Exploring the Use of Prediction and Summarization
to Increase Students’ Listening and Reading Comprehension

Karen Forgrave, B.A., B.Ed.

Department of Graduate and Undergraduate Studies in Education

Submitted in partial fulfillment of the requirements for the degree of Master of Education

Faculty of Education, Brock University
St. Catharines, Ontario

April, 2003
© Karen Forgrave
Abstract

This study examined the effect of explicitly instructing students to use a repertoire of reading comprehension strategies. Specifically, this study examined whether providing students with a "predictive story-frame" which combined the use of prediction and summarization strategies improved their reading comprehension relative to providing students with generic instruction on prediction and summarization. Results were examined in terms of instructional condition and reading ability.

Students from 2 grade 4 classes participated in this study. The reading component of the Canadian Achievement Tests, Second Edition (CAT/2) was used to identify students as either "average or above average" or "below average" readers. Students received either strategic predication and summarization instruction (story-frame) or generic prediction and summarization instruction (notepad). Students were provided with new but comparable stories for each session. For both groups, the researcher modelled the strategic tools and provided guided practice, independent practice, and independent reading sessions.

Comprehension was measured with an immediate and 1-week delayed comprehension test for each of the 4 stories. In addition, students participated in a 1-week delayed interview, where they were asked to retell the story and to answer questions about the central elements (character, setting, problem, solution, beginning, middle, and ending events) of each story.

There were significant differences, with medium to large effect sizes, in comprehension and recall scores as a function of both instructional condition and reading ability. Students in the story-frame condition outperformed students in the notepad
condition, and average to above average readers performed better than below average readers. Students in the story-frame condition outperformed students in the notepad condition on the comprehension tests and on the oral retellings when teacher modelling and guidance were present. In the cued recall sessions, students in the story-frame instructional condition recalled more correct information and generated fewer errors than students in the notepad condition. Average to above average readers performed better than below average readers across comprehension and retelling measures. The majority of students in both instructional conditions reported that they would use their strategic tool again.
Acknowledgements

I would like to thank everyone who has been integral in making this thesis a success. Thank you to Dr. Anne Elliott and Dr. Rosemary Young for agreeing to be committee members and for giving me feedback which helped to clarify my methodological procedures. A special thank you to my thesis advisor, Dr. Vera Woloshyn, for all of her assistance. Her guidance and detailed reviews of the many drafts of this thesis were very helpful. Thank you to (Dr.) Tiffany Gallagher, my interrater, who worked with me through many late nights of scoring students’ work and remained positive through all hours of the day and night!

I would like to thank all of the students who participated in this study. The teachers and principals must also be thanked for their support and flexibility which allowed me to carry out this research in their classrooms and schools. Without the dedication and enthusiastic participation of these important members of our community (students and educators alike), educational research could not take place.

A final heartfelt thank you to my family and friends. They have been a great source of support and encouragement for the duration of this thesis. Without their assistance, this research would not be completed.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>ii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>iv</td>
</tr>
<tr>
<td>List of Tables</td>
<td>vii</td>
</tr>
<tr>
<td>List of Figures</td>
<td>x</td>
</tr>
</tbody>
</table>

## CHAPTER ONE: INTRODUCTION ................................................................. 1

- Background of the Problem ......................................................... 1
- Definition of Terms ........................................................................... 6
- Chapter Summaries ............................................................................ 12

## CHAPTER TWO: LITERATURE REVIEW ......................................................... 13

- Introduction and Chapter Overview ............................................... 13
- What is Good Comprehension? ......................................................... 14
- What are Challenges to Comprehension? ......................................... 15
- What Can be Done to Promote Comprehension? .................................. 29
- Present Study and Hypotheses ....................................................... 55

## CHAPTER THREE: METHODOLOGY AND PROCEDURES ...................................... 58

- Chapter Overview ............................................................................. 58
- Research Design Overview ............................................................. 59
- Procedures ....................................................................................... 74
- Data Analysis ................................................................................ 91
- Methodological Assumptions and Limitations ................................... 102

## CHAPTER FOUR: RESULTS ........................................................................ 111

- Introduction ................................................................................... 111
- Literal, Inferential and Critical/Creative Comprehension Questions .... 111
- Retellings: Key Points, Details, Errors, and Inferences/Elaborations ... 138
- Cued Recall: Correct/Error Marking Scheme .................................... 146
- Cued Recall: Rubric Marking Scheme ............................................... 165
- Title and Tool Recall ...................................................................... 175
- Open-Ended Questions at the Final Interview .................................. 184
CHAPTER FIVE: IMPLICATIONS OF THE FINDINGS AND DIRECTIONS FOR FUTURE RESEARCH

Summary of the Findings.............................................................................. 193
Implications for Theory............................................................................. 202
Implications for Classroom Practice.......................................................... 206
Implications for Future Research................................................................. 212
Final Comment............................................................................................ 215

References.................................................................................................. 216

Selected Bibliography.................................................................................. 225

Appendix -A- Brock University Ethics Board Approval................................. 227
Appendix -B- Sample Items from Reading Component of The Canadian
Achievement Tests, Second Edition (CAT/2) .............................................. 228
Appendix -C- Story Summaries and Comprehension Tests............................ 230
Appendix -D- Participant Instructions............................................................. 260
Appendix -E- Ontario Grade 4 Language Arts Curriculum Expectations Being
Addressed..................................................................................................... 284
Appendix -F- Key Points Protocol: Marking Guideline for Oral Retellings...... 285
Appendix -G- Blank Story-Frame ................................................................. 288
Appendix -H- Blank Notepad ...................................................................... 289
Appendix -I- Observer’s Checklist................................................................. 290
Appendix -J- Marking Scheme for Description of Tool Use and Tool Elements... 292
Appendix -K- Cued Recall Rubric Marking Scheme....................................... 294
List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Students’ Mean and Standard Deviation Performance Scores for Story 1</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>“Blue Moose” Immediate Test as a Function of Question Type, Reading Ability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Instructional Condition: Literal, Inferential, and Critical/Creative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comprehension Test Measures</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Students’ Mean and Standard Deviation Performance Scores for Story 1</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>“Blue Moose” Delayed Test as a Function of Question Type, Reading Ability,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Instructional Condition: Literal, Inferential, and Critical/Creative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comprehension Test Measures</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Students’ Mean and Standard Deviation Performance Scores for Story 2</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>“Snowshoe Trek to Otter River” Immediate Test as a Function of Question</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type, Reading Ability, and Instructional Condition: Literal, Inferential,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Critical/Creative Comprehension Test Measures</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Students’ Mean and Standard Deviation Performance Scores for Story 2</td>
<td>118</td>
</tr>
<tr>
<td></td>
<td>“Snowshoe Trek to Otter River” Delayed Test as a Function of Question Type,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reading Ability, and Instructional Condition: Literal, Inferential, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critical/Creative Comprehension Test Measures</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Students’ Mean and Standard Deviation Performance Scores for Story 3</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>“Fanny Flora’s Kitten” Immediate Test as a Function of Question Type,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reading Ability, and Instructional Condition: Literal, Inferential, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critical/Creative Comprehension Test Measures</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Students’ Mean and Standard Deviation Performance Scores for Story 3</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>“Fanny Flora’s Kitten” Delayed Test as a Function of Question Type, Reading</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ability, and Instructional Condition: Literal, Inferential, and Critical/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Creative Comprehension Test Measures</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Students’ Mean and Standard Deviation Performance Scores for Story 4</td>
<td>124</td>
</tr>
<tr>
<td></td>
<td>“The Shape in the Harbor” Immediate Test as a Function of Question Type,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reading Ability, and Instructional Condition: Literal, Inferential, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critical/Creative Comprehension Test Measures</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Students’ Mean and Standard Deviation Performance Scores for Story 4</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>“The Shape in the Harbor” Delayed Test as a Function of Question Type,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reading Ability, and Instructional Condition: Literal, Inferential, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critical/Creative Comprehension Test Measures</td>
<td></td>
</tr>
</tbody>
</table>
9. Means and Standard Deviations for Story 1 “Blue Moose” Retelling as a Function of Strategy Condition and CAT/2 Ratings of Ability: Key Points, Details, Errors, and Inferences/Elaborations .................................................. 140

10. Means and Standard Deviations for Story 2 “Snowshoe Trek to Otter River” Retelling as a Function of Strategy Condition and CAT/2 Ratings of Ability: Key Points, Details, Errors, and Inferences/Elaborations .................................................. 141

11. Means and Standard Deviations for Story 3 “Fanny Flora’s Kitten” Retelling as a Function of Strategy Condition and CAT/2 Ratings of Ability: Key Points, Details, Errors, and Inferences/Elaborations .................................................. 142

12. Means and Standard Deviations for Story 4 “The Shape in the Harbor” Retelling as a Function of Strategy Condition and CAT/2 Ratings of Ability: Key Points, Details, Errors, and Inferences/Elaborations .................................................. 143

13. Means and Standard Deviations for Story 1 “Blue Moose” Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Correct and Errors Scores for Characters, Setting, Problem, Solution, Beginning Events, Middle Events, and End Events .................................................. 147

14. Means and Standard Deviations for Story 2 “Snowshoe Trek to Otter River” Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Correct and Errors Scores for Characters, Setting, Problem, Solution, Beginning Events, Middle Events, and End Events .................................................. 149

15. Means and Standard Deviations for Story 3 “Fanny Flora’s Kitten” Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Correct and Errors Scores for Characters, Setting, Problem, Solution, Beginning Events, Middle Events, and End Events .................................................. 151

16. Means and Standard Deviations for Story 4 “The Shape in the Harbor” Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Correct and Errors Scores for Characters, Setting, Problem, Solution, Beginning Events, Middle Events, and End Events .................................................. 153

17. Means and Standard Deviations for Story 1 “Blue Moose” (Modelling) Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Characters, Setting, Problem, Solution, and Beginning, Middle, and Ending Events (Rubric Marking Scheme—Nonparametric) ................. 166
18. Means and Standard Deviations for Story 2 “Snowshoe Trek to Otter River” (Guided Practice) Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Characters, Setting, Problem, Solution, and Beginning, Middle, and Ending Events (Rubric Marking Scheme—Nonparametric) ........................................................................................................167

19. Means and Standard Deviations for Story 3 “Fanny Flora’s Kitten” (Independent Practice) Cued Recall as a Function of Strategy condition and CAT/2 Ratings of Ability: Characters, Setting, Problem, Solution, and Beginning, Middle, and Ending Events (Rubric Marking Scheme—Nonparametric) ........................................................................................................168

20. Means and Standard Deviations for Story 4 “The Shape in the Harbor” (Independent Reading) Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Characters, Setting, Problem, Solution, and Beginning, Middle, and Ending Events (Rubric Marking Scheme—Nonparametric) ........................................................................................................169

21. Means and Standard Deviations for Story 1 “Blue Moose” (Modeling) Title and Tool Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability (Nonparametric) ........................................................................................................176

22. Means and standard deviations for Story 2 “Snowshoe Trek to Otter River” (Guided Practice) Title and Tool Recall as a function of strategy condition and CAT/2 Ratings of Ability (Nonparametric) ........................................................................................................177

23. Means and Standard Deviations for Story 3 “Fanny Flora’s Kitten” (Independent Practice) Title and Tool Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability (Nonparametric) ........................................................................................................178

24. Means and Standard Deviations for Story 4 “The Shape in the Harbor” (Independent Reading) Title and Tool Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability (Nonparametric) ........................................................................................................179
List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Overview of the Current Study’s Methodology, Showing the Sequence of Steps as it was Presented to Students in Both Instructional Conditions</td>
<td>60</td>
</tr>
<tr>
<td>2.</td>
<td>Two-Way Interaction Between Question Type and Instructional Condition for Story One (Blue Moose), Initial Group Session Comprehension Tests</td>
<td>130</td>
</tr>
<tr>
<td>3.</td>
<td>Two-Way Interaction Between Time and Ability for Story One (Blue Moose), Initial Group Session Comprehension Scores</td>
<td>131</td>
</tr>
<tr>
<td>4.</td>
<td>Two-Way Interaction Between Time and Instructional Condition for Story One (Blue Moose), Initial Group Session Comprehension Scores</td>
<td>132</td>
</tr>
<tr>
<td>5.</td>
<td>Two-Way Interaction Between Question Type and Time for Story Three (Fanny Flora’s Kitten), Independent Practice Comprehension Scores</td>
<td>135</td>
</tr>
<tr>
<td>6.</td>
<td>Two-Way Interaction Between Question Type and Time for Story Four (Shape in the Harbor), Independent Reading Comprehension Scores</td>
<td>137</td>
</tr>
<tr>
<td>7.</td>
<td>Two-Way Interaction Between Instructional Condition and Ability for the Middle Event Erroneous Responses on Cued Recall for Story Three (Fanny Flora’s Kitten)</td>
<td>159</td>
</tr>
<tr>
<td>8.</td>
<td>Two-Way Interaction for Ability and Instructional Condition on the Cued Recall for Story Four (Shape in the Harbor), Independent Reading, Erroneous Responses About the Story Problem</td>
<td>163</td>
</tr>
</tbody>
</table>
CHAPTER ONE: INTRODUCTION

Background of the Problem

We live in a society where we are bombarded by print. Advertisements speak to us from magazines, newspapers, and television sets, computers give us e-mail messages, and an infinite supply of web pages burst with information. These are the realities that face children who are growing up in our society. How can we, as educators, help struggling readers to make meaning from the chaos that surrounds them?

In our society, it is evident that reading is not just a key element of school success. Reading is a cornerstone for success in life. Yet our educational systems are not preparing all students for a life in a literacy-rich society. The 2002 report of the United Nations Children's Fund found that 10% of 15-year-olds in Canada were unable to solve basic reading tasks such as locating simple textual information, making low-level inferences, and making connections to prior knowledge. In Ontario, yearly provincial assessments are conducted by the Education Quality and Accountability Office (EQAO). The results from the May 2002 tests show that 50% of the province's grade 3 students and 45% of grade 6 students scored below grade level in reading (Peel School Results, 2003). Data from the United States's 1998 National Assessment of Reading Progress reported that 38% of students in grade 4 and only 23% of students in grade 12 demonstrate reading performance which is below grade level (Donahue, Voelkl, Campbell, & Mazzeo, 1999). Sadly, the lower levels of grade 12 students who are experiencing reading difficulties are generally attributed to the fact that "adolescents with a reading disability are at a high risk for dropping out of school and for remaining underemployed or unemployed, leading a life of poverty" (Wilson, 1999, p. 24). When children experience reading problems early in their school careers, it can result in feelings
of embarrassment and can affect students’ self-image and sense of self-worth (e.g., Carnine, Silbert and Kameenui, as cited in Smith, Polloway, Patton, Dowdy, & Heath, 2001). These authors also caution that children with reading problems are more likely to exhibit low motivation and acting-out behaviour. If these children do not receive significant support to assist them with their reading difficulties, feelings of rejection, low-self-esteem, unemployment, and depression can be prevalent themes in their adult lives. Movement for Canadian Literacy (2002) reports that adults with literacy problems have salaries that are 33% lower and are twice as likely to be unemployed as their adults counterparts who do not have literacy problems. In addition, low reading abilities often prevent access to important information, such as health and safety information, which contributes to the fact that adults with low reading abilities are reported to have lower general levels of health (Movement for Canadian Literacy).

Children with reading difficulties do not necessarily have learning disabilities, although over 80% of children who are identified as having learning disabilities are characterized by having reading problems (Winzer, 1996). The website for the Learning Disabilities Association of Canada (LDAC) presents some gloomy statistics about the future for children with learning problems who are not given the assistance they require to meet their learning needs. Thirty-five percent of students who have identified learning disabilities drop out of high school, which is double the rate of students without disabilities. Half of the female students will become mothers within the first 5 years of leaving high school. Approximately half of adolescent suicide victims have been previously identified as having learning disabilities (LDAC, 2001). Some Canadian studies have found that 20 to 70% of juveniles in trouble with the law have been identified as having learning disabilities or learning difficulties (Crealock, as cited in
Winzer, 1996; Murray, as cited in LDAC, 2001). It has been reported that 75% of students with reading disabilities in grade 3 who did not benefit from intervention continue to face problems with reading throughout their later schooling and adult lives (Lyon, as cited in LDAC). These children are intelligent, full of potential, and are part of classrooms across the country. We need to find ways that educators can break this cycle of failure by empowering struggling readers to be able to understand the messages in the print-rich society that surrounds them.

