. Just as he was about to pay for his groceries, he realized that he did not have money. What is Bobby's problem? Or, here is another problem: Maria came to school without her umbrella and now that it time to go home, it is pouring outside. What is Maria's problem? Can you think of other any problems? Elicit their ideas.

9. Now you know three story grammar parts. Who can tell us all three? What is story grammar? (A strategy or tool). How does this strategy help us? (Elicit: To improve our reading by helping us remember what we are reading as we read).

10. Another story part is called events. (Point to Events). The events are the actions of the character during

the story. I'll give you an example. I want to go back to one of the "problems" I just told you about. Do you remember Bobby? He found out that he did not have any money to pay for the groceries when he went to the cashier. Here are some events that might have led up to the problem. When Bobby's mother asked him to go to the store, he was watching his favorite tv show. His mother gave him money which he put it in his sweater pocket. As he was leaving, his mother told him to wear his heavy jacket. He took off his sweater and wore the jacket. He ran home and was very worried that he had lost the money and that his mother would be upset. When he went home he saw the sweater. (Stop just short of a solution).

11. Let's try to think of some events that could have happened to prevent Maria from being prepared with her umbrella. Here is an idea to help you: Maria put the umbrella on the seat on the bus. Then she sat and talked with her friend during the bus ride to school. When the bus arrived at school, she stood up and followed her friend off the bus. (Perhaps, it was sunny when she left home and did not need her umbrella).

12. The last part of story grammar is the solution (point to Solution) on the chart. The solution is how the story ends. The solution for Bobby was finding his money in his sweater pocket. Let's think of a solution for Maria. (Elicit that she found her umbrella on the bus; or, her

grandmother met her at the bus with an umbrella).

13. Let's review the five story grammar parts. Read them aloud as I point. (Point to each successively, beginning with main character.) Close the chart. Call on a student to name as many story grammar parts as they can remember. Call on other students as well and compliment them for their responses. Continue: What is the name of the strategy that we learned today? How will it help you?

14. Now we will read a story together. While we are reading the story, try to find the story grammar parts. Show students the following words on a chart page. These are words in the story that you may not know. I will help you to read them if you do not know the words. Have volunteers read the words individually (which are listed one under the other on the chart: **Ace trash masked markings raided growling porch flashlight.**

15. Distribute the narratives (Narrative 1, Appendix B). As the narratives are being distributed remind the students to think about the story grammar parts. Have a few volunteers recite the story grammar parts. Invite volunteers to read each paragraph. After each reading, ask, have you found the main character yet? Repeat with the other story grammar parts, for example, are you thinking about the setting? or do you think you know what the problem is yet?.

16. After the story has been read, distribute the

Story Grammar Worksheet (Appendix C). Display a chart paper with a replica of the worksheet. Say, look at the Story Grammar worksheet. You will see the story grammar parts on the left side. Next to each part is space to write your answer. We will do this one together. Ask a student to read **Main Character.** Who is the main character in this story? Elicit some discussions on the other characters in the story and discuss why Bob is the main character. At this point, the Instructor writes **Bob** next to Main character and the students do the same on their worksheet.

17. Repeat for:

Setting: Bob's back porch

Problem: Mr. Bell thought that Ace was knocking trash all over his sidewalk.

Events: Bob and Ace were in the house.

Mr. Bell was very angry. He thought Ace was knocking over his trash at night.

He wanted Bob to tie Ace up at night.

There was a loud noise.

Solution: It was a raccoon that was knocking over Mr. Bell's trash.

18. You have worked very hard. Now I would like you to try one all by yourself. Display a chart with the following words listed one underneath each another: **worried soccer Sandra powerfully straight.** First, I will help you read some words (ask for volunteers to read the words).

Distribute the narratives (Narrative 2, Appendix D) with a story grammar worksheet (Appendix C). Remind the students to remember the story grammar parts as they read the story. Walk around the room and encourage the students to do their very best. Collect the papers as the students finish. Before concluding, say, One last time today, what is the strategy we learned today? How will this strategy help us?

Appendix B

Narrative 1

Bob was reading late one night when he heard someone banging on the door. His dog, Ace, was alert at once. The dog ran to the door, barking and growling.

"Down, Ace!" Bob said as he grabbed the dog's collar. Slowly, he pulled open the door.

"Look here, Bob, I want you to keep that dog of yours tied up", said an angry voice. It was Mr. Bell from next door. "This is the third night that your dog has knocked over my trash can. There's trash all over my back porch and sidewalk!".

Bob looked at Mr Bell and said, "Now wait a minute, Mr. Bell. It couldn't have been Ace!".

Mr. Bell grew red in the face. "I know it was your dog. I saw his masked face before he ran off"!

Bob looked at the black markings around Ace's eyes and nose. Ace wagged his bushy tail.

Bob thought a second. "Wait a minute!", he said. "When was your trash can raided"?

"About 9:00", snapped Mr. Bell. "what difference does that make"?

Bob grinned. "Well, Ace was inside by 8:30 tonight".

Suddenly there was a crash outside. Someone or something had bumped the trash cans on Bob's porch.

Bob grabbed a flashlight and ran outside. Mr. Bell was

right behind him. Ace barked wildly.

"Well there's your thief, Mr. Bell", said Bob. He just laughed. There, in the beam of the flashlight, was the face of a huge raccoon.

Adapted from: Stanchfield, J. M. & Gruning, T. G. (1986). Currents, Boston: Houghton Mifflin Company. p. 5.

Appendix C

Story Grammar Worksheet

Main Characters: _____

Setting: _____

_____

Problem: _____

_____

_____

Events: _____

_____

_____

_____

_____

Solution: _____

_____

_____

Adapted from Newby, Caldwell and Recht (1989).

Appendix D

Narrative 2

Name: _____

Sandra and her younger brother, Mark, were playing baseball in their yard. Sandra wanted Mark to be able to hit the ball, so she threw an easy pitch.

Mark could see the pitch was easy, so he swung as hard as he could. He hit the ball powerfully, and it flew out of the yard.

"Oh, no!" said Sandra. The ball was heading straight toward the window of the house next door. Sandra was worried that the ball would break the window.

It was a windy day, and the wind made the ball slow down. It fell in the bushes a few feet from the window. When she saw that there was nothing broken, Sandra stopped worrying.

"I think maybe we should play soccer instead," she said to Mark, "so we don't break any windows".

Adapted from: Stanchfield, J. M., & Gunning, T. G. (1986).

Appendix E

Script for Story Grammar/Metacognition

Lesson 2

1. Good morning. It was very exciting for me to work with you last week. I liked meeting all of you. Since I am working with many children, I am going to ask you to tell me your names again. My name is Ms. Rooney and yours is.... (Go around the room and have children identify themselves). As I told you last week, I will help you learn a reading strategy, called story grammar, today and again next week. Display an oaktag sign showing these words).