Some students are struggling with the decoding component of reading: They find it difficult to connect sounds and symbols together to create coherent words, phrases, and paragraphs. Other students can decode the words, but the underlying message of the text always seems to elude them. They find it difficult to gather meaning from the words and sentences on a page and can finish a story without having a true understanding of what they have just read. These students are missing the true purpose of reading—making meaning (Cain, 1999).

A myriad of programs and strategies exist to help students who have difficulties with decoding. Phonics programs which involve learning letters audiorally, visually, and kinesthetically appear to offer promising solutions to many children with decoding difficulties (e.g., Watson & Johnston, 1999). But what about the students who are experiencing difficulties with making meaning out of the text?

Research examining the differences between good and poor readers has demonstrated that good readers are far more likely to employ reading comprehension strategies when they encounter difficulties reading, while poor readers do not (e.g., Cain, 1999). In the last 2 decades, much research has suggested that a variety of strategies exist which can assist students in creating meaning from text (see Mastropieri & Scruggs, 1997
for a review). Instructing students to make predictions before reading (e.g., Coffman, 1997; Denner & McGinley, 1992), use think-aloud strategies while reading (e.g., Baumann, Jones, & Seifert-Kessell, 1993), and generate summaries after reading (e.g., Jitendra, Hoppes, & Xin, 2000) has been found to enhance the comprehension skills of developing readers.

Unfortunately, teaching students to use more than one strategy with any degree of independence and accuracy is a time-consuming process. In addition, it is especially difficult for students to develop an understanding about when and where to use individual strategies for optimal learning. Explicit strategy instruction has emerged as a successful means of teaching students to become independent users of effective learning strategies (e.g., Mastropieri & Scruggs, 1997; Pressley & Woloshyn, 1995). This research has demonstrated that modelling the use of strategies for students, providing them with extensive guided practice and feedback, and teaching them cues to guide their strategy use are effective in allowing students to become independent strategic learners. Teaching explicitly involves a great deal of time, which can be especially concerning to teachers who are already struggling with demanding curriculum material.

Another problem with the research on reading strategies is that much of it involves working with small groups of students, a luxury which is often not feasible in our public school classrooms today. Large class sizes, heavy curriculum demands, and classes of students with a wide variety of academic, social, and emotional needs put quality small group instructional time at a premium in many of today’s classrooms. In several studies (e.g., Gardill & Jitendra, 1999) the strategies are taught to small groups by special education resource personnel. The reality is that the number of special education teachers and support services have been reduced and the demand for their attention
appears to be continually increasing. These special educators are taxed with demands for their time and expertise with many challenging students, and many do not have the time needed to provide strategic instruction to those who could benefit most. Even if a special education resource teacher could remove and work with a small group of children to teach them reading strategies, the reality is that all children in the classroom are able to benefit from strategic instruction, not just a few. In order to maximize the benefits of strategic instruction, it must be implemented in the classroom, with whole-group instruction, so that the classroom teacher and his/her students can witness the benefits firsthand. This also increases the likelihood of generalization and transfer of learning strategies to other tasks and curriculum areas.

Only a small fraction of the studies on reading strategies to date examine the possibility of teaching students a repertoire of strategies (e.g., Brown, Pressley, Van Meter, & Schuder, as cited in Pressley & Woloshyn, 1995). Most studies examine how instruction in one specific strategy influences students’ comprehension. In a review of the research on strategies for improving reading, Mastropieri and Scruggs (1997) concluded that “instruction in almost any of these strategies appears to have some facilitative effect on reading comprehension, and instruction in some of the strategies appears to have large, powerful effects” (p. 209). The authors further note that the effect of combining strategies may be especially beneficial. The advantages of teaching students a combined repertoire of strategies are twofold: Students are able to reap benefits offered by more than one reading strategy, and the time needed to learn and apply the various strategies may be lessened when the strategies are combined and taught as one strategic tool.
The purpose of the current study was to provide students with explicit instruction on the use of a strategic tool which incorporated research-based reading strategies to improve students' comprehension skills. The tool would also allow students to become strategic learners while covering some of the curriculum expectations defined for their grade level by the Ontario Ministry of Education. In addition, the strategic tool was designed to be presented to the students as part of a whole group, thereby maximizing class time and increasing the likelihood that the strategy could be incorporated into (or generalized to) the classroom reading program.

**Definition of Terms**

*Canadian Achievement Tests, Second Edition (CAT/2):* The vocabulary and reading comprehension subsections of this standardized achievement test were used as an initial assessment to identify children as being either "average to above average readers" or "below average readers."

*Comprehension:* Making meaning; in the case of reading comprehension, making meaning out of written material (e.g., Cain, 1999; Gardill & Jitendra, 1999).

*Comprehension tests:* Students were given a comprehension test immediately following each of the four group sessions (*immediate comprehension test*). These tests were based on the story used in each session and included literal, inferential, and critical/creative questions. The format consisted of both multiple choice and short answer questions. One week after the initial group session, the students were administered a *delayed comprehension test*, which included the same questions and two or three additional questions to see how much information about the story the students retained over the one-week period.
Cued recall: After students completed their retelling, they were prompted to recall specific story elements. Specifically, students were asked to identify the characters, setting, problem, solution, and the beginning, middle, and ending of the story (e.g., “Can you remember who the main characters were in this story?”).

Cued recall correct/error marking scheme: This was one of two formats used for scoring students’ cued recall. A tally was kept for both correct points and errors under each of the seven prompted sections (characters, setting, problem, solution, beginning events, middle events, and ending events). Students were awarded one “correct” point for each item that was correctly identified in the story. “Error” points were awarded for items which were incorrect. This marking format resulted in a total of 14 scores for each student.

Cued recall rubric marking scheme: This was the second format used for scoring students’ cued recall. Students’ responses to each of the five cued recall questions (which related to characters, setting, problem, solution, and main events) were evaluated separately, using a 4-point rubric. Each of the students’ responses was given a mark from 0 (very poor) to 3 (excellent). The rubric was created by the researcher and was designed to be consistent across the sections and across the four stories.

Explicit strategy instruction: Explicit strategy instruction involves the teacher modelling the strategy for the students, including verbalizing the thought process while using the strategy and giving the students reasons as to why they should use the strategy and where and when they should use it. Students are provided with guided practice sessions which include teacher prompts and feedback in order that students gradually become successful in using the strategy independently (e.g., Pressley et al., 1991; Pressley & Woloshyn, 1995).
Fourth group story session: Independent reading: In this fourth group session, students independently read a story and completed the story-frame or notepad. The main purpose of this session was to examine if there was transfer from the first three group sessions (where the story was presented orally) to independent reading.

Individual follow-up sessions: Individual follow-up sessions occurred one week following each of the group sessions, for a total of four individual follow-up sessions. Students met individually with either the researcher or her assistant and were asked to retell the story (which they had heard one week before), and were then asked cued recall questions about the same story. In all four follow-up sessions, students were asked to identify the title of the story and the name of the tool they used. In the first and final follow-up sessions, students were also asked to describe the tool (story-frame or notepad) in detail and to describe how they used it.

Initial group session: Modelling the strategic tools: This first classroom session was used to explicitly model to students how to use the story-frame or the notepad in order to help them understand and remember stories. In this first session, neither group were provided with paper or pencils: All written instruction were modelled by the researcher on a large copy of either the story-frame or the notepad on the front board.

Key points protocol: Students' retellings were scored using a key points protocol. The key points protocol is a list of the most important elements in the story (the main sequence of events in the story, which included key information about the characters, setting, problem, and solution). It was developed by two elementary school teachers who independently read the stories and then compared their lists of key points.

Metacognition: “the knowledge of when to apply such [reading] strategies as a function of text difficulty, situational constraints, and the reader’s own cognitive abilities” (van
den Broek & Kremer, 2000, p. 10). Being aware of one’s own thinking, so that one can reflect on the best way to approach a given task, such as reading a story in order to understand and remember it.

**Notepad:** The notepad is a pencil and paper tool that was designed for the purposes of this study. A means of recording information about the stories presented in the study. The students who did not receive strategic instruction on the use of the story-frame were provided with a notepad. The notepad resembles the story-frame with its three distinct sections so that it can be used to record ideas and information before, during, and after the reading of the story. The notepad is much less structured in format than the story-frame. Within each of the three layers, the space on the paper is open for students to make use of as they wish, and there was no request for specific types of information (e.g., characters, setting). Students could record their thoughts and ideas about the story in a form which made sense to them (e.g., words, symbols, and images were all acceptable).

**Predictive story-frame (or story-frame):** The story-frame is an advanced organizer (a strategic tool) designed for the purposes of this study. It includes the story-elements (characters, setting, key events, problem, solution) positioned in the shape of a picture-frame. The predictive story-frame used in this study is an adaptation of a simple story-grammar organizer, because it includes space for students to make predictions. The predictive story-frame used in this study had three “layers.” The outermost layer allowed students to record their initial predictions about the story after hearing the title and viewing the cover illustration. The middle layer allowed students to revise and add to their initial predictions based on their knowledge of the initial part of the story. The innermost layer allowed students to summarize the main elements of the story after they
had listened to or read the story.

**Reading ability:** For the purposes of this study, students' reading ability was defined using their scores on the Canadian Achievement Tests, Second Edition (CAT/2) Reading Assessment. Students who received an overall score of 50% or higher were defined as "average to above average readers," while students who received a score lower than 50% were defined as "below average readers."

**Reading strategies:** Reading strategies can be defined as "mental and behavioural activities that people use to increase their likelihood of comprehending text" (van den Broek & Kremer, 2000, p. 10). "Any systematic, goal-directed behaviour that can be generalized beyond the immediate task ([e.g.,] the particular text)" (Johnston, 1985, p. 636). The current study examines a repertoire of strategies (prediction and summarization, based around the use of a story-grammar) presented in a single tool, the story-frame.

**Recall of story title and strategic tool name:** At the beginning of each of the four retelling sessions, students were asked to provide the title of the story and the name of the strategic tool they had used during the story session (story-frame or the notepad). Students' recall of the title and tool name was scored using a simple marking scheme which was developed by the researcher. Students could receive between 0 points (no title/tool recalled) and a maximum score of 3 points for each of the title and strategic tool descriptions.

**Retelling:** One week following the presentation of each story, students participated in an individual follow-up session with the researcher or the research assistant. In this session, students were asked to retell the story from one week ago, starting at the beginning and including as many details as possible. Students' retellings were scored using the "Key
Points Protocol.”

Second group session: Guided practice: This second session followed the initial group session, where the story-frame or notepad was explicitly modelled by the researcher. In this second session, the teaching format remained the same as in the initial training session, except that the students were provided with the pencil and paper tools which they completed under the direction of the researcher.

Strategic tool description: In both the initial and final retelling sessions, students were asked to describe in detail how they used their strategic tool. Students’ explanations were evaluated in two manners: one which evaluated students’ description of how to use the tool, including the correct sequence of actions (e.g., making predictions before reading, reading the story until the halfway point and then refining predictions, and generating summative comments after reading). The second manner examined how accurately students were able to recall the strategic tool elements (e.g., the story elements for the story-frame, and “thought-bubbles” for notepads). In each case, students’ responses were evaluated using a 4-point marking scheme, with scores ranging from 0 (very poor) to 3 (excellent).

Third group session: Independent practice: In the third group session, students practised using the story-frame or the notepad on their own (i.e., the researcher did not model making predictions and did not fill in the enlarged story-frame or notepad that was posted on the blackboard). As in the first two training sessions, the story was presented to the students on a videotape. Students were reminded to use the same strategies (e.g., thinking about the story before, during, and after the story, making and changing your notes) to help them remember important details about the new story they were going to see in this third group session.
Working memory or short-term memory: This is where information is consciously manipulated or "worked on" in order to increase the chance of transferring that information to long-term memory. Without attention and rehearsal, the information in working memory decays in approximately 30 seconds. Working memory is limited in capacity, although the amount that can be stored depends on how the information is "chunked" or related together (Dechant, 1991). It is important to realize that working memory "is of central importance in reading. It is where you lodge the traces of what you have just read while you go on to make sense of the next few words" (Smith, as cited in Dechant, p. 84). When reading, younger children and children with reading difficulties use more of working memory for encoding (or processing), and therefore, there is less space available for the storage of information (e.g., Nation, Adams, Bowyer-Crane, & Snowling, 1999).

Chapter Summaries

The literature review presented in Chapter Two explores what it means to have good comprehension skills and explores various challenges students face when comprehending text materials. Research on strategies which have been used to promote comprehension are presented, with a focus on prediction, story-maps, and summarization strategies. Chapter Three provides an overview of the methodology, including a description of the participants, procedures, and materials used. Chapter Four presents the findings, and Chapter Five includes the implications of the findings and the final conclusions.
CHAPTER TWO: LITERATURE REVIEW

Introduction and Chapter Overview

In our increasingly complex and technological society, literacy is a requirement, not a luxury. Reading is required in daily occupational and leisure activities and is a prerequisite for success in our educational system (Dechant, 1991; Pressley, 1998). Reading can be crudely divided into two components: decoding and comprehension. Both are necessary for effective reading to occur.

As students' elementary school years progress, the instructional focus in reading shifts from lower order processing skills, such as decoding, to higher order processing skills, such as comprehension. Students who are poor readers often continue to receive instruction in decoding which delays, sometimes indefinitely, their instruction in reading comprehension. Some researchers believe that this is one of the causes of poor readers' comprehension difficulties (e.g., Hansen & Pearson, 1983).

This chapter presents an overview of the research on reading comprehension. First, the components of good comprehension are examined, followed by an exploration of the factors which contribute to students' reading comprehension difficulties. Both internal and external factors are explored. The second half of this chapter examines how students' difficulties with comprehension can be addressed. The research supporting a variety of cognitive strategies, including prediction, story-mapping, summarization, and self-monitoring are presented. Some researchers (e.g., Mastropieri & Scruggs, 1997; Pressley & Woloshyn, 1995) have conducted extensive literature reviews on reading instruction and have identified some key elements of successful strategy instruction. These researchers have also identified explicit instruction as being integral to the teaching
of strategies which foster reading comprehension, and their research is presented in this chapter. Finally, this chapter concludes with an overview of the purpose, procedures, and hypotheses associated with the present study.

What is Good Comprehension?

Comprehension can be defined as the process whereby a reader constructs a mental representation of the author's message, which includes both the information in the text and its interpretation by the reader (Dechant, 1991; van den Broek & Kremer, 2000). Dechant states that comprehension relies on two types of information: that which is received from the text (the surface structure of the text) and that which is retrieved from the reader's memory. The schemas of past experiences and prior knowledge that are contained in the reader's memory are critical in assisting readers to construct meaning from the text. By relating new ideas encountered in the text to familiar ideas and mental constructions, readers build an understanding of the material they are reading, and comprehension occurs.

Many processes and skills underlie comprehension. First, good comprehension depends on students' word-recognition abilities. Students who are unable to demonstrate fluency and accuracy in their word-recognition skills will be unable to accurately construct meaning from the text (Dechant, 1991). Skilled comprehenders must be able to identify individual words and their meanings and must understand the semantic and syntactic processes by which individual words are organized into phrases and sentences. When reading a sentence, students attempt to interpret the information contained in the
text by linking the information to prior knowledge and to concepts encountered in previous sentences within the same text (van den Broek & Kremer, 2000). This same process occurs between sentences, within paragraphs, and within the total text (Dechant).

Skilful comprehension also relies on readers' personal standards for success, metacognitive awareness, and ability to apply strategies successfully (Cain, 1999; van den Broek & Kremer, 2000). Skilful comprehenders recognize when they have adequately understood the meaning of one portion of the text and can proceed to the next unit of comprehension (phrase, sentence, or paragraph). Similarly, good comprehenders recognize when they are having difficulties constructing meaning from the text, and are able to apply additional strategies to assist them with the comprehension task. Cain found that even 7- and 8-year-old skilled comprehenders were able to identify effective strategies that could be employed independently when they encountered various comprehension problems. This was demonstrated at both the word level (e.g., when students encountered a word they could not identify) and at higher levels of comprehension (e.g., when they did not understand a sentence or event that was presented in the text).

What Are Challenges to Comprehension?

Cain (1999) states that sources of reading comprehension difficulties may be identified as either lower level processing problems (e.g., phonological processing problems or syntactical deficits) or as higher level processing difficulties (such as making inferences and connecting the text to personal background knowledge). Van den Broek
and Kremer (2000) identify five types of reader characteristics which play a role in comprehension failure: general attention, attention-allocation skills, inferential skills, background knowledge, and basic skills.

**General Attention Difficulties**

Attention to task is critical in allowing students to block out distractions and focus on processing the information in the text. Lorch et al. (1999) looked at children with Attentional Deficit Hyperactivity Disorder and found that these children show deficits in “the amount of cognitive resources they dedicate to story comprehension and the way in which they distribute these resources” (p. 280), although these findings were moderated by both intelligence and gender. The authors suggest that students’ poor comprehension could be attributed to their attentional problems which are causing them to encode very few story events. As a result, these students are unable to form connections between the events and are unable to produce a logical story structure (Lorch). Another possibility is that the students may have deficits in working memory, which is another challenge to comprehension that van den Brock and Kremer (2000) identify under their category of “general attention” difficulties.

Deficits in working memory may prevent poor comprehenders from maintaining a story event in working memory long enough to form connections to previous and subsequent events in the text (Barkley, as cited in Lorch et al., 1999). Several studies support the idea that poor working memory deficits underlie the comprehension difficulties of poor readers. Yuill, Oakhill, and Parkin (1989) examined whether working memory could be a source of difficulty for 7- and 8-year-old children who demonstrated
weak comprehension skills compared to their word recognition skills. They found that poor comprehenders did not perform as well as good comprehenders on a test of nonlinguistic working memory (i.e., the reading and recall of digits). In their second experiment, the authors found that poor comprehenders did not perform as well as the good comprehenders on a reading comprehension task, but only when the task involved high processing demands which placed increased demands on students’ working memory (e.g., by increasing the distance between the resolution and the anomaly in an anomaly resolution reading task). Yuill and her colleagues concluded that the difficulties lie in poor comprehenders’ storage ability when they are concurrently involved in processing information.

Nation et al. (1999) contested the finding that poor comprehenders have a deficit in general working memory. These authors argued that Yuill et al.’s (1989) nonverbal memory task did place demands on verbal working memory, as students were required to read and recall the names of digits. Nation et al. compared good and poor comprehenders (matched for word recognition ability) on a spatial working memory task and found that on this task the performance of good and poor comprehenders did not differ significantly. In the experiment involving the processing and storage of verbal information, poor comprehenders did significantly poorer than good comprehenders. Nation et al. concluded that the comprehension problems of average decoders are due to more specific problems in the verbal/linguistic domain of working memory, rather than resulting from a more generalized working memory deficit. Their findings can be related to the theory of working memory which states that only seven (plus or minus two) chunks of information
can be stored at any time (Miller, 1956), or that the amount of information is based on what can be held in an “articulatory” or “phonological” loop, where information can be rehearsed for approximately 1.5 seconds (Baddeley, 1998). In the complex memory task involving the storage and processing of verbal information, results indicated that the more difficult the processing, the less successful poor comprehenders were in being able to recall task information. Nation et al. suggested that poor comprehenders are less efficient at processing information than age-equivalent average comprehenders. When processing demands are increased, less of the information is stored, and therefore, less can be recalled. Younger children and children with reading difficulties use more of working memory for encoding (or processing), and therefore, there is less space available for the storage of information.

Attention-Allocation Skills

Van den Broek and Kremer (2000) described attention-allocation skills, or the decisions about what components of reading currently need attention, as depending upon the reader’s metacognitive awareness and repertoire of reading strategies. Studies have demonstrated that good and poor readers differ in their understanding of how to apply reading strategies (e.g., August, Flavell & Clift, 1984; Cain, 1999; Moore, Chan, & Au, 1993). August et al. examined the differences between good and poor grade 5 readers, matched on IQ and decoding ability, on measures of story recall and comprehension monitoring. Students were presented with stories on a computer screen and were instructed to read the story and tell the researcher whether or not they thought the story
was missing a page. Students were then asked questions to test their understanding of the story. August et al. found that relative to poor readers, the good readers were significantly more likely to correctly report the missing page, identify its position, and describe what information the page should include. The researchers also found that students did not differ significantly in their ability to recall the main ideas in the story.

August et al. used this information to conclude that the differences in students' abilities to report problems in the stories (e.g., missing pages) could not be attributed to differences in students' recall abilities. Since the stories were written at a grade 2 reading level, and because all students were pretested on the vocabulary in the stories to ensure they could read the words successfully, it is reasonable to suggest that poor readers' working memory was not taxed by complex ideas or decoding difficulties, which explains the lack of difference in students' recall abilities. Good readers were found to spend more time on the inconsistent stories than children who were poor readers. Good readers were also more likely to look back in the story when confronted with inconsistencies and to slow down at inconsistent sections of passages. This evidence suggested that good readers are more likely to monitor their comprehension as they read and/or are more likely to employ strategies (e.g., slowing down, looking back in the text) when they encounter comprehension difficulties.

Cain (1999) interviewed good and poor comprehenders who were matched for word recognition ability and chronological age (7 to 8 years old), along with a group of younger (6- to 7-year-old children) who formed a comprehension age match (CAM) group for the older students who were poor comprehenders. Cain, Oakhill, and Bryant
(2000) investigated the comprehension age match design and suggested that finding significantly different results for poor comprehenders and the CAM group "does not prove causality. However, it indicates that strengths in the skill being measured are more plausibly the cause of reading comprehension success, than the result of it" (p. 38). It is evident that empirical studies which use this methodology have advantages over the more traditional single control group design in helping to determine the direction of the relationship between reading comprehension and specific skills, such as metacognition.

In the first experiment, students were asked how they would try to remember a story (Cain, 1999). Sixty-seven percent of good comprehenders indicated that they would use a "gist" memory strategy, focusing on the main ideas of the story, compared to only 14% of poor comprehenders. Forty-two percent of students in the CAM group also identified a "gist" or main idea memory strategy as their preference. On another item, students were presented with a list of six options to improve story recall, including strategies to remember the main idea of the text (e.g., thinking about the key points), external strategies (e.g., writing the story down), as well as strategies which were unlikely to enhance recall (e.g., look at each word carefully). Good readers were significantly more likely than poor comprehenders or students in the CAM group to select comprehension strategies such as imagery or key point identification over other strategies such as remembering key words correctly or memorizing the names of the characters. That is, good comprehenders were more likely to select strategies which have been shown in the research to be beneficial to reading comprehension (e.g., see Pressley & Woloshyn, 1995 for a review) than strategies which are generally considered to be unrelated to
successful comprehension. In a third situation, students were asked to identify strategies that could be employed when they encountered comprehension problems while reading. Significantly more skilled comprehenders were able to identify effective strategies at the word level, sentence level, and event level than poor comprehenders. The findings from this first experiment support the belief that metacognitive differences are related to comprehension skills, but the direction of the relationship remains unclear.

In a second experiment, Cain (1999) presented students with stories and comprehension questions in four different instructional conditions which reflected different reading goals (e.g., skim versus study). It was found that students’ ability to adjust their reading style in light of different reading goals was directly related to students’ comprehension level. Students in both the good comprehension group and the younger CAM group demonstrated control over their reading which was not apparent in the group of poor comprehenders. For example, poor comprehenders’ reading speed did not vary from the skim condition to the study condition. In addition, these students, unlike the comparison groups, did not demonstrate improved recall in the study condition over the “skim” condition. These findings indicated that poor comprehenders did not set specific goals for various reading tasks, did not monitor how well they were attaining the prescribed goals, and were not aware of effective strategies they could employ to remedy their comprehension difficulties. Cain (1999) concluded that flexibility and control in reading behaviour should be considered a prerequisite skill for success in reading comprehension. This metacognitive behaviour appears to be lacking in poor comprehenders.
Inferential Skills

Inferencing and reasoning skills enable readers to connect ideas stated in the text to additional textual information and to their personal background knowledge (Cain & Oakhill, 1999; van den Broek & Kremer, 2000). Inferencing allows readers to add missing details to what is explicitly stated in the text and allows readers to construct integrated, coherent mental representations of the text. Unfortunately, studies have shown that poor comprehenders are less likely to make inferences than their peers who are good readers (Oakhill, 1983). Cain and Oakhill (1999) conducted a study to examine whether inference-making skill was more likely a determinant of or a product of good comprehension by using the comprehension age match design. They examined students’ performance on both text-connecting inferences (making connections between sentences) and gap-filling inferences (which require the use of prior knowledge to understand the meaning of the text). The authors found that poor comprehenders did not differ significantly on their ability to answer literal questions from memory, but they were worse at both text-connecting and gap-filling inference questions than good readers. Since students in the CAM group did significantly better than the poor comprehenders on text-connecting inferences, the authors suggested that poor inference-making ability is at least partially the cause of poor comprehension, rather than the reverse (i.e., that poor comprehension is causing weak inferencing).

The second purpose of Cain and Oakhill’s (1999) study was to examine the reasons why poor comprehenders do not make inferences. The authors were interested in
examine three possible causes for students' failure to make inferences suggested by Yuill and Oakhill (1991). First, it was suggested that less skilled comprehenders may have a weaker memory of text. This theory was not supported in the study, as all students did equally well on measures of literal recall. A second possibility was that less skilled comprehenders may not be aware of when inferences should be made. This theory was also rejected by Cain and Oakhill, as they found that poor comprehenders were able to make inferences when they were allowed access to the text for look-backs. The authors suggest that a reason for poor comprehenders' initial failure on text-connecting inference questions may be that they enter the reading task with a different set of goals than students who are more skilled at comprehension. Poor readers may concentrate more on the accuracy of their word reading rather than concentrating on extracting meaning from the text. The third possible reason suggested for inference failure was that poor comprehenders may have general background knowledge deficits. This was not supported by Cain and Oakhill's findings, as they questioned students to ensure they had adequate knowledge about the ideas and concepts being addressed. The authors suggest that poor comprehenders may lack strategic knowledge about how to apply their background knowledge to the text in order to fill in missing information.

Background Knowledge

Content knowledge and a knowledge of effective reading strategies are necessary for effective comprehension (Perfetti, Marron, & Foltz, 1996; van den Broek & Kremer, 2000). Perfetti et al. suggested that knowledge at many levels may be a fundamental
difference between good and poor readers. For example, knowledge of word meanings and of the concepts covered in the text is needed to construct an accurate representation of the text. Readers' knowledge also affects their use of strategies (Afflerbach, 1990; Perfetti et al.). For example, the ability to make inferences depends on the reader's goals and the surface structure of the text, in addition to the knowledge the reader has about the topic and about when inferences should be made (Perfetti et al.). Afflerbach found that when readers possessed background knowledge about a topic, their use of prediction strategies increased significantly across both fictional and expository text. Cain (1999) demonstrated that poor comprehenders showed weaker declarative and procedural knowledge of reading strategies than their peers who were more skilled comprehenders. Perfetti et al. cautioned that problems in reading should not necessarily be attributed to problems with strategy use, as a lack of knowledge will often display itself as failure to make inferences or to engage in metacognitive monitoring. If readers do not have an internal schema which can be used to integrate new information that they are encountering in a passage they are unlikely to recognize inconsistencies when they occur, and thus are unlikely to engage in strategies to remedy their comprehension difficulties.

Perfetti et al. (1996) stated that knowledge of text structures and text genres is critical for readers to be able to apply appropriate comprehension strategies. Cain (1996) conducted an investigation to examine how comprehension ability is related to story knowledge and to explore which facilitates the other. The study included 7- and 8-year-old poor and good comprehenders who were matched by age and reading accuracy scores, and a comprehension age match group of 6- and 7-year-olds. In the first experiment,
students were asked to compose stories in response to either a picture sequence or a title prompt. Stories were transcribed and evaluated in terms of story conventions (beginnings, endings, characters, and setting) and in terms of the event structure (integrated and logically sequenced events). Cain used the findings from this experiment to suggest that a good knowledge of story structure is causally related to comprehension ability rather than resulting from extensive exposure to or practice with reading comprehension. This conclusion was based on two findings. First, the topic prompt elicited stories with better structure from the CAM group than the poor comprehenders. Since these two groups of students were equivalent in terms of comprehension ability, it is concluded that poor story knowledge does not result from comprehension ability.

Second, with the picture sequence prompt, the quality and completeness of the poor readers’ stories improved greatly. In this condition, the performance of the two groups (poor comprehenders and the CAM group) was not statistically significant. Cain suggested that the sequence of pictures was providing the explicit narrative structure that the poor comprehenders required to compose a complete, integrated story. The author further suggested that a lack of knowledge about textual organization may be a contributing factor to students’ poor comprehension of stories.

In the second part of the investigation, Cain (1996) conducted interviews with students in all three groups to examine their awareness and understanding of story features. She found that good comprehenders (75%) were more likely than the CAM students (44%) or poor comprehenders (37.9%) to maintain that fairy tales are fictional and that the characters in them are not real. Cain referred to Applebee’s (1978) finding
that 40% of 6-year-olds believed that a fairy-tale character was real, whereas by age 9, over 90% of children confirmed that the characters in these tales were fictional. In light of this developmental evidence, Cain suggested that poor comprehenders may have an immature knowledge of stories.

In the same study, Cain (1996) conducted interviews to probe students’ understanding about the textual features of stories. One question asked students to describe how they would make up a title for a story that was read to them. Eighty-three percent of good comprehenders identified that they would look at key events in the story and the names of the characters, compared to only 29% of the poor readers and 27% of students in the CAM group. Similar results were obtained when students were asked about the importance of story beginnings. The majority (54%) of good comprehenders identified the beginning of a story as being important in setting up the story (e.g., introducing characters) compared to 26% of CAM students and 21% of poor comprehenders. Statistical analysis revealed that comprehension ability was significantly related to students’ ability to identify key features of story beginnings. The same trend was noticed when students were questioned about story endings, although the results were not statistically significant. The author suggested that poor comprehenders’ less developed knowledge about the role of story features may affect their comprehension. Overall, this study demonstrated a strong relationship between story knowledge and comprehension ability and suggests that weak knowledge of story structure is likely to be a cause of reading comprehension problems (Cain).
Basic Skills

Lower level processing problems, such as difficulties with letter or word identification, phonological processing, and a lack of syntactical knowledge, can contribute to poor comprehension (Cain, 1999; van den Broek & Kremer, 2000). Being able to construct mental representations of the text relies on readers being able to understand the surface structure of the text. Studies show that poor readers and younger children are more likely to attend to the decoding aspects of reading rather than to meaning construction (Hansen & Pearson, 1983). Yuill and Oakhill (1991) found that poor comprehenders differ from good comprehenders in their likelihood to identify accurate word reading ability as a critical feature of reading skill. More skilled comprehenders are more likely to identify meaning construction as the purpose of reading (Dechant, 1991; Yuill & Oakhill). When readers are struggling with basic decoding skills, they are placing more demands on their cognitive resources, or their working memory (Yuill et al., 1989). The result is that less working memory is available for higher order processing such as creating connections between information contained in the text and background knowledge. This is why children who have difficulty with basic decoding skills often have difficulties with comprehension (van den Broek & Kremer, 2000).

When students are struggling with reading, many teachers tend to focus on these basic decoding skills, often to the detriment of higher level comprehension skills and to the true meaning of reading as "meaning making" (e.g., Hansen & Pearson, 1983). It is important to recognize that listening comprehension is an important element of and
precursor to reading comprehension (e.g., Dufva, Niemi, & Voeten, 2001; Joshi & Aaron, 2000). Listening comprehension activities provide an avenue for students with weak decoding skills to attend to the key elements of stories and provide them with a chance to practice essential reading comprehension strategies such as making predictions. Experiences with listening comprehension then provide a foundation for later success with reading comprehension. “Listening or auditory comprehension...has an important effect on the development of competency in reading....Listening and reading both involve the reception and interpretation of linguistic messages and ideas from others” (Dechant, 1991, p. 93). It is evident that general linguistic comprehension in addition to basic word recognition skills is essential for successful reading comprehension (e.g., Dufva et al.).