2. Hmmmmm. I said "strategy". Who remembers what a "strategy" is? (Elicit: A strategy is a tool). Why do we need a strategy for reading? (Elicit: It will help us remember a story as we read it).

3. Display a chart entitled **Story Grammar** with the numbers 1 to 5 listed vertically in order. Story Grammar has five parts. Who remembers one part of story grammar? (As students identify the various elements write them on the chart in this order: 1. Main Character; 2. Setting; 3. Problem; 4. Events; 5. Solution).

4. Point to **Main Character** on the chart. If we were watching TV or a movie we would call the most important character the 'star'. The main character in a story is like a TV or movie star. The main character keeps the story together. What are examples of main characters? (Elicit

people, animal and make-believe characters). Using their examples, classify the suggested characters as people, animal or make-believe. As I read your responses to the Story Grammar Worksheet that you completed last week, I saw that most of you were able to find the main character.

5. Pointing to **Setting**, say: Now we will review the second story grammar element. This is .....(call on a student). And, the setting is ..... Yes, the setting is where the story takes place. Who can suggest some story settings that you remember. Many of you were able to find the setting correctly.

6. Now, why are we learning about **main characters** and **settings**? Elicit: Yes, we want to improve our reading. How do **main character** and **setting** help us read. Evoke: It helps us remember what is happening in the story.

7. Point to **problem** and say: This is the third story grammar element, **problem**. What is a problem? (Evoke: A problem can make us worry; or a problem is something that needs to be fixed. When you worked on your story by yourself last week, many of you had trouble finding the problem. Let's think up some problems. If the students do not give suggestions, try: Suppose you and your family are shopping at Kings Plaza and you are walking to the car to go home. You are feeling very tired and all of a sudden your mother says that she cannot find the car keys. What is the problem here? Or, let's pretend that your little brother is

crying because has no one to play with and you wanted to go out with your friends by yourself. What is the problem? Who can give us an example of a problem. Sometimes problems can make us worry. Sometimes when there is a problem we have to think up another way to do something.

8. We are now up to the fourth Story Grammar element, the **events**. On last week's story grammar worksheet, many of you made mistakes here. So, to learn this is part of story grammar we need to put on our thinking caps and to listen very carefully. The **events** are the actions in the story. The events help us to be good detectives because the events help us understand the **problem** and know how the story ends. Now, let's think about the problem where the mother did not have her car keys. Here are some possible events or actions that might have happened: The family was walking back to the car; Everybody was very tired and just wanted to get home; The mother looked in her purse and could not feel the keys; She tried it again; Then she emptied her purse and looked more carefully; Still, no keys; Then her little son said, look in your pockets; She looked in her pants pockets and still there were no keys; Then she saw her jacket and said, oh let me look in my jacket; Sure enough, she pulled out the keys and the family got in the car and went home.

9. The events are the actions that happened around losing the car keys. What did the mother do? She looked in her purse. Then .....(she looked more carefully in her

purse). Then .... (she began to look in her pockets). Finally, she found them in her jacket.

10. The last story grammar part is the **solution.** The solution is how the story ends. It is always related to the problem. How did the problem get fixed? What was the solution in the story that I made up about the mother losing her car keys? (She found her keys after looking in a few places or, she found her keys and the family could go home).

11. Cover chart paper. Ask for volunteers to identify all story grammar elements.

12. Display chart again. Say, I am thinking of a story grammar element that tells us where the story takes place. Who can identify it? (setting) Now I am thinking of a story grammar element that describes a difficulty in a story. I am thinking of .....(problem). The most important role in the story is the .....(main character). The actions in the story are also called the .....(events). Finally, how the story ends is called ..... (the solution).

13. Now we can practice using the story grammar parts in a story. First, I will show you some words from the story that you may not be familiar with. (Have the words read by students or identify the word if no one can read them. Except to facilitate the reading of this story, a teaching of the vocabulary is out of the purview of this lesson). The following words will be printed on a story chart page: **campfire excited hairy beast Bigfoot**

direction explanation proof trampled (to press down). Have words read a few times. To introduce the story, ask children if they have ever watched a TV program or movie and then felt scared when they went to bed. What can happen? (Elicit: bad dreams, nightmares; when you are dreaming, do the dreams seem real?). Ask students if they have ever gone camping. Hold a brief discussion that includes: 1) it is usually very dark at night; How do you feel when it is very dark at night? 2) there are noises that we are not used to; How do you feel about hearing strange noises just before you go to bed? 3) campers like to tell scary stories before going to bed; How would you feel going to sleep? Would you pretend that you are brave.

14. Distribute Narrative 3 (Appendix G). As it is being handed out, return the student's focus to the story grammar elements. Who will tell us all of the story grammar elements? How will story grammar help us? (To remember the story better as we are reading).

15. Ask for volunteers to read. As a student finishes reading a section of the narrative, remind the students that they should be asking themselves, "Have I identified the main character yet?" As the reading continues, include setting, problem, events and solution.

16. After the story was read, tell students to think about the story for minute. Ask them to think if they know the main character, setting, problem, events and solution of

the story. Distribute Story Grammar Worksheet (Appendix C). Display a replica of this worksheet on chart paper.

17. Point to **Main Character**. Discuss the various people in the story. Discuss which individual was in the whole story and was important throughout the story. Write Bill next to main character.

18. Point to **Setting**. Elicit "camping trip" and write it next to setting.

19. Point to **Problem**. Have a discussion around the problem in this story. Invite several students to volunteer their ideas. Conclude that the problem is: "Bill is not sure if 'Bigfoot' is a story or is real. Write it next to problem.

20. Point to **Events**. What are the actions in the story that are important in the story and that help us understand the problem. Discuss children's ideas. Conclude with the following and write them on the chart:

The guide told scary stories before the campers went to bed.

Bill decided that 'Bigfoot' was only a story.

Something woke Bill as he slept.

Something was coming toward him.

His friend's shouts scared the thing away.

21. Point to **Solution**. How does this story end? Conclude and write on the chart that Bill is still not sure if 'Bigfoot' is real. Discuss that Bill thought seeing

'Bigfoot' was just a dream but then he saw trampled grass and broken branches and wondered if 'Bigfoot' was real. Collect papers.

22. Just as we did last week, I am going to ask you to read a story and complete a story grammar worksheet by yourself. Here are some words that I want to introduce to you (show the words on chart paper) before I hand out the story: **Amy complain basement afford starvation.** Invite various students to read the words. Distribute Narrative 4 (Appendix H). Have volunteers read the story. Distribute the Story Grammar Worksheet. Instruct to work on it by themselves and to think hard about the problem, events and solution today. As the students finish, collect the papers. Have students identify the name of the strategy they are learning. Have students identify how it will help them.