**Text Properties and Instructional Context**

In addition to reader characteristics, van den Broek and Kremer (2000) include text properties and instructional context as two broad factors which influence comprehension. When texts are structured to reduce the demands on the readers’ working memory (i.e., through the use of simple vocabulary, clearly presented background information, and the omission of unnecessary details), readers have more processing capacity available to engage in higher order comprehension skills. Conversely, if readers are forced to struggle with decoding words that are beyond their reading level and read about concepts that are unfamiliar, the cognitive resources that are needed for inference making and comprehension monitoring are not available and poor comprehension results. Similarly, the instructional context may include distractions.
which result in less than complete processing of textual information. In addition, van den Broek and Kremer state that teachers’ instructional styles, techniques, and learning expectations may influence students’ reading goals (Cain, 1999) and consequently the type of strategies they employ and the amount of effort that is allotted to the comprehension process.

What Can Be Done to Promote Comprehension?

Durkin (as cited in Pressley, Brown, El-Dinary, & Afflerbach, 1995) examined elementary classes and discovered that teachers were constantly testing students’ comprehension of reading materials, but that there was very little evidence of teaching students how to be successful comprehenders. Pressley et al. stated that Durkin’s observations were “a wake-up call, motivating research on how instruction might increase students’ reading comprehension” (p. 215). In the late 1970s and early 1980s, much research already existed which demonstrated that students with learning difficulties could improve their performance on certain intellectual exercises when they received instruction in the use of cognitive strategies related to the task (e.g., Chan & Cole, 1986; Hansen & Pearson, 1983).

In the 1980s and 1990s, many experiments on strategic instruction were carried out which hypothesized that when students were taught to either construct representations (e.g., a summary, or mental images) or to interact with the text (through activating prior knowledge or answering questions of the text), the result would be improved comprehension and recall (Pressley et al., 1995; Pressley & Woloshyn, 1995). The results
of these studies demonstrated that strategies applied before (e.g., predictions), during (e.g., generating images), and after (e.g., summarizing) the reading of a text could result in improved recall and comprehension. Pressley et al. believed that strategy instruction fosters the type of mental processing that good readers use to be successful. Students who use comprehension strategies demonstrate an enhanced understanding of what they read, which leads to increased academic knowledge and general background knowledge. This knowledge, in turn, makes it easier for learners to carry out the strategies more effectively, and thus they benefit more from new textual encounters. As a result, Pressley et al. stated that these readers will experience increased motivation to use the strategies they have been taught.

**Prediction**

Duffy and Roehler (1987) stated that skilled readers readily employ two types of strategies. During the reading process, skilled readers use a number of repair strategies (e.g., rereading) when comprehension is endangered. Before beginning the reading process, good readers are already engaged in activating their background knowledge and evaluating the reading goals to make strategic predictions about the text (Afflerbach, 1990; Duffy & Roehler). A number of studies have shown that making predictions is related to enhanced reading comprehension.

Afflerbach (1990) analyzed the “think-alouds” of high school and university students who were good readers as they read a variety of stories and essays. He found that a greater number of predictions were made on stories that were more familiar to the
participants in both content and structure. Students’ prior knowledge about the topic covered in the essays and stories appeared to influence the number of predictions students made. Predictions for less familiar materials occurred less frequently and were more general in nature than predictions made for more familiar topics. Afflerbach concluded that students combined their knowledge of text content and structure with cues from the text to create predictions and to gather meaning from the text. The author relates his findings to schema theory, whereby background knowledge is activated by cues from the text, which in turn causes readers to anticipate both the content and structure of the passage. This also allows good readers to use predictions for the purpose of monitoring their comprehension. An analysis of participants’ think-alouds indicated that good readers made predictions and then read to modify or confirm their prediction as they constructed a representation of the text (Afflerbach; Baumann, et al., 1993).

Denner and McGinley (1992) examined the use of two different types of prereading strategies to increase the reading comprehension of 96 grade 7 and 8 students. These good and poor readers were asked to write either predictions or a story composition when they were shown words and phrases selected from a story, or what were otherwise referred to as “story impressions.” After reading the story, students’ recall was measured by a cloze exercise which contained both impression-related and impression-unrelated items. For impression items, students in both the prediction and the story-construction condition had a mean recall score that was significantly higher than students in the control group who read the story without participating in any prereading activity. Both good and poor readers who composed a story from the impressions
demonstrated the highest degree of recall. This experiment demonstrated that prereading activities can be particularly important for poor readers, as they recalled significantly more impression-related items in both the prediction and story-composition conditions over poor readers in the control condition. Poor-readers actually scored slightly higher than good readers in the composing condition, and the authors suggest these results may reflect the fact that good readers make predictions and employ strategies automatically while reading, whereas poor readers do not. The results of this study suggest that poor readers can be instructed on the use of prereading strategies, such as prediction, which can increase their reading comprehension.

In a study examining the effect of four different prediction conditions on grade 6 students’ written retellings or stories, no significant differences were found between the groups (Coffman, 1997). Several limitations may have influenced these findings. For instance, the prediction questions were placed within the story passages that students read, rather than being posed prior to reading, and there was no assurance that students stopped to answer the prediction question when they encountered it in the text. As they were given the entire story at once, students may have read to the end of the story and then gone back to create their written answer to the prediction question which they had to submit. In addition, the prediction questions were based on only the actions of the character in the text and not the general chain of events (e.g., “What do you think will happen next?”). The three different stories used in this study resulted in significant differences in students’ retellings. Students demonstrated a significantly greater recall for a traditional folktale story over the other two (historical fiction and mystery) stories. The
author suggested that the length of the stories may have been a variable in students’ success, as the folktale was the shortest story. This may have reduced the load on students’ working memory by reducing the number of important events students had to remember and recall. Coffman also suggested that the traditional story structure of this story might have made it more familiar to students. This corroborates Afflerbach’s (1990) finding that when stories are more familiar, students are likely to formulate more predictions as they read, and this is likely to improve their recall of the text. If stories are unfamiliar, students are unable to rely on prior knowledge and internal story schemas to generate quality predictions that will guide their understanding of the text. The results of Coffman’s study suggest that presenting students with more familiar text passages may reduce the load on working memory, which in turn will provide students with more processing capacity for higher level comprehension demands.

**Story Maps**

Skilled readers begin the task of reading with preconceived ideas or expectations about the structure of narrative stories. Story schemas, or readers’ expectations about story structure, are believed to help recall and comprehend text by facilitating connections between readers’ prior knowledge and new information that they encounter in the text (Mathes, Fuchs, & Fuchs, 1997; Rand, 1984). The schema theory emphasizes the importance of connections between prior knowledge and text. According to this theory, poor comprehenders do not activate their prior knowledge effectively when they read, nor do they perceive the potential connections between new information and existing mental
representations (Idol, 1987; Mathes et al.). Story maps are visual representations of story structure; they can be used as a framework to focus readers' attention to key story elements (e.g., characters, setting, problem, main events, solution) and can foster connections to prior knowledge, which leads to increased comprehension of the text (Idol; Rand; Reutzel, 1985). Several research studies have examined the use of story maps to increase story comprehension across students of different ages and abilities and across different learning contexts (e.g., before, during, or after reading).

Since students with learning disabilities are often characterized by poor reading abilities, several studies explaining the effectiveness of story maps have included students with learning disabilities (Gardill & Jitendra, 1999; Idol, 1987; Vallecorsa & deBettencourt, 1997). Idol conducted a study with a mixed-ability group of grade 3 and 4 students which included three students who were identified as having learning disabilities and two children who were identified as low achievers. Students in this study progressed through the stages of explicit teacher instruction and modelling (of story map construction), guided practice, and independent practice, before moving on to the final maintenance stage, where students were no longer permitted to use a story map. Students read 21 stories over the course of the study, with each story being followed immediately by 10 comprehension questions which referred to elements contained in the story maps (e.g., characters, setting). The results indicated that all students increased their daily story comprehension scores over baseline measures, and the elevated levels were maintained even when students did not use the story map. While all students made gains, the students identified as having either learning disabilities or low achievement demonstrated
the most significant gains on the curriculum-based assessment, where they read passages aloud which were scored for reading rate, accuracy, and comprehension. It was also found that the number of story elements that students, especially poor readers, included in their story writing increased significantly over the course of the study compared to students who did not receive story-map instruction. Idol concluded that average achievers were not curtailed by the presence of poor readers in the group, and thus the explicit instruction of a story-mapping strategy can be used successfully in a mixed-ability classroom to improve students' reading comprehension. Mathes et al. (1997) report similarly positive results with cooperative story-mapping which involves mixed-ability groups of three to five students who complete story-maps collaboratively. The authors suggest that the use of mixed-ability groups provides modelling for less skilled comprehenders (Mathes et al.).

Gardill and Jitendra (1999) looked exclusively at children with diagnosed learning disabilities. In a multiple baseline study, they examined the effects of providing explicit story map instruction to students whose reading comprehension levels were at least 2 years below grade level. Students were involved in constructing a story map for each story they read (with teacher feedback that was diminished and eventually withdrawn), and they completed comprehension questions following the completion of the story maps. Students' overall performance on tests consisting of story grammar comprehension questions increased significantly from baseline levels, as did their comprehension scores on questions from the basal readers (although the increase here was not as substantial). All participants were able to generalize their use of story maps to a new story at the end
of the study, and average scores on the accompanying story grammar comprehension questions were up by 56% compared to students’ original baseline comprehension scores. Two weeks after instruction, students completed a maintenance measure. Four of the six participants obtained scores that were as high or higher than their independent scores from the end of the study. Two of the participants’ scores dropped compared to their independent level, although their scores were still up from the baseline measures. In addition, all students reported that the story map strategy was beneficial in assisting them to comprehend and remember stories (Gardill & Jitendra).

Several studies have examined the effectiveness of story-map instruction compared to other classroom instructional procedures. Reutzel (1985) conducted an experiment which examined the use of story maps with a regular basal lesson compared to the same basal lesson with the directed reading activity (DRA) as scripted in the teacher’s manual. All the grade 5 students read one expository and one narrative passage. Students in the experimental group were shown a completed story map for each story prior to reading. The researcher engaged students in a discussion which focussed on examining the story map and making predictions about the story it described. The control group followed the directions in the teacher’s manual for story prereading activities, and students composed answers to comprehension questions designed to engage students in making predictions about the story. Students in the story-map condition did significantly better than students in the control group on written retellings of both stories. Reutzel concluded that story maps can improve students’ comprehension of both expository and narrative text. He suggested that story maps gave students a visual summary of the text,
provided a model for them to organize information as they read, and encouraged self-monitoring of comprehension.

Baumann and Bergeron's (1993) extensive study of grade 1 students' story comprehension incorporated Reutzel's (1985) control group design (i.e., students in the control received instruction which consisted of directed reading activities as scripted in the basal teacher's manual, and students received no specific instruction in comprehension). Baumann and Bergeron explored the use of story-map instruction through two different experimental groups. Students in the first classroom were instructed on how to create their own story maps (e.g., filling in information on setting, characters, problem, events, and ending). Students in the second story-mapping condition also created story maps, but in the second half of the study these students also used story maps for writing. Specifically, they were provided with completed story maps for stories they had not read, and were told to write a story from the story map (this is similar to the "story impressions" procedure used by Denner & McGinley, 1992). A third classroom used a modified directed reading and thinking activity (DRTA) approach which involved the heavy use of predictions. All students participated in six instructional sessions where they were provided with copies of children's stories to follow as the instructor read the story aloud. Results showed that students in both story-mapping conditions outperformed students in the control condition in all measures of reading comprehension (e.g., test of story elements, summary test, main idea selection task, retelling test). Students in the story-mapping groups demonstrated a significant increase in their understanding and recall of narrative elements compared to the other two groups. Students in the DRTA
condition did equally well as students in the story-mapping conditions on delayed story comprehension measures and on the identification of important story elements. The authors hypothesized that this was due to the extensive predicting and verifying component of the DRTA which has been empirically validated as contributing to reading comprehension (e.g., Denner & McGinley, 1992). In the oral retellings, the students in the story-mapping condition included more information and more story elements and composed longer, more organized retellings. No significant difference in performance was found between the two story-mapping conditions. Both appeared to be equally effective in increasing students' reading comprehension (Baumann & Bergeron,).

Researchers have questioned the extent to which story mapping influences both literal and inferential comprehension (Boyle & Weishaar, 1997; Davis, 1994). Davis compared the effectiveness of story mapping as a prereading strategy to the use of the directed reading activity (DRA) prereading lessons which are included in basal readers' teachers' guides. Davis explained that the DRA procedure aims to "develop a background" (often by asking students about the title of the story) and to create a purpose for reading (often by asking open-ended questions). Davis's story map condition was designed to mirror these same prereading aims. A story map was prepared for each story, and was predesigned to reflect the story's structure. Questions about the story frame were intended to develop a background and to create a purpose for reading (i.e., by making predictions about the story). This procedure is similar to that used by Reutzel (1985). Unlike Reutzel, Davis examined the literal and inferential comprehension of readers in two grades: grade 3 and grade 5. He found that grade 3 students in the story-mapping
group scored 14% higher than the control group on inferential comprehension questions and 7% higher on a measure of literal comprehension. These results were statistically significant; however, only the inferential comprehension score of grade 5 students (7% greater than the control group’s inferential score) was statistically significant, and not their literal comprehension score (2% higher than the control group). These findings support previous research which has indicated that comprehension monitoring abilities tend to increase with development (Dechant, 1991). Davis also proposed an explanation for the differences in students’ inferential and literal comprehension scores. He stated that the use of story maps should cue readers as to text content and structure, which should reduce the demands on working memory and allow for more higher order processing, such as the processing of inferences contained in the text.

Boyle and Weishaar (1997) explored the effect of story mapping on the literal and inferential comprehension of students with learning disabilities who were poor comprehenders. Students were randomly assigned to a student-generated cognitive organizer condition, an expert-generated cognitive organizer condition, or a control group where no cognitive organizer was used. Students participated in structured sessions where they received explicit instruction (including the use of mnemonics) on how to create or use cognitive organizers on text passages. Students who used either type of cognitive organizer scored significantly higher on tests of literal comprehension. Students in the self-generated condition scored the highest on inferential comprehension and significantly outperformed students in the control group on their inferential comprehension of passages that were both below and at their reading level. Boyle and
Weishaar suggested that self-generated story maps may require students to make more inferences than when they are provided with expert-constructed story maps. It is suggested that the use of self-generated story maps may lead to greater understanding and comprehension of text.

Overall, it appears that story maps can help students identify the organizational structure of textual material. According to schema theory, this makes it easier for readers to store and recall information from text, which increases their comprehension (Reutzel, 1985). A number of studies have demonstrated that story-map instruction is effective for readers across a variety of ages and abilities and that this instruction can occur in whole or small groups. Finally, story-map instruction improves students’ abilities to retell stories (e.g., Baumann & Bergeron, 1993), identify critical story elements (e.g., Baumann & Bergeron), write more comprehensive stories (e.g., Idol, 1987), and improve their literal and inferential understanding of stories (e.g., Boyle & Weishaar, 1997; Davis, 1994; Gardill & Jitendra, 1999).

**Summarization**

Students’ familiarity with text content and text structure influences their ability to employ summarization strategies successfully (Hare, 1992). In reviewing the literature on summarization, Hare found that when text passages are brief and contain obvious story structures, students are more likely to summarize it independently. However, when text is more complex in terms of length, ideas, and organization, students may require direct instruction on summarizing procedures. Students who do not understand what is
involved in summarization are less likely to successfully use strategies to select and condense ideas in the text and will rely on less complex, less efficient strategies.

Williams (1993) used a comprehension age match design to investigate the differences between grade 7 and 8 students with learning disabilities, their peers without learning disabilities, and a comparison group of grade 4 to 6 students who were matched by reading level to the students with learning disabilities. Students were asked to read along with an audio tape (to eliminate decoding difficulties) a story which was divided into three sections. At the end of each section, students were asked to summarize the previous section and to make a prediction about the next section. At the end of the story, they were asked to state the theme of the overall story. Results indicated that students without learning disabilities scored significantly higher on their summaries than students in either of the two comparison groups. Similarly, the number of grade 7 and 8 students without learning disabilities who were able to identify the theme of the story was significantly higher than the number of students in either of the other groups who could identify theme. An analysis of the students' answers indicated that a greater percentage of the younger students without learning disabilities demonstrated a significant awareness of a general theme in their discussion of the story, even when they were not able to identify the theme in a single phrase or idea. This measure of theme awareness indicated that students with learning disabilities (poor readers) were not as good at identifying theme as nondisabled students of the same reading comprehension ability. Overall, it was found that students with learning disabilities made more idiosyncratic additions to text summaries. Williams suggested that this is reflective of students' difficulties in
constructing accurate representations of the text, which in turn affects their ability to identify the theme or main idea in stories and text passages. Students who reported idiosyncratic additions were significantly less likely to show an awareness of the story’s theme.

Students with learning disabilities or who are poor readers can be assisted in improving their summarization ability, and thus improving their reading comprehension. Anderson-Inman, Knox-Quinn, and Homey (1996) explored the use of computer-based organizational strategies on students with learning disabilities in grades 7-11. The program Inspiration (1994) was used to allow students to summarize their ideas through the use of integrated outlines and concept maps. Students were instructed on how to use this program to assist in their comprehension of a textbook chapter. They learned how to create a summary by entering subheadings into the computer program and then reading each paragraph to identify the main ideas, which were then added to the outline or concept-map on the computer screen. The Inspiration program allows students to switch from web mode (which allows the use of graphics) to a linear outline mode. Students were taught how to test their knowledge of the chapter’s content by engaging in a self-monitoring procedure which involved selecting certain parts of the outline or concept map to be hidden. With the information gone from the screen, students were able to test their recall of the main ideas from the text. Success rates varied by IQ and reading level, but overall findings indicated that 23 out of 30 students in the study were able to use the computer program to assist them in their schoolwork either independently (n=7) or with prompting (n=16). The reading level of students who were identified as “power users”
(being able to use the computer program independently to complete class assignments) varied from a grade equivalent of 3.3 to 14.3, indicating that computer-assistive technology can be powerful in assisting students with a range of reading abilities in increasing their comprehension skills and academic performance.

Another study which demonstrated that students can be taught to engage in self-monitoring along with summarization strategy instruction was conducted by Jitendra et al. (2000). Participants in this study were enrolled in grades 6-8, were between 2 and 2.5 years behind in reading, and were receiving resource room help. Students were randomly assigned to either a main idea/summarization strategy and self-monitoring group or a control group which continued to receive the regular resource room program which focussed on decoding and comprehension activities. Students in the experimental group received explicit instruction and guided and independent practice on generating the main idea (a one-sentence summary) from practice passages over the course of eight lessons. The lessons progressed from having students identify the main subject (person) and major action to having them identify and eliminate extraneous information, and then to having students identify a more complex main idea summary which included information that addressed the questions who, what, where, why, when, and how. Students were provided with a self-monitoring card which consisted of a four-item checklist on a cue-card, which students were to follow to apply the strategy successfully. Tests consisted of 36 passages for which students had to identify the main idea. While there were no differences between the control and experimental groups prior to instruction, posttest results indicated that students in the experimental group were significantly better at identifying
the main idea than students in the control group. These increased scores were maintained on a delayed posttest 6 weeks after the completion of the instructional program. The authors suggest that the prompt card allowed students to attend to the application of the summarization strategy rather than recalling it and that this reduced the demand on working memory and contributed to the positive results. Results on a postinstruction questionnaire indicated that students demonstrated positive attitudes towards the instruction they received and believed that it was a helpful strategy (Jitendra et al.).

Most research studies on summarization focus on teaching specific rules to students. Hare (1992) noted that following explicit rules is more successful with lower level processes of deleting and condensing to create summaries rather than more challenging processes of creating topic sentences, especially when there is a mixture of explicit and implicit information contained in the text. Less skilled readers find it difficult to identify main ideas when passages require readers to generate inferences from the text (Yuill & Oakhill, 1991). Yuill and Oakhill used short stories which omitted explicit information about the setting and action of characters to train poor comprehenders on making inferences. They found that the instruction appeared to help the less skilled comprehenders (but not the more skilled comprehenders) attend to the main ideas in the story. Pressley and Woloshyn (1995) provided an overview of research on the use of summarization as a strategy to improve students’ reading comprehension. The results of various research studies indicate that teaching rules of summarization can be successful in improving students’ recall of story passages and main ideas, with the most impressive benefits resulting when students are able to internalize the
summarization strategy and create summaries independently (e.g., Berkowitz, as cited in Pressley & Woloshyn).

Self-Monitoring Strategies

A number of researchers report that it is not sufficient to teach students strategies to use to enhance their reading comprehension. Rather, students must be provided with self-monitoring strategies which they employ to monitor their comprehension and strategy use (August et al., 1984; Baumann et al., 1993). Several studies have included the use of self-monitoring strategies in addition to comprehension strategy instruction, and overall, results appear positive (e.g., Jitendra et al., 2000; see Pressley & Woloshyn, 1995 for a review).

Several studies incorporate comprehension monitoring through the use of self-questioning. Wong and Jones (as cited in Wong, 1986) taught self-monitoring skills to grade 8 and 9 students with learning disabilities in order to have the students monitor their use of a main idea identification strategy for expository text. Students were first instructed on how to identify the main idea in a paragraph by using a list of rules (e.g., the main idea is the most general statement; most of the other sentences should refer to the main idea). Once students achieved mastery levels, a self-questioning strategy was introduced to allow students to monitor their own reading comprehension. As in Jitendra et al.'s (2000) study, these participants were provided with a prompt card which listed the questions they should be asking themselves during reading (e.g., “Find the main idea and underline it; think of a question about the main idea”). Results of this study indicated that
students with learning disabilities significantly increased their reading comprehension, with participants demonstrating significant improvements in identifying the main ideas in paragraphs and achieving higher scores on tests of recall.

Mastropieri and Scruggs (1997) conducted an extensive review of the literature (1970-1996) on improving the reading comprehension of students with learning disabilities. One of the categories of studies they classified as "Questioning Strategies," with the critical common feature of these studies being that they taught students to stop and engage in self-questioning before, during, or after reading to enhance their comprehension. The authors of this review found that overall, successful studies appear to include explicit self-questioning, an outline of specific steps to engage in questioning, direct instruction, guided practice, and feedback about students' use of these strategies.

Baumann et al. (1993) used self-questioning along with a variety of other monitoring and repair strategies in a unique format to improve students' success with reading comprehension. Specifically, these authors used a think-aloud strategy to facilitate grade 4 students' comprehension monitoring. The rationale behind thinking-aloud is that it is a type of comprehension monitoring and it allows students to activate strategies for enhancing their comprehension as they read and encounter comprehension difficulties. Baumann et al. reported that think-alouds can help students to learn a variety of strategies, both to monitor their comprehension (e.g., making predictions, self-questioning) and to improve their understanding of the text through repair strategies (e.g., rereading, retelling). The results of the study found that students in the think-aloud group demonstrated the most improvement in acquiring strategies to increase their reading
comprehension skills and were most likely to employ strategies when they encountered comprehension difficulties. These results were superior compared to the comparison groups, which focussed on either DRTA (predicting and verifying) or DRA (previewing story vocabulary, activating prior knowledge, and questioning approach). In-depth interviews with students demonstrated that those in the think-aloud strategy condition reported using a number of strategies when they were asked, "What do you do to help you understand when you read?" Conversely, students in the comparison groups were more likely to emphasize correct decoding, oral reading skills, and literal comprehension of text. The results of this study support the view that students must be given self-monitoring skills in addition to comprehension strategy instruction to facilitate their independent and flexible use of effective strategies to support comprehension.

Additional Strategies for Improving Reading Comprehension

There exists a broad range of research on the teaching of strategies to improve students' reading comprehension, and just a few have been reviewed here in any detail. Several authors have conducted extensive literature reviews on the topic, and they offer some insight into the various approaches that have been used in studies and offer conclusions based on the results of studies thus far (e.g., Mastropieri & Scruggs, 1997; Pressley & Woloshyn, 1995).

Mastropieri and Scruggs (1997) reviewed over 100 studies and concluded that overall, teacher-directed questioning and self-questioning strategies are the most beneficial for improving reading comprehension, followed by text-enhancement strategies
(e.g., imagery, study aids), followed by the instruction and reinforcement of basic skills (e.g., vocabulary). They conclude that acquiring vocabulary and building fluency are important components of reading comprehension instruction, but are not sufficient strategic approaches by themselves. They also found that adjunct aids, such as mnemonic illustrations and study guides, could improve students' reading comprehension, but only for passages that were included in the study, unless explicit instruction for generalization was provided. When the text is attainable (e.g., the reading level is appropriate for students), Mastropieri and Scruggs found that questioning techniques, where students activate their background knowledge, identify key points, question the text structure and main ideas, and check their understanding through self-questioning increase reading comprehension significantly.

Pressley, Johnson, Symons, McGoldrick, and Kurita (1989) caution that not all students benefit from all forms of strategic instruction. Upon reviewing several types of reading strategies, these authors concluded that less skilled readers appear to derive more benefit from instruction in story-grammars, prior knowledge activation, and question-answering techniques. Research on the use of summarization, imagery, and question-generation strategies suggest that these techniques are beneficial for students of all ability levels in the later elementary and intermediate years. The finding that strategy instruction can have various results on readers of different abilities is supported by the findings of studies that have been reviewed in this chapter. For example, Yuill and Oakhill (1991) found that instruction on inferencing skills improved poor readers' comprehension significantly but did not improve the scores of more skilled readers. Similarly, Wong
(1986) reported that when students were given instruction on main idea strategies and self-questioning techniques, students in the comparison group who were average readers and did not have learning disabilities did not improve significantly with training. Wong suggested that more skilled readers may already have their own successful, automatized monitoring strategies in place and that introducing additional strategies which are not automatized may burden their cognitive resources.

Dole, Brown, and Trathen (1996) identified two disparate learner profiles: a less skilled reader who became increasingly motivated and enjoyed the strategy use and a more skilled reader who became increasingly unmotivated and who reported disliking strategy use. Individual interviews, teacher observations, and student questionnaires allowed the researchers to address students’ beliefs about themselves as readers and about the value of the learning strategies. The first student started the study with low opinions about her ability as a reader. As this student learned strategies, her sense of having control over learning increased, she gained more confidence, improved her ability to use the strategies, and thus improved her comprehension scores significantly over the course of the study. Conversely, the second student started with strong positive beliefs about her ability as a reader. This student saw strategy instruction as interfering with her already successful, automatized strategies for effective reading. Dole et al. concur with Wong (1986) that introducing additional strategies to efficient readers may burden their cognitive resources and make an easy task challenging and overly difficult. The reading comprehension scores of the student from the second profile in Dole et al.’s study actually decreased over the course of the program. Dole et al. emphasize that the
effective use of strategies depends on students’ ability to use the strategy in addition to their will or motivation to use it. There is often a reciprocal relationship between strategy instruction and students’ motivation. When students believe that the strategy can increase their performance, they are more willing to engage themselves in learning it effectively (Dole et al.; Pressley et al., 1989).

Some researchers (Dole et al., 1996; Pressley et al., 1989) believe that effective strategy instruction can promote feelings of control over learning. Increased self-efficacy results when control of the strategy is shifted from teachers to students and when students are shown how the strategy can significantly improve their performance. Mastropieri and Scruggs (1997) reviewed studies which combined summarization training with self-monitoring and attribution training and concluded that it is important to provide students with information about the purpose of the strategic instruction and to allow for student control over the strategy. For example, Borkowski, Weyhing and Carr (as cited in Mastropieri & Scruggs) found that training students to attribute success or failure to factors which they can control (i.e., the use of effective strategies) led to significant improvements in students’ reading comprehension. Similarly, Dole et al. were surprised by their finding that students in a “story content” condition who received important declarative information about the text prior to reading it did not do significantly better than students in the comparison groups in the instructional testing conditions. The researchers observed that, with time, the students in this condition became more passive and increasingly disengaged from the learning process. They suggested that children who have reading difficulties may need to be more actively engaged in the reading process and
may need to be given more ownership of the strategy use in order to be successful (Dole et al.).

After reviewing more than 100 studies on the use of various strategies to increase students' reading comprehension abilities, Mastropieri and Scruggs (1997) suggested that similarities existed among the studies which demonstrated positive results. The authors suggested that comprehension generally increased when teachers provided explicit instruction to students, which includes modelling, guided practice and feedback, attributional instruction, and monitoring of students' progress. These findings echo those of Pressley et al. (1989) who found that the models of instruction used by various researchers all emphasized teaching a limited number of strategies, one at a time, and ensuring that each strategy is taught well. These authors called for extensive and intensive explicit instruction which allows for much practice with teacher feedback.

Pressley et al. (1989) outline the essential components of explicit strategy instruction. First, the strategy must be described through teacher modelling and the use of think-alouds, which allow teachers to demonstrate the use of the strategy, the rationale for its use, and when and where to use it. Second, students need extensive practice under the guidance of a teacher who provides support and feedback. Often, students start working with material that is below their grade level and then extend the use of the strategy to work at their own level. Next, teachers should encourage generalization by having students use strategies in different contexts and with different materials (i.e., in different areas of the curriculum). Cues are needed initially to guide students to use the strategy in a variety of situations. Teachers need to emphasize that the use of strategies fosters higher
comprehension, greater world knowledge, and increased academic success (Pressley et al., 1995). The end goal of strategy instruction is having students who are able to use a variety of strategies independently, flexibly, and effectively.

In order to enable students to generalize strategy use to new situations, students must be taught explicitly when and where strategies should be used (Pressley et al., 1989). Strong support for this argument comes from a study by Dole et al. (1996), who taught poor readers strategies to activate their background knowledge prior to reading. Over 60 grade 5 and 6 students were divided into three different groups: story content instruction, strategy instruction, and traditional basal instruction. Story content instruction consisted of building students’ declarative knowledge and introducing students to vocabulary and concepts from the story. Strategy instruction provided students with both procedural and conditional knowledge: Students learned various strategies such as predicting and identifying important story elements in addition to learning when and where the strategies could be used most effectively. Students in the basal condition followed the traditional basal program provided in the teacher’s manual, which included some declarative knowledge (e.g., introduction of the topic and key vocabulary prior to reading) and some procedural knowledge (e.g., word recognition skills). Findings indicated that students who received strategy instruction demonstrated significant improvements in reading comprehension over their peers in the story content and basal conditions. Dole et al. presented this finding as evidence that procedural and conditional knowledge is needed in addition to declarative knowledge in order to promote reading comprehension in poor readers. The authors also suggested that the results may
have been attributable to the scaffolded instruction, including faded support, which permitted students in the strategy group to internalize strategies so that they were able to apply this knowledge independently, without teacher support. Dole et al. also noticed that the students in the strategy condition acquired a sense of control over their developing strategy use as time progressed. This sense of ownership may be partly because these students were actively engaged in the learning process (e.g., through guided practice) and this likely contributed to their successful overall experience (Dole et al.; Mastropieri & Scruggs, 1997).

Studies have shown that good readers do not rely on only one strategy, but use several in a coordinated fashion to ensure success in reading comprehension (Cain, 1999). Thus, the long-term goal of reading strategy instruction is to have students who are able to use a variety of internalized strategies flexibly when they encounter difficult textual materials (Pressley et al., 1995; Pressley & Woloshyn, 1995). Pressley and Woloshyn call for the teaching of repertoires of strategies for reading comprehension, which they call Transactional Strategies Instruction (TSI). Three key components of TSI include (a) using strategies which facilitate connections between students' prior knowledge and the information in the text, (b) having much of the strategy teaching taking place in groups where the joint construction of meaning is essential, and (c) emphasizing that group members' reactions and interpretations cannot be predicted, as they come from the interpretations of other group members. It is essential that teachers model the strategies, provide feedback, and engage in interactive dialogues with students to allow students to clarify, elaborate, and confirm the use of particular strategies (Pressley et al., 1991). A
variety of strategies can be taught to students as part of TSI, but Pressley and Woloshyn (1995) identify prediction, activating prior knowledge, creating images, monitoring, question generation, and summarizing as the most common. The long-term, high-intensity TSI program results in more long-lasting benefits than short-term intervention programs (Pressley et al., 1995). Brown, Pressley, Van Meter, and Schuder (1994) conducted a year-long study on the effect of transactional strategy instruction on grade 2 students who were poor readers. The findings demonstrated that the poor readers demonstrated greater story recall and the ability to make more personal connections with stories, which gave them a richer understanding of the text. In addition, these students demonstrated significant improvements over students in the comparison group in terms of their performance on a standardized reading comprehension test. Findings also indicated that students who received TSI were more likely to use strategies effectively and to demonstrate their understanding of effective strategy use (Pressley et al, 1995; Pressley & Woloshyn, 1995).