Appendix F

Script for Story Grammar/Metacognition

Lesson 3

1. Good Morning, boys and girls. This is our third lesson on the reading strategy that we know as story grammar. Show the students a scissor. Ask students to identify the object. Ask a student to tell its use. Demonstrate ripping a piece of paper (rip the paper unevenly). How would the scissor be useful? It will help us cut the paper evenly. Say, The scissor is a tool. It improves our ability to cut things evenly. Sometimes we use tools that we cannot see because they are ideas that are in our brains. I have been teaching you about a tool or strategy, called **Story Grammar**, which will improve your reading if you use it. By using it over and over again, you will know it very well, just as you know your own name. When the tools are in our brains, we say they are strategies.

2. Say, Story Grammar has five parts. Ask a few students to identify all five. Display the **Story Grammar** parts on chart size paper. Have each one read and have a student tell what each part is in their own words. Call on several students if necessary until the following information has been verbalized:

Main Character: The 'star' or most important individual in the story.

Setting: Where and/or when the story takes place.

Problem: A difficulty in the story that the characters are involved in.

Events: The important actions in the story.

Solution: How the story ends.

3. Display another chart size paper with two columns. On the left side are the story grammar elements. On the right hand column are examples of the story grammar parts but in a mixed up order. Say, now we will match story grammar parts with examples of each. Let's read this column(point to the left column). Have the right column read by individual students. Say, Who would like to draw a line to the example in this column that is an example of the story grammar part. Display:

Main Character *	* Sally found her puppy.
Setting *	* The puppy was gone!
Problem *	* Sally
Events *	* At the playground
Solution *	* Sally tied her puppy to a tree.
	She fell asleep.
	The puppy got loose.
	She called her puppy's name and looked all over.
	Then she heard a dog barking.

4. Say, I just want to be sure that you know how **Story**

Grammar can help us. Invite a student to reiterate that **Story Grammar** will help us remember a story as we read.

5. Before we read a story together and complete a Story Grammar Worksheet, I will introduce some words from the story that may seem new to you: **whisker medicine husband cave.** Let me just briefly introduce this story to you. It is an old story, a story that takes place a long, long time ago.

country grandmother lunchbox straight.

6. Distribute the story (Narrative 5, Appendix H). As the papers are being handed out, remind the students to think of the story grammar parts. Say, When I look at the **Story Grammar Worksheets** that you do yourselves, I have noticed that most of you can find the main character and setting. Many of you can find the problem. The events and solution still need much more practice. Try to be very careful with those two parts today.

7. Call on various students to read the narrative. After a section has been read, remind the students to ask themselves, Do I know the main character yet? the setting? the problem? the events? the solution?

8. Display a replica of the **Story Grammar Worksheet.** Point to **Main Character.** Ask children to identify all of the characters in the story. Which one has the most important part? Yes, it is the lady. Next to **Main Character** write: The lady

9. Continue with **Setting.** Where does the story take place. Have children respond the "village" and "outside the cave". Which is the place where most of the story took place.

10. Point to **Problem:** What is the problem in this story. Evoke: The lady has a sick husband. She needs a tiger whisker to for medicine for her husband. She is afraid of the tiger. Conclude that the lady's problem is that she needs a tiger's whisker but she is afraid of the tiger.

11. Point to **Events.** The events are the important actions in the story. What important actions or events happened in this story? Elicit and write on the chart paper: The lady decided to trick the tiger. She gave him food and played soft music. The tiger was nice to her and came over to thank her. The lady grabbed the whisker and ran away.

12. The **solution** is how the story ends. And ..... The lady took the tiger's whisker and ran to her sick husband.

13. You have worked very hard today and shown that you are learning story grammar. Now it will be your turn to read a story and complete your own **Story Grammar Worksheet.** First I have some words to show you (display words on a story chart): **country grandmother lunchbox straight.** Remember to say your story grammar parts. Distribute

Narrative (Appendix J). Collect papers as the students finish.

14. Although today is the last story grammar lesson, I will return next week and give you a story to read by yourselves and a worksheet to complete alone. I want to ask you what strategy you have learned. How does that strategy help you? Elicit: it helps us remember the story as we are reading it.

Appendix G

Narrative 3

It is the first night of Bill's camping trip. He was sitting with his friends around the campfire. He was thinking about everything he did that day and he felt so excited.

His guide interrupts his thoughts and begins to tell a scary story. "A large, hairy beast that looks and walks like a man roams all over this country," the guide says. "Many important people say they have seen him. No one knows where this creature comes from or where he goes. Everyone calls him 'Bigfoot'".

Bill does not believe this story. "It sounds good," he says to himself, "but it couldn't be true". Soon all of the boys were going to sleep. As Bill began to fall asleep, he said, "This is just a story. There is no 'Bigfoot'"!

Soon, Bill was awakened by the shouts of one of his friends - "There he is"! Bill looked in the direction that his friend was pointing. A really big animal that is covered with dark hair is coming toward him. But the shouts of the boys scared the 'thing' away.

The next morning Bill thought that there must be an explanation for what happened. He thought he had been dreaming about Bigfoot. But, was he dreaming? Soon Bill found proof: the grass had been trampled by something and there were some broken branches. "No, it wasn't a dream",

thought Bill. As he was getting ready for breakfast, he wondered if he had seen 'Bigfoot'.

Adapted from Rauch, S. J. & Weinstein, A. B. (1991), p. 57.

Appendix H

Narrative 5

Once there was a woman who needed a tiger's whisker. She was afraid of tigers but needed the whisker to make medicine for her sick husband.

She decided to use a trick to get the tiger's whisker. She knew that tigers loved food and music. She thought that if she brought food to a lonely tiger and played soft music the tiger would be nice to her and she could get a whisker.

She went to the tigers caves where a lonely tiger lived and put food in his bowl in front of the cave. Then she sang soft music. The tiger came out and ate the food. He walked over to the lady and thanked her for the delicious food and lovely music.

The lady then cut off one of his whiskers and ran very quickly down the hill. The tiger felt lonely and sad again.

Adapted from: Stein, N. L., & Glenn, C. G., (1979), p. 79.

Appendix I

Narrative 4

Name: _____

Four days passed and Amy's puppy did not complain. It never cried at night or howled at the wind. It wouldn't even follow Amy up basement steps unless it was invited. It was a good dog.

Sometimes Amy opened the door in the kitchen that led to the basement and the puppy was there, all stretched out, on the top step. Amy knew it wanted company. It always wagged its tail, eyes all sleepy when she found it there.

A week had gone by and Amy didn't name the dog. She knew her parents wouldn't let her keep it, that her father made so little money that any pets were out of the question and that the puppy would be given away as soon as the snow cleared and the car could be driven.