The literature clearly demonstrates that students who receive explicit strategy instruction and who learn to engage in strategy use before, during, or after the reading of a text can increase their understanding and memory of the passage. Whether this increase in reading comprehension results from the facilitated construction of a complete and well-integrated representation of the text in memory, the building of important background knowledge, and/or a reduction on working memory demands is not yet clear. Currently, there exists little research which examines teaching students a repertoire of strategies to facilitate reading comprehension, despite the findings that good readers possess a
repertoire of strategies which they are able to apply flexibly in different learning situations (Pressley et al., 1995). The few studies which do exist (e.g., Brown et al.; Palinscar & Brown, as cited in Pressley & Woloshyn, 1995) have demonstrated that providing students with multicomponent strategies can lead to increased reading success.

**Present Study and Hypotheses**

The purpose of the current study is to examine the effect of providing students with explicit instruction on the use of a combination (or repertoire) of strategies. Specifically, the effect of providing strategic or generic prediction and summarization instruction on students’ comprehension and memory for narrative stories will be explored. Whether poor or good readers benefit more from instruction will also be examined.

Several studies have combined the use of self-monitoring strategies and various reading strategies (e.g., summarization) to examine the combined effect on students’ comprehension skills (e.g., Jitendra et al., 2000). Strategic tools, such as prompt cards, which guide students to monitor their own strategy use during reading activities appear to be effective when they are combined with additional reading strategies. There is little research on presenting two or more disparate reading strategies in combination as a concrete tool which students can use to increase their reading comprehension. The current study will examine whether providing students with a “predictive story-frame” which combines the use of prediction and summarization strategies structured around narrative story elements, will be beneficial in improving the reading comprehension and
story recall of both good and poor readers in a grade 4 classroom. This combination strategy will be compared with the effectiveness of generic instruction on prediction and summarization.

Students will be randomly assigned to either the strategic or generic prediction and summarization instructional conditions. Students who receive strategic instruction will be presented with a “predictive story-frame” which they will use to make predictions and summaries and to identify the key elements of narrative stories which they hear/read. Students in the generic instruction group will receive a “notepad” which they will use to record any important information about the story which they believe will help them to understand and remember the story more effectively. In both conditions, students will be involved in using the pencil and paper tool before, during, and after the presentation of four different stories. Students’ comprehension will be measured through the use of comprehension questions (literal, inferential, and critical/creative) administered as immediate and delayed measures and through delayed story retellings and cued recall measures. Four hypotheses are associated with this study:

1. Students in the predictive story-frame condition will demonstrate greater story comprehension (as measured by their scores on the written comprehension tests) as compared to students in the notepad (generic instruction) condition.

2. Students in the predictive story-frame condition will demonstrate increased recall for stories (i.e., they will achieve higher scores on the retellings, cued recall, and the delayed comprehension tests) as compared to students in the notepad condition.
3. Poor readers in the predictive story-frame condition will perform as well as or better than good readers in the same instructional condition across all measures of comprehension and story recall.

4. Poor readers in the notepad condition will not perform as well as good readers in the same instructional condition across all measures of comprehension and story recall.
CHAPTER THREE: METHODOLOGY AND PROCEDURES

Chapter Overview

Studies have shown that students with reading difficulties often fail to see "meaning making" as the purpose of reading and focus instead on the decoding aspect of the reading process (e.g., Cain, 1999). Comprehension or "meaning making" is especially important in the junior grades (i.e., beginning in grade 4), where the instructional focus shifts from "learning to read" to "reading to learn." Research has shown that explicit strategy instruction or the extensive teacher modelling of effective strategies can be helpful in teaching all students, including those with reading difficulties (Pressley & Woloshyn, 1995). For example, activating prior knowledge, making predictions, or using summary techniques (sometimes called story grammars) have been beneficial in helping students to become more effective readers (e.g., Baumann & Bergeron, 1993; Denner & McGinley, 1992; Dole, Brown, & Trathen, 1996). To date, there has been relatively little research examining the effectiveness of providing students with a repertoire of comprehension strategies. In this study, the effectiveness of providing students with a repertoire of learning strategies (i.e., structured predictions, both before and during the story, and structured summarization based around story grammar, or what I collectively refer to as "predictive story-frames") was compared with the effectiveness of general predictions, both before and during the story, and summarization instruction (or what I collectively refer to as "notepads"). Both strategies had students thinking about the story before, during, and after reading.

This chapter provides an overview of the methodology employed in the current study. Specific information about the selection of participants, materials, data collection,
analysis, and experimental procedure are presented here. This chapter concludes with a brief discussion of the methodological assumptions and limitations inherent in this study.

**Research Design Overview**

The current study received approval from Brock University’s Research Ethics Board (see Appendix A). Figure 1 presents an overview of the research design. After receiving parental consent, students' reading level was assessed as either below grade level ("below average readers") or at or above grade level ("average or above readers") using the standardized Canadian Achievement Tests, Second Edition (CAT/2) Reading Assessment (see sample items in Appendix B). Students who participated in this study were ranked according to their CAT/2 scores and were then randomly assigned to one of two study conditions: predictive story-frames (structured instruction in prediction and summarization), or notepads (general instruction in prediction and summarization). This experimental design allowed for both within- and between-group analysis, so that the effectiveness of both types of instruction could be examined in light of students’ reading abilities.

Throughout the study, the students participated in a combination of group training and practice sessions and individual follow-up sessions. Each of the four group sessions took place in the students’ own classrooms. The group sessions were led by the researcher, who is a qualified teacher and who has had experience working with children in the classroom setting, including those with learning difficulties. A research assistant, who was a recent graduate from the Faculty of Education, was also present during each of the group sessions. For the two individual follow-up sessions, students were taken to a
Figure 1. Overview of the current study's methodology, showing the sequence of steps as it was presented to students in both instructional conditions.
quiet location in the school (e.g., the office of the learning resource teacher or the librarian's office), to work one-on-one with the researcher or the researcher-assistant. These sessions provided the opportunity to gain an understanding into how well the students understood and remembered the stories that were presented in the group sessions.

In the first three group sessions, the researcher explained to students that they would be listening to some short stories that had been videotaped and which would be shown on a TV/VCR. The stories were all taken from grade 4 basal educational series (e.g., Scott, Foresman & Company, see Appendix C for story summaries and accompanying comprehension tests). The students watched a video-recording of an adult reading the story aloud in a "classroom-like" setting. Students were informed that they would be asked questions about the stories after watching the video (see Appendix D: Participant Instructions). In the fourth and final group session, students read a story independently. This story was also from a basal educational reader (e.g., Scott, Foresman & Company). As with the previous three stories, students completed comprehension questions about the story following their reading of it.

This experiment consisted of four independent variables: type of instruction received (story-frame or notepad), reading level ("average or above readers" or "below average readers"), time (immediate recall versus a one-week delayed measure), and question type (literal, inferential, and critical/creative questions). One dependent variable of interest was students' comprehension of the stories they heard and read. Comprehension was measured by students' performance on the literal, inferential, and critical/creative comprehension questions which were presented both immediately
following each story (immediate comprehension) and one week after each story’s presentation (delayed comprehension measure). Also one week after the presentation of the stories, students’ delayed recall was determined by their ability to retell the stories orally and their ability to answer cued recall questions about the elements of each story (e.g., “What was the main problem in this story?”).

**Participants**

One grade 4 class from each of two schools in the District School Board of Niagara were involved in this study, and this generated 47 participants. Their ages ranged from 9.4 to 11.3 years, with an average age of 9.9 years ($SD = 0.48$ years). At School 1, parental consent was obtained for 23 out of a possible 28 students, and at School 2, parental consent was obtained for 24 out of a possible 26 students. No attempt was made to exclude students who were identified as having learning exceptionalities.

Once consent was obtained from the parents of each student, the initial standardized reading test was administered (as a group), and students were identified as having an “average or above average” reading ability (scoring at or above the $50^{th}$ percentile on the CAT/2) or a “below average” reading ability (scoring below the $50^{th}$ percentile on the CAT/2). Based on these scores, four distinct groups of student participants emerged: average or above readers who participated in the structured story-frame instruction sessions, below average readers who participated in the story-frame sessions, average or above average readers who participated in the notepad sessions, and below average readers who participated in the notepad instruction sessions. A one-way ANOVA confirmed that participants in the story-frame and notepad conditions did not
differ as a function of their CAT/2 scores. No significant differences existed on the vocabulary subtest, \( F(1, 45) = 0.018, p > 0.05 \), the comprehension subtest, \( F(1,45) = 0.016, p > 0.05 \), or on the total reading score, \( F(1, 45) = 0.005, p > 0.05 \).

Teachers were also asked to identify students as either “average or above average” readers or “below average” readers. There was a 75% agreement between the teacher ratings and the reading levels based on the CAT/2 scores. This discrepancy may reflect classroom teachers’ use of holistic assessments rather than pencil-and-paper tasks, an idea further explored in the limitations section of this chapter. For the purposes of this study, the CAT/2-based ratings of students’ reading ability were used. This ensured a level of consistency across the two schools, and the researcher believed that the CAT/2 scores were more consistent with the pencil-and-paper strategies and assessment tools that were used in this study.

Students who did not return a consent form or whose parents indicated that they did not wish their child to participate in this study were not involved in any part of this study. These students remained with their own teacher and with other students in their class who worked in the library or in another available classroom while the researcher was conducting group sessions in the classroom.

**Materials**

**Initial Assessment**

Students’ initial reading ability level was determined by using the reading component of the standardized Canadian Achievement Tests, Second Edition (CAT/2). The use of this multiple-choice achievement test is designed to measure basic skills in
reading, which are measured through two distinct subtests. The vocabulary and reading comprehension subsections of this test were administered to students in a whole-class session. The CAT/2 Technical Bulletin (Canadian Test Centre, 1992b) states that the purpose of the vocabulary subtest is to “tap various avenues to constructing meaning and expressing meaning clearly and well” (p. 6). Questions consist of words both within context, where students will select the word with the correct meaning to complete a cloze exercise, and isolated words, which allow students to demonstrate their knowledge of synonyms, antonyms, and word definitions. The goal of the comprehension subtest is “to measure the student’s ability to construct meaning and to expand it in many ways” (p. 6). This subtest consists of excerpts from stories which are introduced by a brief statement which identifies the topic of the passage. Questions which accompany each passage are designed to allow students to demonstrate their knowledge of the main ideas and concepts of the passage, rather than the surface details (such as vocabulary). The comprehension questions ask students to recall information that is explicitly stated in the text, in addition to having students identify key events or ideas, make interpretations about characters' feelings, and make assessments about the passages (e.g., distinguish between fact and fiction). The administration guide states that the vocabulary portion of the CAT/2 has a time limit of 17 minutes, and comprehension portion a time limit of 37 minutes (Canadian Test Centre, 1992a). In the present study, these two subtests were administered to students as a group, with the vocabulary subtest being administered one day before the comprehension subtest. Students’ scores on these two subtests resulted in an overall reading score which was used to identify students as either an “average or above reader” or a “below average reader” for the purposes of this study.
The CAT/2 was standardized on a sample of approximately 50,000 students from grade 2 to grade 12 in a stratified random sampling of public, separate, private, and band schools from all 10 Canadian provinces. "The target population to which the norms are intended to apply includes all schools in Canada in which English is the language of instruction" (Canadian Test Centre, 1992b, p. 17). The reliability coefficient (KR20) of the total reading subsection (which consists of both the vocabulary and reading comprehension subtests) of the CAT/2 for grade 4 students is 0.93. The reliability of the CAT/2 is one of its major strengths (Lurkin, 1998).

The CAT/2 test was based on the Comprehensive Tests of Basic Skills, Fourth Edition (CTBS/4), and items were reviewed by educators across Canada to ensure the relevancy of items to Canadian students. Canadian teachers created another 1,000 items which were tested in an item tryout on 5,000 students in 1991. Items which appeared unclear or biased were eliminated so that only validated items remained in the final pool of test questions (Canadian Test Centre, 1992b). All items were reviewed for ethnic, racial, and gender bias. The CAT/2 Handbook for Coordinators (Canadian Test Centre, 1992a) states that "the content validity of the CAT/2 can be checked by comparing the content descriptions and the test items to particular curriculum objectives" (p. 50). In developing the tests, the authors reviewed many curriculum guides and met with teachers and curriculum experts. Items in the CAT/2 are thus said to reflect a wide content base which represents comprehensive curriculum areas. A comparison of The Ontario Curriculum Grades 1-8: Language (1997) objectives to the items included in the CAT/2 reading test (vocabulary and reading comprehension subtests) reveals that the CAT/2 test taps many of the same objectives. For a listing of the overall objectives (e.g., "By the
end of Grade 4, students will state their own interpretation of a written work, using evidence from the work and from their own knowledge and experience”) and specific objectives (e.g., “By the end of Grade 4, students will identify synonyms and antonyms for familiar words”) that are covered in the CAT/2, see Appendix E. It is important to note that overall, there is not extensive coverage of the test’s validity in the provided manuals. In a review of the test, Hattie (1998) states that “although the test package is over 3 inches thick, there is almost no mention of validity” (p.174). Since the CAT/2 test items appear comparable with objectives from the Ontario Curriculum, it is expected that the test provided a valid measure of students’ reading ability as being either “average and above average” or “below average.”

**Video-Recordings**

In the first three group sessions, participants watched a video of a story being read aloud to them. Each video-recording featured a female adult reading the story aloud in a “classroom-like” setting (i.e., the video featured only the adult reader in a classroom environment, but with no students or additional distractions). The reader on the video was an experienced elementary school teacher who had taught students from kindergarten to grade 5 in both regular and special education classrooms for 30 years. As a result, this teacher had much experience reading stories to students. The video provided students the opportunity to see the teacher reading aloud and also “zoomed in” to capture any illustrations that were included in the stories.
Reading Material

The stories were taken from educational basal series, with all stories being at the grade 4 level as determined by Fry’s Readability Graph (see Appendix C for the story summaries and accompanying comprehension questions). The stories were selected from basal readers which are “out of date” in that they are over 10 years old and do not appear on Circular 16, which lists the books which are currently eligible to be used in Ontario schools. All stories were taken from basal series which were used in Ontario schools in the 1980s (e.g., publication dates range from 1980-1986). These materials were used in an effort to ensure that students had not heard or read the stories previously. The stories were selected on the basis of having a strong central problem and an accompanying solution, in addition to having clearly identifiable settings and characters. The stories were also selected to appeal to the interests of grade 4 students, and a pilot study demonstrated that an independent group of grade 4 students found the stories appealing. In selecting the stories, the researcher avoided any stories which included overt racial, ethnic, or gender stereotypes (i.e., the portrayal of characters in stereotyped roles or occupations). The final element which was used in the story selection procedure was the story length. The stories ranged from 1,550 to 1,970 words in length, with the length of the videos ranging from 10.5 minutes to 15.3 minutes. The last story, which students read independently, was slightly shorter in length (900 words) than the other stories in order to ensure that all students were able to complete the reading of the story in the time allowed.