Still, she talked to her parents about keeping the puppy at dinner one night. But her mother and father shook their heads and kept right on eating.

But it was on Saturday, nine days after she found the puppy, that the sun was shining and the roads were clear. Amy's dad stared the car and opened the trunk of hie car. Amy was fighting back the tears but she was not strong enough.

"Mama, please," begged Amy. Her mother shook her head and said, "Amy you know we can't afford the pet". Amy

pressed her face into a pillow.

She heard the car travel down the road. Even though it was early afternoon, she went into her bed and cried herself to sleep.

It was night when she woke up. She felt so sad and eventually she felt hungry. She did not want to see her parents and kept her head down when she went into the kitchen.

Her father said, "Amy, you'd better feed that dog before it dies of starvation".

Amy turned around and said, "What? You didn't take her"?

"I did," said her dad. "It was the worst place I've ever seen," said her father. "I wouldn't leave anything at that place. So I brought the dog back". "Well," he said, "Are you going to feed that dog"?

Adapted from Stanchfield, J.M., & Gruning, T. G. (1986).

Appendix J

Narrative 6

Once there was a little boy who lived in a very hot country. One day his mother told him to take some cake to his grandmother. The little boy put the cake in a bag and carried it under his arm and walked down the country road to his grandmother's house.

After lunch, his grandmother gave him butter to bring home to his mother. He put the butter on his head and began to walk home. Along the road he met his friend and stopped to play. It was very hot and the sun was shining hard. When he got home the butter had all melted. His mother told him he was a silly boy and that he should have put the butter in a lunchbox and come straight home. The little boy said he was sorry and would be more careful next time.

Adapted from Stein, N. L., & Glenn, C. G. (1979), p. 78.

Appendix K

Script for Story Grammar/Metacognition With Self-Regulation Training (SG+SR)

Lesson 1

Follow paragraphs 1 through 12 in the Script for Story Grammar/Metacognition Lesson 1 (Appendix A).

1SR. As we read the story, I want you to try very hard to remember all of the story grammar parts. First, close your eyes and say the five story grammar parts to yourself. You should be thinking about main character, setting, problem, events and solution. Remember that knowing the story grammar parts will help you comprehend the story better as you read it.

2SR. I have a checklist (Self-Regulation Checklist, Appendix L) to help you remember the story grammar strategy. You can use it as a guide. Look at yours and look here at mine. (Display a model of the student's worksheet on chart paper).

3SR. Find sentence 1. To the left are two boxes. We are going to use only the outer box just now. (Run finger down the outer left box. Walk around the students to insure that they are in the correct column). The sentence reads, **I will close my eyes and say the <u>five</u> story grammar elements.** Let's do it and say them to ourselves. Now if you have thought of them all, put an X in this box. Who will say them for us? Call on a volunteer.

4SR. Now we will read a story together. While we are reading the story, try to find the story grammar parts. (Display the following words on a chart page). There are words in the story that you may not know. I will help you to read them if you do not know the words. Have volunteers read the words individually (which are listed one under the other on the chart: **Ace trash masked markings raided growling porch flashlight.**

5SR. Distribute the narratives (Narrative 1, Appendix B). As the narratives are being distributed remind the students to think about the story grammar parts. Return to the display **Self-Regulation Worksheet.** Point to sentence 2. Read, As I read the story, I will find the **main character, setting, problem, events, solution.** Say: As we read the story we will check off the story grammar parts as we find them. Invite volunteers to read each paragraph. After each reading, ask, have you found the main character yet? If you think you know who the main character is, you will mark it here. (Show students where to make the X, using the Self-Regulation display. Repeat with the other story grammar parts; for example, Say, Are you thinking about the setting? or do you think you know what the problem is yet? (As the story is read, mark off the story grammar parts on the **Self-Regulation Worksheet.** Now we are ready to complete a worksheet and we can mark the outer box in front of sentence 3. (Point to sentence 3 and walk around the room to insure

that the students are in correct place).

Follow paragraphs 16 and 17 in SG Lesson 1 (Appendix A).

6SR. Distribute **Goal Setting Chart** (Appendix L). Display a replica of this chart on chart paper. Say, on this paper, you are going to predict how well you can find the story grammar parts in a story that you read. Find **1.** Find **Predict.** Come up a little and you will read two words. Who can read them? If you think you can find the main character, mark this box. (Demonstrate on the chart paper). Repeat with the remaining story grammar parts, reminding students that they need to be honest about the story grammar parts they can find, especially 'problem' and 'events'. Now find the word **actual.** You do not have to mark here but I will. During this next week, I will put marks in this column after I read your answers on the next story grammar worksheet. I will mark in the **actual** column if you found the part or say "Try harder" if you are not correct. Collect the goal charts.

7SR. Just as we did last week, I am going to ask you to read a story and complete a story grammar worksheet by yourself. Here are some words that I want to introduce to you (show the words on chart paper) before I hand out the story: **worried soccer Sandra powerfully straight.** Invite various students to read the words. Distribute the narratives (Narrative 2, Appendix D) with a story grammar

worksheet (Appendix C). Remind the students to remember the story grammar parts as they read the story and to refer to the **Self-Regulation Worksheet** (Appendix L) as they work. Walk around the room and encourage the students to do their very best. Collect the papers as the students finish. Before leaving, ask, What is the strategy that we have learned today? How will it help us? Very good responses!

Appendix L

Self-Regulation Checklist

___ ___ 1. I will close my eyes and say the five story grammar elements.

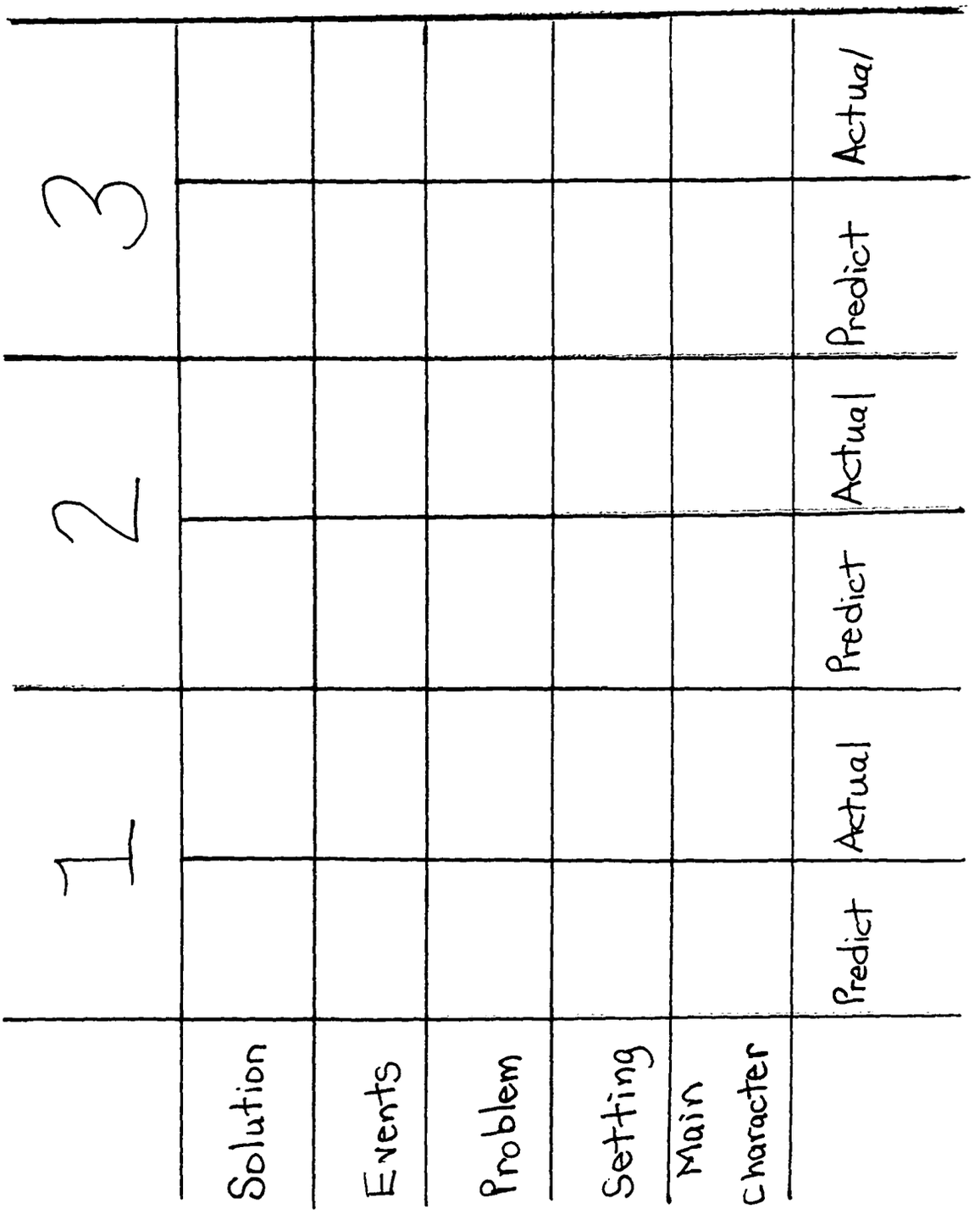
___ ___ 2. I will read the story and find:

the main character	_____	_____
the setting	_____	_____
the problem	_____	_____
the events	_____	_____
the solution	_____	_____

___ ___ 3. I will complete the worksheet.

Appendix M

Goal Setting Chart



Appendix N

Script for Story Grammar/Metacognition With Self-Regulation Training

Lesson 2

Follow paragraphs 1 through 13, from SG Lesson 2 (Appendix E).

8SR. Last week I gave you a checklist to remind you of the story grammar strategy. We will be using this checklist (Appendix L) again. Let's look at this checklist (display a replica of the checklist on chart paper. Find sentence 1. Who will read it. Now let's do what it says. We'll close our eyes and say the five story grammar elements to ourselves. Who will say them aloud. Now we can check off the box that we have said the five story grammar parts to ourselves.

Follow paragraph 14 from SG Lesson 2 (Appendix E).

9SR. Ask for volunteers to read. As a student finishes reading a section of the narrative, remind the students that they should be asking themselves, "Have I identified the main character yet?" As the reading continues, include setting, problem, events and solution. The students also need to be directed to their checklist. As they think they have identified a part, they should mark it on their checklist.

Follow paragraph 16 through 21 from SG Lesson 2 (Appendix E).

10SR. Just as we did last week, I am going to ask you to read a story and complete a story grammar worksheet by yourself. First, I will introduce words from the story that you may not know (show the words on chart paper) before handing out the story: **Amy complain basement afford starvation.** Invite various students to read the words.

11SR. Display the chart sized replica of the Goal Setting Guide that the students completed last week. Say, Last week you predicted which story grammar elements you would be able to find in the story that you read. I read your answers and looked at you chart. If you predicted that you could find the **Main Character** and you did, I put a star in the next box in the column labelled 'Actual'. In fact, I read all of your answers and also looked at your predictions. When you were correct, I gave you a star. Sometimes I wrote a little note that said "No. Try harder". Look at your guides, see how well you predicted your responses. If you have stars, then you can predict that part of story grammar. If I said "try harder", you need to think about whether you will be able to answer the question. Look at ones that you did not get correct and try harder on them.

Distribute the Goal Setting Guide (Appendix M) that the students completed last week. Give students a few minutes to look over their returned guides and predict how well they will do on this next story. Direct students to the columns

marked 2. Show them the 'Predict' column. Tell them to predict which story grammar parts they will be able to correctly find. Collect the guides.

12SR. Distribute Narrative 4 (Appendix I). Have volunteers read the story. Distribute the Story Grammar Worksheet. Instruct the students to work on it by themselves. As the students finish, collect the papers. Have students identify the name of the strategy they are learning. Have students identify how the strategy will help them.

Appendix O

Script for Story Grammar/Metacognition With Self-Regulation Training (SG+SR)

Lesson 3

Follow paragraphs 1 through 5 from SG Lesson 3 (Appendix F).

13SR. Display a chart size replica of the Story Grammar checklist. Distribute the checklists (Appendix L) to the students. Point to sentence 1 and ask for a volunteer to read. Tell students to do as the sentence tells them (close their eyes and say the story grammar parts). Ask a few students to recite the story grammar elements. Say, the checklist will help you remember the story grammar strategy while you are reading. Now they are to mark the box as they have completed step one.

Follow paragraphs 5 and 6 in SG Lesson 3 (Appendix F).

14SR. Call on various students to read the narrative. After a section has been read, remind the students to ask themselves, Do I know the main character yet? the setting? the problem? the events? the solution? Remember to mark your **Story Grammar Checklist** as you find the main character, setting, problem, events and solution.

Follow paragraphs 8 through 12 in SG Lesson 3 (Appendix F).

15SR. You have worked very hard today and shown that you are learning story grammar. Both weeks that we have

worked together, you predicted which **Story Grammar** parts you would be able to find in the story that you completed by yourself. I am returning your papers so you can see your predictions. You will see a star in the box next to your prediction if you were correct. If you need to improve your responses, I wrote little comments. Look at your papers and I will answer any questions that you have.