The first story presented to students was “Blue Moose” (Pinkwater, 1981). It is a story of a restaurant owner who is sad because no one ever compliments him on his
cooking. One day, a moose comes to his door, and the life of the restaurant is changed forever. Crowds come to the restaurant to see the moose helping in the restaurant, and they compliment the restaurant owner on his cooking. The moose and the restaurant owner are very happy to have found each other. The second story, “Snowshoe Trek to Otter River” (Budbill, 1986) is an adventure story of a boy who goes on a snowshoe trip and falls through the ice. He has to think quickly and use his survival skills to stop himself from freezing. The third story was entitled, “Fanny Flora’s Kitten” (Crampton, 1980) and is a silly story about a family who goes to pick up their kitten from the train and ends up with a tiger kitten instead. In the fourth and final group session, students read a story independently (instead of having it presented on video). A passage that was slightly below the grade 4 level was selected in order to reduce the likelihood that students would experience decoding difficulties. The story “The Shape in the Harbour” (Eagle, 1985) is at the mid-grade 3 level, as determined by Fry’s Readability Graph. It is about a girl and boy who go for a swim and have a close encounter with a shark. This story is also from the same educational series as the first story (Scott, Foresman & Company, 1985). Except for the lower reading level, this story was selected according to the same criteria as the other stories.

**Comprehension Questions**

After watching/listening to each story, students were given an immediate comprehension test or a series of comprehension questions to complete. The immediate test was divided into three sections in order to examine students’ literal (Recalling Facts), inferential (Understanding the Passage), and critical/creative (Applying Your
Understanding) comprehension of the story. The literal and inferential sections for each test consisted of four multiple-choice questions and three open-ended questions, while the critical/creative section consisted of four open-ended questions only. Questions were composed by the key researcher in collaboration with a Language Arts professor at Brock University. The questions were also used in the pilot test to ensure that the questions were appropriate for students at the grade 4 level. The last page of the test also had students rate their enjoyment of the story by filling in a bubble on a Likert-type scale, from 1 (terrible) to 5 (great). Below the scale were several lines in which students were asked to explain why they had given the story this rating.

In the Recalling Facts or literal comprehension section, students were asked to recall key information from the story (e.g., “In what month does this story take place?”). The Understanding the Passage or inferential comprehension section asked students to make inferences based on the information that was in the story (e.g., “What made Cal swim so fast?”). The Applying Your Understanding or critical/creative section had students demonstrate their higher order thinking skills in conjunction with their understanding of the story (e.g., “What lesson did Daniel learn from his snowshoeing adventure?” “What would another good title for this story be?”). Appendix C presents the story summaries and accompanying comprehension questions.

The same comprehension test format and many of the same comprehension questions were used to identify students' recall of the story at the follow-up sessions which occurred one week after they read/heard the story in their group session. For each story, two or three new questions were included in the delayed comprehension (follow-up) tests, and the ordering of the questions was changed to ensure that students were
actually recalling information from the story and not just remembering their pattern of answers. The additional questions caused the number of questions in each section of the delayed comprehension tests to change slightly. Appendix C presents both the immediate and delayed comprehension tests for each of the four stories.

**Retelling Protocols (Key Points Protocol)**

During the individual follow-up sessions which occurred one week after each of the four group story sessions, students were asked to retell the stories that they had heard/read in their group sessions. The retellings were audio-taped and transcribed for analysis to ensure that no important details of the students' retellings were omitted. Students' retellings were scored using a "Key Points Protocol" that was developed for each story (see Appendix F). Specifically, two elementary school teachers sat down and independently read the stories and created a list of the key elements in each story. The teachers then shared their lists, negotiating any concepts that were different across their lists, and created a final "Key Points Protocol" which they believed reflected the most important elements in the story (the main sequence of events in the story, which included key information about the characters, setting, problem, and solution).

**Cued Recall Scoring Formats**

After students completed their oral retelling, they were prompted to recall specific story elements. Specifically, students were asked to identify the characters, setting, problem, solution, and the beginning, middle, and ending of the story (e.g., "Can you remember who the main characters were in this story?" "Can you tell me about the
setting/problem/solution/three main events - beginning/middle/end of the story?").

Students’ responses to these cued recall questions were audio-taped and transcribed for analysis.

**Story-Frames**

The predictive story-frame that was used in this study is an advanced organizer that was designed by the researcher for the purposes of this study (see Appendix G). It included the information that is typically included in a story-grammar organizer (characters, setting, key events, problem, solution). These elements have been positioned in the shape of a picture-frame to use with students in classrooms, and this has been called a “story-frame.” The predictive story-frame used in this study was an adaptation of a simple organizer, because it included space for students to make predictions.

Typically, story-grammars are used for students to summarize only the key information about a story (for example, see Baumann & Bergeron, 1993). The predictive story-frame used in this study had three “layers”. The outermost layer allowed students to record their initial predictions about the story after hearing the title and viewing the cover illustration. The middle layer allowed students to revise and add to their initial predictions based on their knowledge of the initial part of the story. The innermost layer allowed students to summarize the main elements of the story after they had listened to or read the story.

**Notepads**

The students who did not receive strategic instruction on the use of the story-frame were also provided with a pencil and paper method of recording information about
the presented stories. Students were provided with a piece of paper which resembled the story-frame in that it also had three distinct sections, so that it could be used to record ideas and information before, during, and after the reading of the story. Students were instructed to think of this piece of paper as their “notepad,” where they could record any information about the story that they believed would help them to better understand and remember the story. Unlike the story-frame, the notepad was much less structured in format. Within each of the three layers, the space on the paper was open for students to make use of as they wish, and there was no request for specific types of information (e.g., characters, setting). Students could record their thoughts and ideas about the story in a form which makes sense to them (e.g., words, symbols, and images were all acceptable).

**Pilot Study**

All study materials (the stories, the videos, the story-frames and notepads, the comprehension questions, and the key points protocol for retellings) were used in a pilot study which took place in April 2001. The CAT/2 was administered to an entire grade 4 class, and then four students identified as “average or above average readers” and four students identified as “below average readers” were selected to participate in the pilot study. The procedures were designed and tested in the pilot to ensure that both groups received comparable amounts of teacher-directed time discussing the story. The materials and all instructional procedures were tested during this pilot study to ensure that the passages were at an appropriate level for grade 4 students and to ensure that students of this age found the story topics engaging and enjoyable. Students’ performance on the comprehension tests and retelling measures were also examined in order to ensure that
the evaluation and scoring procedures were appropriate to capture the diversity in students' reading comprehension abilities and to ensure that the questions were neither too easy nor too difficult.

The main purpose of the pilot study was to test the materials and procedures for this study, and it was successful in accomplishing this goal. The pilot study allowed the researcher to go through all of the instructions and procedures for each stage of the study. This added practice and additional familiarity with the study's procedures helped to ensure consistency across conditions in the final study. In addition, the pilot study brought forth several important suggestions and considerations about changes that enhanced the research process. For example, in the pilot study the multiple-choice questions on the comprehension tests did not have the options labelled as a, b, c, and d. This made reading these questions aloud to students difficult and somewhat confusing. This confusion was clarified by simply adding alphabetic labels to each of the options in all multiple-choice questions. Another problem that was discovered in the pilot study was that some students spent a lot of time on the critical/creative question which asked students to "think of a new title for the story," and this prevented some students from going on to complete the comprehension test. It was found that by placing this question last on the test, students were able to complete the test and then could spend any extra time they had thinking about their answer to this final question. All of the changes that were suggested by the pilot study were implemented before this study was conducted, and it is felt that this improved the overall research design.
Procedures

Initial Group Session: Modelling the Strategic Tools

After the initial administration of the CAT/2, which allowed participants to be identified as either "average or above average" or "below average" readers, the training and practice sessions began. In the initial group training session, the researcher informed the participants that they would be watching a story being read to them on the TV/VCR and that they would be asked questions about the story at the end of the video. In both instructional groups, the researcher showed students the front cover of the story that they would be seeing and hearing, "Blue Moose", and read the title of the story to the students (see Appendix D for participant instructions). In the first session, neither group was provided with paper or pencils: All written instruction were modelled by the researcher on a large copy of either the "story-frame" or the "notepad" on the front board. The research assistant sat at the back of the classroom during the instructional time and recorded the instruction time that was given to each group.

Story-Frame Condition

The researcher modelled strategic processes to students in the story-frame instructional group using an enlarged (poster board sized) story-frame on the front board of the classroom (see Appendix G for blank story-frame). Before having the students listen to the story, the researcher modelled using the predictive story-frame to make predictions based on seeing the title and cover of the story. The researcher told the students, "One way that we can help ourselves to remember a story is to start thinking about it even before we read or listen to the story. We can do this by making predictions
about the story or by making good guesses about what the story might be about.” The researcher then went through each section of the predictive story-frame, explained what type of information should go in each section (characters, setting, problem, solution), and then modelled making predictions for each section of the story-frame. For example, the researcher said, “Let’s look at the section that says “characters.” By looking at the title and the cover of the book, I can make some predictions about what characters might be in the story. Since the title of the story is “Blue Moose,” I think that there is going to be a blue moose in the story as one of the characters, so I will write that down.” This initial modelling session was designed to ensure that each student had been shown how to use the story-frame correctly (see Appendix D for complete participant instructions). After completing predictions for each section of the story-frame, the researcher instructed the students to listen carefully as they viewed the selected story being read aloud on the videotape. The video was paused once at the halfway point in the story. At this point, the researcher modelled the process of checking the predictions that were made on the story-frame and also demonstrated to students the process of changing (adding to or altering) predictions that were made previously. For example, the researcher said, “I need to ask myself if there is anything else I want to add to my predictions or anything I need to change. I think I will add to the characters, because I predicted that the story would be about a “blue moose” and an “old man,” but now I know that the old man is the restaurant owner, Mr. Breton, so I can add that to my predictions. Any changes we make to our story-frames are going to be made in the middle section.” (See Appendix D for instructions given to participants).

Following the viewing of the video-taped story, the researcher demonstrated how
to use the story-frame as a summary tool to record the actual story elements (characters, setting, problem, events, and solution). The researcher said, "Now I get to look at the story-frame and see how close my predictions were to the real story. I'm going to summarize what actually happened in the centre part of the story-frame." Comparisons were made to previous predictions, and the summary was recorded in the innermost section of the story-frame.

After the researcher modelled the use of the predictive story-frame, it was removed from the blackboard and students were asked to answer a set of standardized story questions (see Appendix C). Sufficient space on the test paper allowed students to answer both multiple-choice questions and open-ended questions on the comprehension test itself. All test instructions were provided by the research assistant (see instructions in script, Appendix D). Students were encouraged to try their best to answer each question and were informed that spelling and grammar would not be counted. In order to account for students' varying reading abilities, the research assistant read the questions aloud to the entire group. Students were expected to complete the multiple-choice questions as the questions and possibilities were read aloud. For the short-answer questions, the research assistant read the questions aloud and then gave students 5 minutes to answer the questions in that section (e.g., "Recalling Facts") before proceeding to the next section (e.g., "Understanding the Passage"). The researcher and the research assistant circulated around the room during this time. Questions were reread aloud to any students who required this assistance, but the researcher and her assistant did not provide any hints or assistance with the answers and did not answer any students' questions concerning the
quality or accuracy of their answers. All students were simply encouraged to “do their best.”

**Notepad Condition**

In the notepad condition, the researcher modelled procedures for the students using an enlarged version of the notepad (see Appendix H for blank notepad) on the front blackboard. The researcher introduced the notepad as a tool that students could use to write down anything about the story that they thought might be helpful for remembering it later. As in the story-frame group, the researcher talked about the importance of “getting your brain thinking about the story before reading it” in order to improve one’s ability to understand and remember the story. Before students watched the story being read aloud on videotape, the researcher modelled writing down the title and author of the story (as in the story-frame group) and also modelled making general predictions about the story (e.g., “I think I will like this book because I like nature stories, and the title of this story has the word “moose” in it, so I think it is going to be a nature story,”). The predictions modelled for this group did not centre around the story elements (character, setting, problem, solution, or main events). The researcher also put down a “thought-bubble”; a cartoon-like thought-cloud, in which pictures or words could be placed. The idea was to put down things that the story made you think about or remember. Thinking about these strong memories of personal experiences would help you to remember the story. In this case, the researcher explained that the story of the “Blue Moose” reminded her of going camping in Algonquin Park and seeing a real moose when they were out hiking. In the thought-bubble on the enlarged notepad, she put a picture of a tent, and
then underneath put the words "camping in Algonquin" to remind her of this adventure. See Appendix D for complete participant instructions.

The researcher then instructed the students to listen carefully as they viewed the videotape. As in the story-frame condition, the video was paused once at the halfway point in the story. Students were instructed to think about whether they were enjoying the story so far, and the researcher modelled adding information to the "notepad" (e.g., changing the reason why she said she would enjoy the story "because it sounded like a nature story" after learning that it is a humorous story to "I like this story because it is humorous--it is a funny story."). The information was added in the middle section of the notepad, mirroring the same process as the three-tier story-frame. Following the viewing of the video-taped story, the researcher modelled some general story-response questions (e.g., "Did I like the story?" "What was my favourite part of the story?") The researcher recorded some of her ideas on the third or innermost section of the enlarged notepad (e.g., "My favourite part was when the moose ate 17 bowls of clam chowder.").

Immediately following this group modelling session, students were given the Blue Moose comprehension test (see Appendix C). The same test was used for students in both the story-frame and notepad conditions. Students were once again encouraged to try their best to answer each question and were informed that spelling and grammar did not count. As with the story-frame students, the research assistant read the questions aloud to the entire group in order to account for varying reading abilities. Students completed the multiple-choice questions as they were read aloud and then given 5 minutes to complete the short-answer questions in each section, after they were read aloud. The researcher and her assistant circulated around the room and reread the questions aloud to any
students who required this assistance. No assistance with any answers was provided, and neither the researcher nor her assistant answered any questions which pertained to the quality or accuracy of students’ answers. All students were simply encouraged to “do their best.”

**Second Group Session: Guided Practice**

In the second training session, the teaching format remained the same as in the initial training session, except that the students were provided with the pencil and paper tools (see Appendix D for specific instructional scripts). The story used in the second session was entitled “Snowshoe Trek to Otter River.” During the second training session, an observer’s checklist was filled out by the research assistant (who was blind to the hypotheses of the study). Specifically, the checklist was used to ensure that there was consistency in the instructions that students in study conditions received (for checklist see Appendix I). The research assistant was given a list of key phrases to listen for (e.g., “We can think about the story even before we listen to it or read it” and “Anytime we read a story, we can use the story-frame/notepad to help us understand and remember the story”), and simply checked them off as she heard them. This observer check was performed in both schools, and there was 100% agreement between the checklists for all groups, demonstrating that students in both study conditions received identical treatment in terms of the general instructions they were given in using the story-frame/notepad.

**Story-Frame Condition**

In the story-frame instruction group, the researcher once again modelled how to
fill in predictions around the outer layer of the story-frame. This time, students provided their input, and the researcher interacted with the students and then put down predictions on the story-frame until each section of the story-frame contained an appropriate prediction. For example, the researcher began to fill in the story-frame by asking students where they should look to get some ideas about the story and then guided them to examine the cover illustration and the title if they did not supply this information. This scaffolded instruction is designed to encourage students to remember what the researcher modelled in the previous session and enabled the researcher to guide the students to construct a complete and detailed story-frame together. Students also filled in the information on their own copies of the predictive story-frame. Pressley et al. (1995) presented a review of some of the research on the importance of explicit, scaffolded instruction to maximize students’ internalization of learning strategies. They referred to Vygotsky’s (1978) Social Learning Theory, whereby the teacher can scaffold the students’ learning and promote their understanding of and internalization of the strategies. “The teacher provides hints, prompts, and supports as needed...teachers elaborate the interpretations offered by students” in order to assist their students in internalizing the demonstrated learning strategies (p. 220). The current study utilized scaffolded instruction, whereby the amount of modelling done by the researcher was gradually reduced over the first three group sessions.

During the pause (halfway through the story), the researcher engaged the students in checking their predictions thus far, and in making appropriate changes or corrections (the researcher made changes on the enlarged story-frame posted on the blackboard; the students made changes on their personal copies of the story-frame). For example, the
researcher said, “Let’s look at the predictions we’ve made so far. Is there anything we should change about our predictions?” If students did not provide critical details (e.g., confirming the characters of the story), then the researcher prompted the group to think about each section in the story-frame and to remember what they had heard in the story so far. Changes were recorded in the middle section of the story-frame. Additional information was added here (e.g., the names of new characters), while previous information that was still correct was carried through by drawing an arrow from its position in the outer rim to the middle section. If information was found to be incorrect, it was crossed out on the outside rim and replaced with new, correct information in the centre.