16SR. Now it will be your turn to read a story and complete your own **Story Grammar Worksheet.** First I have some words to show you (display words on a story chart): **country grandmother lunchbox straight.** Remember to say your story grammar parts. After you have said the, remember to mark your checklist. Distribute Narrative 6 (Appendix J). Collect papers as the students finish. Before leaving, remind the students that they have learned a strategy (elicit name of strategy) and that the strategy helps them to remember what they are reading as they read.

Appendix P

Script for Story Grammar/Metacognition With Modeling Feedback (SG+MF)

Lesson 1

Follow the Script for Story Grammar/Metacognition Lesson 1 (Appendix A) through paragraph 12.

1M. Cover the story grammar parts on the chart. Say, I have just taught you the parts of story grammar. Now, I am going to pretend that I am a student and that I have just learned the story grammar elements. (Dramatize remembering what was just taught). Let's see. There are five parts to story grammar. The first one is....(students may volunteer answers) **main character**. And then there is the **setting**. The setting is where the story takes place. The **problem** is the next part that I will try to find as I read the story. I also want to try to pay attention to the **events** or all of the actions that happen in the story around the problem. The **solution** is how the story ends. Now I'll say them once more: main character, setting, problem, events, solution. Can anyone else remember the story grammar parts? (Call on volunteers). Say, story grammar is a reading strategy. It will help us remember a story better as we are reading it. If we use story grammar as we read, it will improve our reading comprehension.

Follow paragraphs 15, 16 and 17 in SG Lesson 1 (Appendix A).

2M. Say, Before I read the next story, (model) I am going to make sure that I remember all of the story grammar parts so that I will remember the story better and improve my reading comprehension. The five story grammar parts are: main character, setting, problem, events and solution. As I read I am going to try to find them in the story.

Follow paragraph 18.

3M. After the narratives have been collected, the instructor will say, I would like to model this second story for you. Watch me. As I read this story (hold a copy of the narrative), I will try to find the main character, setting, problem, events and solution. The instructor reads the story aloud. This was a story about Sandra and Mark. (Display a chart-size replica of a Story Grammar worksheet, with the answers to this story. Responses are in black magic marker while the story grammar parts are in red). Point to **main character**. In this story, the main character is Sandra. Her brother Mark is also in the story but Sandra is the one who is important in the whole story.

4M. The setting is ..... hmmmmmm... I have to look back in the story. Here is the answer, Sandra and Mark's backyard.

5M. There is a problem. (If the students want to respond, they will be called on, but discussion is limited here as it is important to model thinking aloud). Mark hit the ball very hard and it may break a window. Sandra is

very worried.

6M. The events or actions in the story are:

Sandra threw an easy pitch.

Mark hit the ball hard.

It was going toward their neighbor's window.

It was windy and the wind slowed the ball down.

7M. The story ends with the ball falling in the bushes. Sandra was very happy that the window did not break.

That was hard work. Now, before I leave today, just tell me, what is the name of the strategy we have learned today? Why are we learning this strategy? See you next week!

Appendix Q

Script for Story Grammar/Metacognition With Modeling Lesson 2 (SG+MF)

Follow paragraph 1 from SG Lesson 2 (Appendix E).

8M. Before we go into today's lesson, I am going to return the story grammar worksheet that you completed last week. I read your answers and wrote in answers where I thought you needed some help. Look over your answers and see where you need to pay extra attention today. Give students about 5 minutes to look over their answers from last week.

9M. As I told you last week, I am here today and will come once next week to teach you about a reading strategy that is called story grammar. (Display an oaktag sign showing these words). Say, Hmmmmm. I said "strategy". Who remembers what a "strategy" is? (Elicit: A strategy is a tool). Why do we need a strategy for reading? (Elicit: It will help us remember a story as we read it).

Follow paragraphs 3 and 4 in SG Lesson 2 (Appendix E).

10M. Pointing to **Setting**, say: Now we will review the second story grammar element. This is .....(call on a student). And, the setting is ..... Yes, the setting is where the story takes place. Who can suggest some story settings that you remember.

Follow paragraphs 6 through 20 in SG Lesson 2 (Appendix E). Follow paragraph 21 through the independent completion

and collection of the story grammar worksheets.

11M. Model this last story. Display the story grammar elements on chart paper. Before we close for today, I want to model finding the story grammar elements to this last story.

I am thinking of the story grammar elements. Let's see. The main character is a little girl named Amy. Her mother and father are in this story and so is a puppy that she found. Hmmmmm.... A puppy that she found. What do we know about that puppy ..... Invite a volunteer to say that Amy wants to keep the puppy, but she can't. Now, I have remembered the **main character** and the **problem**. Now, I forgot about the setting. Oh yes, this story takes place at Amy's house. I wonder if Amy will keep the puppy. I am going to think of some things that happened in the story. One important thing I remember is that Amy asked her parents if she could keep the puppy. And they said (elicit from a student: no). The puppy stayed with Amy because it was too snowy to drive the car and find another home for the puppy. It was a good puppy. When Amy's dad could drive he took the puppy away and Amy cried very hard. (As these ideas are stated, volunteers may contribute to the discussion. At this time, too, the instructor is walking around the students engaging them in the discussion although it is primarily modeled). And how does the story end? Yes, Amy gets to keep her puppy. The place where her father took the

puppy would not have been good to the puppy.

Before we finish today, I would like someone to tell me what the strategy is that we have learned? How does knowing story grammar help you?

Thank you for today. I will see you again next week.

Appendix R

Script for Story Grammar/Metacognition Lesson 3 With Modeling (SG+MF)

Lesson 3

12M. Good Morning, boys and girls. This is our third lesson on the reading strategy that we know as story grammar. Last week you read a story yourselves and then completed a Story Grammar Worksheet, which I have since read and marked. I was happy to see that you are learning about the parts of story grammar. When I thought your answer was correct, I put a star next to it. When your responses needed some improvement or were not correct, I wrote in the answer. I am going to give back your papers. Spend a few minutes looking over your worksheet. Look at the story grammar parts that you getting correct and try to pay attention to Story Grammar parts that you may need to improve.

Follow paragraph 2, 3, 4, 5, 6 in SG+MF Lesson 3 (Appendix F).

13M. Distribute the story (Narrative 5, Appendix H). As the papers are being handed out, say, While I am handing out the stories, I want you to say the story grammar parts to yourself. Dramatize, Now, did you say to yourself, **Main Character, Setting, Problem, Events, Solution.** If you did not, you can do it right now with me, repeat all five elements. Now let's whisper all five items. Good! I

really think you did it that time! As you work on this story and worksheet, try to remember the parts that you are weak on and try even harder to understand those **Story Grammar** parts. Many of you can find the problem. The events and solution still need much more practice. Try to be very careful with those two parts today.

Follow paragraphs 8 through 15 in SG Lesson 3 (Appendix F).

14M. Remember to say your story grammar parts. Distribute Narrative 6 (Appendix J) and Story Grammar Worksheet. As the narrative is being distributed, dramatize reciting the story grammar elements. Add, I am using the story grammar strategy to help me remember the story as I read.

15M. After the stories and worksheets have been collected, model determining the story grammar elements. Say, After I read the story, I am going to think about the parts of story grammar. First, there is the main character. Now let's see, in this story, there was a boy, his friend (elicit grandmother, mother from students). But it was the boy who interacted with his mother, grandmother and his friend. He was the most important character. He is the ..... (canvass a student) main character.

16M. Now, we have one story grammar part. The next one is the setting. It seems to take place in the summer. (Some of you are shaking your heads, Oh, you think it takes

place in the country. Well, let me see (pretend to look back in the story). That's right! The setting is the country.

17M. Now, I need to remember the problem. (Pretend to think for a few seconds). I remember that his mother was mad at him. (Call on volunteers who are willing to risk a response). The problem was that the butter for his mother had already melted.

18M. So, I have a problem, a main character and a setting. I still need to find the events and the solution. Say, the butter had melted. I wonder how that happened? Oh yes! It was very hot and sunny. Also, the little boy saw a friend and stopped to play.

When his mother was angry, he felt sad and said he would not do it again. That is how the story ended. That is the solution.

19M. I was able to remember the story pretty well, with your help, of course. But I used the story grammar strategy and it helped me remember the story.

20M. Display a chart with the correct responses and ask volunteers to read:

Main Character	The little boy
Setting	In the country
Problem	The butter had melted and his mother was angry.
Events	It was very hot and sunny.

The little boy stopped to play with his friend.

Solution: The little boy told his mother that he was sorry and that he would not do it again.

Thank you for your cooperation today. Next week I will come back and give you a posttest. The posttest will tell me how much you have learned about **Story Grammar**. Before I leave, what is the strategy we have learned? How will it help us?

Appendix S

Script for Story Grammar/Metacognition With Modeling Feedback and Self-Regulation Training

Lesson 1

For this treatment condition, follow the paragraphs from the identified scripts in this order:

1 to 12 from SG Lesson 1 (Appendix A.

1M from SG+MF Lesson 1 (Appendix P)

1SR to 5SR from SG+SR Lesson 1 (Appendix K)

16 and 17 from SG Lesson 1 (Appendix A)

6SR from SG+SR (Appendix K)

18 from SG Lesson 1 (Appendix A)

3M from SG+MF Lesson 1 (Appendix P).

Appendix T

Script for Story Grammar/Metacognition With Modeling Feedback and Self-Regulation Training (SG+MF+SR)

Lesson 3

For this treatment, follow the paragraphs from the identified scripts in the order in which they are presented:

1 from SG Lesson 2 (Appendix E)

8M and 9M in SG+MF Lesson 2 (Appendix Q)

3 and 4 from SG Lesson 2 (Appendix E)

10M from SG+MF Lesson 2 (Appendix Q)

6 through 13 in SG Lesson 2 (Appendix E)

8SR from SG+SR Lesson 2 (Appendix N)

14 from SG Lesson 2 (Appendix E)

9SR from SG+SR Lesson 2 (Appendix N)

15 through 20 in SG Lesson 2 (Appendix E)

10SR through 13SR in SG+SR Lesson 2 (Appendix N)

11M in SG+MF Lesson 2 (Appendix Q).

Appendix U

Script for Story Grammar/Metacognition With Modeling Feedback and Self-Regulation Training (SG+MF+SR)

Lesson 3

For this treatment, follow the paragraphs from the identified scripts in the order in which they are presented:

12M from SG+MF Lesson 3 (Appendix R)

2 through 4 in SG Lesson 3 (Appendix F)

13 SR in SG+SR Lesson 3 (Appendix O)

5 and 6 in SG Lesson 3 (Appendix F)

13M from SG+MF Lesson 3 (Appendix R)

14SR in SG+SR Lesson 3 (Appendix O)

8 through 12 in SG Lesson 3 (Appendix F)

15SR and 16SR in SG+SR Lesson 3 (Appendix O)

13 through 15 in SG Lesson 3 (Appendix F)

14M through 18M in SG+MF Lesson 3 (Appendix R).

Appendix V

Pretest

Once upon a time there was a skinny little mouse named Melvin who live in a big red barn. He always wanted to eat a lot of food. He thought that could make him feel happy.

One day he found a big box of rice crispies under some hay. Melvin knew how good the rice crispies tasted and he wanted to eat a little bit of the cereal. Then he saw a hole in the side of the box.

Before squeezing through the hole of the cereal box, Melvin decided to get some sugar first so he could sweeten his cereal. Then Melvin slipped through the hole in the box and quickly filled his cereal bowl.

Soon Melvin had eaten every bit of the rice crispies and he had become very fat. Melvin knew he had eaten too much and felt very sad.

Adapted from: Stein, N. L., & Glenn, C. G. (1979), p. 61.

Appendix W

Posttest

Judy is going to have a birthday party at her home. She is ten years old. She wants a hammer and saw for presents. The she can make a coat rack and fix her doll house.

She asked her father to get them for her. Her father did not want to get them for her. He did not think that girls should play with a hammer and a saw.

But he wanted to get her something. He bought her a beautiful new dress. Judy liked the dress but she still wanted the saw and hammer.

Later she told her grandmother about her wish. Her grandmother knew that Judy really wanted a hammer and saw. She decided to get them for her because when Judy grows up, she will have to fix things when they break.

That very day her grandmother went out and bought the tools for Judy. She gave them to her that night. Judy was very happy. Now she could build things and fix things with her hammer and saw.

Adapted from Stein, N. L., & Glenn, C. G. (1979), p. 79.

Appendix X

Self-Efficacy Questionnaire

1. After I have read a story, I can find the main character

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

2. After I have read a story, I can find the setting

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

3. After I have read a story, I can find the problem

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

4. After I have read a story, I can find the events

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

5. After I have read a story, I can find the solution

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

Adapted from Graham, S., & Harris, K. R. (1989).

Appendix Y

Attribution Questionnaire

1. Story Grammar has helped me to remember the main character in a story I have read

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

2. Story Grammar has helped me to remember the setting in a story I have read

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

3. Story Grammar has helped me to remember the problem in a story I have read

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

4. Story Grammar has helped me to remember the events in a story I have read

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

5. Story Grammar has helped me to remember the solution in a story I have read

very well pretty well somewhat not well not well at all.

( ) ( ) ( ) ( ) ( )

Adapted from Graham, S., & Harris, K. R. (1989).

Appendix Z

Script for the Pretest

As your teacher just told you, my name is Ms. Rooney and I will be coming into your class once a week to teach you about a reading strategy called Story Grammar. Before we begin today, I would like to know your names. So, starting here, what is your name (have each student identify him/herself).

It is important that I know how much you know about story grammar before I return next week. For today, I am going to ask you to read a one page story and then complete a worksheet. Some of you may that you are not sure of the answers, but I would like you to try your very best. If you really can not complete any part of the worksheet, you can just write that you "do not know".

In a few minutes I will give you the story to read. There are some words in the story that you may not know and I will present them to you. (Each of the following words is printed on an 8"x 14.5" piece of oaktag in black magic marker). Let's begin.

1. Here is your first word cereal. It is something that we eat. Raise your hand to tell us your favorite cereal.

2. The next word is bowl. Cereal is usually eaten from a bowl. What other foods do we usually eat from a bowl.

3. This word is Melvin. Melvin is a name that belongs to boys or men.

Before we see the next words, I just want to review the words we've learned. Raise your hand if your remember this word (hold up each of the cards and call on different students).

4. Skinny is the next word that I want to show you. Skinny means that people are very thin.

5. Our next word to learn is sweeten. Sugar sweetens coffee and tea. What other foods do we sweeten?

6. Rice crispies is the name of a cereal that we will read about in this story. Raise your hand if you have ever eaten rice crispies. Nod your head to the side if you like to eat rice crispies.

Let's just review the words quickly. Have children respond as a group as each word is presented.

Here is the story. (Distribute the stories). Write your name at the top, then read the story. When you have finished, look up at me. (Give the students time to read the story at their pace). Now that you have all read the story, I am going to give you a Story Grammar worksheet. (Distribute the worksheets). Write your name at the top. (Display a story chart paper that looks very similar to the "Story Grammar Worksheet"). Point to the title and read aloud "Story Grammar Worksheet". Ask children to find the same words on their sheet. Move down to the first line

which reads "Main Character". Walk around the room to insure that the students are at the correct place. Tell the students to read this to themselves. Say, if you think you know this, write your answer in the space next to these words. (No other assistance is offered).

Move to "setting". Tell the students to read it to themselves. Say, if you know this, write the answer next to this word.

Repeat this same procedure for "problem", "events" and "solution". If students persist in asking for more information they can be reminded that they are not expected to know everything today but that it is important that they try their very best. Collect the pretest papers and say: "I see that you have all tried to complete the story grammar worksheet".

Introduction to the Pre-Efficacy Questionnaire

I have one more activity for you to complete today. It is a questionnaire. Does anyone know what a questionnaire is? (Elicit some responses). We use a questionnaire when we want to know what people think or feel about things. So, if I wanted to know what this class thought about foods, I would ask you to read some sentences about food and then ask you to mark the answer that best describes your opinions. Display a chart-size paper with the following:

I like ice cream

very much pretty much somewhat not very much not at all.

( ) ( ) ( ) ( ) ( )

Have it read by a child. Call on one child and ask that child to respond. Color in the bubble that represents the child's response.

Have a child read the second sentence:

I like vanilla ice cream

very much pretty much somewhat not very much not at all.

( ) ( ) ( ) ( ) ( )

Say: Boys and girls, it is important for you to remember that there are no right or wrong answers. Whatever you mark is your opinion.

Let's try these (Call on one child to read each sentence):

I like spinach

very much pretty much somewhat not very much not at all.

( ) ( ) ( ) ( ) ( )

Watching basketball games is a lot of fun

very much pretty much somewhat not very much not at all.

( ) ( ) ( ) ( ) ( )

Say: Now you will each have an opportunity to give your opinion about how well you remember story parts. Distribute the Self-Efficacy Questionnaire (Appendix X). Display a chart-sized, hand-written Pre-Efficacy Questionnaire. Direct students to find sentence 1 on their paper and to

read along as the Examiner reads sentence 1. As the choices are read as to how a student recalls the main character, ask children to reflect on how well they really can find the main character and then to fill in the circle that best describes their opinion. Repeat for the remaining four sentences.

Appendix AA

Script for Posttest

Good morning! This morning I will give you a story to read along with a story grammar worksheet. You will be working all by yourselves today. I want to see how well you have learned story grammar. There are a few words that I want to read with you before I hand out the story. (Display a chart paper with the following words: **presents rack Judy hammer.**

Distribute posttests (Appendix W). As the stories and **Story Grammar Worksheets** are passed out, Say, think about the story grammar parts that you have learned to help you remember a story as you read. Remember those parts as you read this story and complete the worksheet. Good luck!

After all of the papers have been collected display a chart size replica of a questionnaire. Say, once before I asked you to complete a questionnaire. I have two more today for you to fill out. We will review these examples first:

Look at This chart. There are sentences and under each sentence are some choices that we can make about the sentence. Say, Who will read Sentence 1?

1. I like to read books at night before I go to bed

very much pretty much somewhat not very much not at all.

( ) ( ) ( ) ( ) ( )

Say, under the sentences are choices. We can only choose one, so we need to think about which fits best. Who will read the choices?

Which one tells how much you like to read before you go to bed at night. I'll bet that people have different thoughts about that sentence. Let's here some responses. Name a student and then ask how he/she responded. Show how that bubble under that choice would be shaded in. Repeat with sentences 2 and 3.

2. I like to watch TV before I go to bed at night

very much pretty much somewhat not very much not at all.

( ) ( ) ( ) ( ) ( )

3. I like a snack as soon as I come home from school

very much pretty much somewhat not very much not at all.

( ) ( ) ( ) ( ) ( )

Distribute the Self-Efficacy and Attribution Questionnaires (Appendix X and Y). Have children find sentence 1. Ask for a volunteer to read. The instructor reads the choices. Tell children to mark under the choice that best describes the sentence. Repeat with sentences on both questionnaires.

Thank students for their cooperation during the story grammar instruction.

Appendix BB

Permission Slip

January 25, 1996

Dear Parents,

As part of my preparation for my doctoral degree in Educational Psychology at the City University of New York, I am conducting a research project The focus of this study is to compare children's confidence and feelings of competence after they have learned a new reading strategy.

I will teach a reading lesson with the teacher, _____, in the classroom for approximately 45 minutes each week for three weeks. The students will be given a pretest and posttest. All responses are confidential and your child will not be exposed to any stress in learning the reading strategy. A student may withdraw at any time, and there is no penalty for not participating.

Please sign the permission slip below and have your son or daughter bring it back to the teacher tomorrow. If you would like to contact me or meet with me, please feel free to call me at _____.

Thank you for your support in this project.

Very truly yours,

Jeanne Rooney

I give permission for my son/daughter _____ to participate in the research project that is described above.

Signed _____

Relationship_____

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