Following the viewing of the story read-aloud, the students used the same story-frame organizer to record their summary comments about the story. The researcher once again used scaffolded instruction to demonstrate the use of the predictive story-frame and modelled the students’ responses on her enlarged story-frame (e.g., “What do the numbers stand for in the centre of the story-frame? That’s right, in the centre of the story frame, we can summarize the three main events in the story, or the beginning, middle, and ending of the story. What should I put beside number 1?”). Appendix F lists the elements which were included by the researcher on the model story-frame.

**Notepad Condition**

In the notepad condition, or the general prediction and summarization instruction group, the students were each given a copy of a notepad to use at their desk. The researcher prompted the students to recall that this was their “notepad” and that they
could use it to record any information that they thought would be useful in helping them to remember the story and answer the questions about the story. As in the story-frame group’s second session, the researcher used scaffolded instruction and accepted students’ input as she modelled using the enlarged notepad on the blackboard. For example, the researcher recorded the author and the title of the story, along with a reason why she thought she would like the story (e.g., “What is something that we could put down about the story on our piece of paper, before we even begin listening to it? That’s right, we can write down the title and author of the story. In this case, the title of the story is “Snowshoe Trek to Otter River,” and the author is David Budbill. I will write it up here on my notepad so that everyone can see it, and you can write the same information down on your own notepads.”). The researcher also put down a thought-bubble (see Appendix D for complete participant instructions) and encouraged students to use the space to write whatever they thought would help them to better understand and remember the story. Students were reminded that they wanted to be able to answer the questions that would immediately follow the story session.

When the video was paused (approximately halfway through the story), the researcher modelled thinking about the story thus far and also modelled making some changes to the notes on her notepad. For example, at one school, a student suggested that this story reminded him of an adventure he had when he fell through the ice at his cottage, and the researcher accepted this response and encouraged him to put that down in a “thought-bubble” on his notepad as something that reminded him about the story. Since the researcher had a familiar experience herself, she also modelled this suggestion on the board, putting some pictures and words inside a “thought-bubble.”
Following the viewing of the video, the researcher modelled thinking about whether or not she liked this story and then wrote this down on the notepad along with her favourite part of the story (e.g., "when the ice on the river started to crack"). Students were encouraged to write down any additional information they would like to include on their notepad and to record their opinion of the story (whether they like it or not) and their favourite part of the story.

In both the notepad group and the story-frame instructional group, the researcher and her assistant circulated through the room, ensuring that students were on task as they filled in the last section of their page. Following this activity, students were asked to respond to a set of standardized story questions (Appendix C). Once again, the research assistant read the questions aloud, and students were encouraged to do their best and were informed that spelling and grammar would not be counted. The entire process for the second group training session took approximately 75 minutes to complete.

**Third Group Session: Independent Practice**

In the third group session, students practised using the predictive story-frame or the notepad on their own (i.e., the researcher did not model making predictions and did not fill in the enlarged story-frame or notepad that was posted on the blackboard). As in the first two training sessions, the story was presented to the students on a videotape. Each student was given a blank copy of the story-frame or notepad to use independently at their desk. Students were reminded that they had been using this tool for the last 2 days to record information about the stories they saw. They were instructed to use the same strategies (e.g., thinking about the story before, during, and after the story, making
and changing your notes) to help them remember important details about the new story they were going to see, entitled “Fanny Flora’s Kitten.” Students were given 5 minutes to complete each of the three sections of their strategic tool (for complete script, see Appendix D). The researcher and her assistant circulated to ensure that students were on task and were filling in the correct section of their strategic tool at the appropriate time. At the end of this session, students completed the written comprehension test for the story (see Appendix C). This third session took approximately one hour to complete.

**Individual Follow-Up Session One: Oral Retelling**

The first follow-up session took place one week after the first group story session. In this follow-up session, students worked individually with either the researcher or the research assistant in a quiet place in the school (e.g., the LRT’s office, the library, or a similar available space). Students were randomly divided between the researcher and her assistant. In these sessions, students were asked to recall the first story they had done in class, “Blue Moose.” They were first asked to recall the title of the story and were then asked to explain what strategic tool they used to help them remember the story. Students were then asked to retell as much of the story as possible. Students’ responses were audio-taped to allow for subsequent analysis and in order to ensure that no details of the students’ retelling were missed.

Following their retelling of the story, students were asked to answer a few questions about the story. Specifically, students were asked general questions about the story elements (characters, setting, problem, solution, and main events). For example, students were prompted by asking, “Can you remember who the main characters were in
this story?” “Can you tell me about the setting/problem/solution/three main events - beginning/middle/end of the story?” Students’ answers to these questions were also audio-recorded and then transcribed for further analysis. For complete participant instructions for the individual follow-up sessions, please see Appendix D.

Delayed Comprehension Test One (In-Class Session One Week Later)

Immediately after all of the students participated in an individual follow-up session (i.e., one week following the initial presentation of the story, “Blue Moose”), students were presented with another written comprehension test based on the story. The format of this test was identical to the immediate comprehension test except that the order of questions (and multiple-choice answers) on the delayed test had been changed and a few new questions were added to each test. Appendix C contains all of the delayed comprehension tests. The test was administered to the whole class as a group. The questions were read aloud to the students, just as they were in the initial group session, and students were once again informed that spelling and grammar did not count.

Individual Follow-Up Session Two: Retelling of Story Two

The day after students participated in the individual follow-up sessions and group delayed comprehension tests for the first story (and one week after they had been presented with the second story), they participated in a similar follow-up session for the second story. The students who had been interviewed by the researcher the day before were now interviewed by the research assistant, and the students who had the research assistant were now interviewed by the researcher. Names were pulled out of a hat to ensure that the order of the students (i.e., who was interviewed first) was randomized.
In the individual follow-up sessions, students were asked to recall the story from the second training session, “Snowshoe Trek to Otter River” (when the researcher was modelling for the entire group, in addition to having students’ complete their own paper). The students gave an oral retelling of as much of the story as they could remember, and their retellings were audio-taped. Students were then asked to answer standardized questions about the central elements of this story (characters, setting, problem, solution, and main events), and this section was also recorded on audio-cassette.

**Delayed Comprehension Test Two**

After all students had participated in a second individual follow-up session, a delayed comprehension test was administered to the group for the second story, “Snowshoe Trek to Otter River.” Once again, the questions were read aloud to eliminate any decoding difficulties children might have, and students were informed that spelling and grammar would not be counted. A copy of the delayed comprehension test is presented in Appendix C.

**Individual Follow-Up Session Three: Retelling of Story Three**

One week following the independent practice session, where students completed their own story-frame or notepad for the story, “Fanny Flora’s Kitten,” students participated in individual follow-up session three. Once again, the selection of students was randomized, but students who saw the researcher for session two now saw the research assistant, and students who were interviewed by the research assistant in session two were now seen by the researcher. Students were asked to provide a detailed retelling
of the third story that they had heard in class, and this retelling was audio-taped. Students were then asked the generic cued recall questions which asked them to recall the key elements of the story (character, setting, problem, solution, main events). Once again, responses were audio-taped so that they could be transcribed and further analysed.

**Delayed Comprehension Test Three**

After all students had participated in a third individual follow-up session, a delayed comprehension test was administered to the group for the third story, “Fanny Flora’s Kitten.” As in the previous sessions, the questions were read aloud to eliminate any decoding difficulties children might have, and students were informed that spelling and grammar would not be counted. A copy of the delayed comprehension test is presented in Appendix C.

**Fourth Group Story Session: Independent Reading**

The fourth session had students reading a story independently in order to allow the researcher to examine if there was transfer from the group sessions (where the story was presented orally) to independent reading. This was a key part in addressing the research questions which ask whether story-frames can be an effective classroom tool for improving the reading comprehension of students in grade 4 classes. In this second posttraining session, students were provided with the story, “The Shape in the Harbour,” a grade 3 reading passage (as determined by Fry’s Readability Graph) from a basal reading series (Scott, Foresman & Company, 1985). The slightly lower than grade level passage was selected to ensure that students who are “below average readers” would be
able to experience reading success with their story. This fourth group session took place 1 or 2 days after students had participated in the third individual follow-up session and the delayed comprehension test had been administered to the group.

Students in the predictive story-frame condition were provided with a predictive story-frame to use as they read the story. Students in the general prediction and summarization instruction group (notepad group) were given a copy of the notepad to make notes while reading the story. Students were prompted to remember what they had been doing in the previous group sessions:

Remember that we have been learning about how we can use our story-frame/notepad to help us to think about and remember stories. Today, you are going to read a story by yourself, and you are going to complete your story-frame/notepad independently. Try to remember how we used them in our group sessions, and do follow the same procedure today when you are completing your own. We will have approximately forty minutes to work on this, so I want you to take your time and do your best. When you have finished reading the story, and have completed your story-frame/notepad, then raise your hand, and your paper and the story will be collected. (For complete participant instructions, see Appendix F).

As in a regular classroom session, students were permitted to raise their hand and ask for any words which they were unable to read. In order to have a record of how many words each student had difficulty in decoding, each student was asked to underline the words they did not know. Students were instructed that if they came across a word they did not know, they were to underline the word, and then the researcher or the research assistant would tell them the word as they were circulating through the room.
When a student finished making notes or completing the predictive story-frames, the student raised his/her hand for the story and story-frame/notepad to be collected by the researcher. The time that it took each student to complete his/her notes was recorded on the paper by the researcher or the research assistant. Students were allowed to read quietly for the remainder of the period, while the other students finished reading the story and completing their notepads or predictive story-frames. After everyone had completed the story, the immediate comprehension test was administered to the entire study condition. This ensured that everyone was working on the questions at the same time and that no one still had the story or story-frame/notepad in view while answering the comprehension questions. It also allowed for consistency in reading the questions aloud to everyone at the same time, as was done in the previous sessions.

**Individual Follow-Up Session Four: Oral Retelling**

The final follow-up session followed the same format as was used in the first three follow-up sessions. That is, approximately one week after the fourth group story session, students were seen individually by the researcher or her assistant in a quiet place in the school (e.g., the LRT’s office or a similar available space). The students who had seen the researcher in individual follow-up three were now interviewed by the research assistant, and the students who had seen the research assistant for session three were now interviewed by the researcher. The order in which students were seen was randomly selected.

Before students were asked to give a retelling of the fourth story which they had read independently, and before they were asked to answer the cued recall questions, the students in the fourth follow-up session were asked a series of open-ended questions. As
in the first follow-up session, students were first asked to recall the name of the last story that they had read in class and were then asked what they did to help themselves remember it. Students were asked to describe "exactly" what they did (i.e., if they mentioned using the story-frame/notepad, then they were asked to describe how they used it). Following this, students were asked if they had found using the story-frame or notepad helpful or not, and why (e.g., "Why do you think the story-frame has helped you?" "How has it helped you?"). Students were also asked to talk about other methods or strategies; things they had used in the past to help them remember and understand stories that they were reading (e.g., "Before learning about the story-frame/notepad, what would you do to help yourself remember or understand a story?"). They were also asked to think about what they would do in the future to help them to better understand and remember stories. If students did not mention using the story-frame or notepad specifically, they were prompted, "Would you think about using a story-frame/notepad again? Why or why not?" Students were also asked when they would consider using the strategic tool again (i.e., in what situation). Student answers were all audio-recorded and were later transcribed and analysed.

The agenda of the fourth follow-up session from this point on mirrored the first three follow-up sessions. Students were asked to recall the story that they had read independently in class, "The Shape in the Harbour," and were asked to retell as much of the story as possible. The retellings were audio-taped for subsequent analysis. Students were then asked the general cued recall questions which had them identify the central elements in the story (characters, setting, problem, solution, and main events). Students' answers to these questions were also included in the audio-recording.
**Delayed Comprehension Test Four**

After everyone in the class had participated in an individual follow-up session for story four, the delayed comprehension test for “The Shape in the Harbour” was administered to the class as a group (see Appendix C for delayed comprehension test). The questions were read aloud to the students, just as they were in the previous group sessions, and students were once again informed that spelling and grammar would not be counted.

**Data Analysis**

**Immediate and Delayed Comprehension Tests**

Students’ responses on the immediate and delayed comprehension tests were scored by the researcher, and a random representative sample of 17% of the papers were also scored by an assistant who was blind to the students’ study condition (story-frame or notepad). This procedure allowed for a measure of interrater reliability by comparing the scores assigned by each marker (the researcher and the independent assistant). The individual who served as the interrater was also an elementary school teacher who had experience working with children in the regular classroom including those with learning difficulties.

The sample of students’ papers was randomly selected with half of the group coming from each of the two study conditions. The selected numbers were then checked against the master list to ensure that both males and females were represented, as well as “average or above” and “below average” readers.
The marking scheme developed by the researcher was designed so that students could receive a maximum score of 3 points for each of the open-ended comprehension questions. The marking scheme was designed to be consistent across the instructional conditions and across the four stories. A score of 0 (very poor) was awarded for answers which were incorrect, incomplete, or vague to the point of being incomprehensible. For example, when asked, “What was unusual about the kitten that came out of the crate the Floogles opened?” (from “Fanny Flora’s Kitten”) one student responded, “It had to much stripes.” A score of 1 (poor) was awarded for answers that were vague or which answered only part of the question, but which were not incorrect. For example, one student responded, “It looked like a kitten, but it was a baby tiger.” This answer is correct, but since it does not provide the supporting details which alerted readers to the fact that the kitten was indeed a tiger, it received a score of 1. A score of 2 (good) was awarded for answers that contained some of the information of key details from the story and that correctly answered the question. For example, the response, “The kitten was unusual because it ate all the food on Mr. and Mrs. Floogle” was awarded a score of 2. A score of 3 (excellent) was given for answers that went beyond the literal information stated in the text by either making connections within the story itself or by making connections to background knowledge and personal experience. For example, one student responded, “Because it was really big and looked like a tiger and it would growl and eat all the food and kittens don’t do that.” This student provided a number of supporting details and made connections to her prior knowledge. Students’ total test scores for each story were recorded, in addition to the breakdown of how they performed on each question type (i.e., literal, inferential, and critical/creative questions). This
allowed for an analysis of student performance by question type in addition to instructional condition, ability, and time.

Both the researcher and the interrater marked the papers independently according to the marking scheme. They then met and went over the students' answers and their corresponding scores. When there were disagreements, both markers examined the students' answers and the marking scheme and renegotiated a mark for the student. Interrater reliability scores ranged from 77.5% to 81.25% across the four stories. Since the interrater reliability score was less than 85% for the first 17% of the student responses, a second set of eight randomly-selected papers was selected and the procedure was repeated. The interrater reliability scores for the second selection of immediate comprehension test papers was 91.25%, ranging from 87.5% to 95% across the four stories. On the delayed comprehension tests, the average interrater reliability score was 88.4%. The interrater reliability scores ranged from 86.25% to 91.25% across the four stories.

### Retellings

Students' total scores for the story retellings consisted of key points, details, errors, and inference/elaborations. The "Key Points Protocol" (Appendix F) was used to identify the most important content units in each story (as described by Coffman, 1997, and Baumann & Bergeron, 1993). The markers analyzed the transcriptions of students' retellings and awarded students points based on how many content units were included in their retellings. Students were also given a "detail" score, which consisted of the number of points that they made which were contained in the story but were not on the list of
"key points." If students' retellings included points which were incorrect they were counted as "errors," which received a separate score. Finally, if students mentioned details which were not explicitly mentioned in the story but which could be inferred to be true, they were given an "inference or elaboration" score. For example, one student stated, "The customers paid the bill and then left the restaurant." The fact that the customers paid their bill is not explicitly mentioned in the story: It mentions the waiter bringing their bill and then skips to the customers leaving the restaurant. This student was awarded an "inference/elaboration" point for her idea, because it is neither explicitly correct (mentioned in the story) nor incorrect (outside the general story pattern).

In order to gain a measure of interrater reliability, 10 out of 47 papers (approximately 20%) of the students' retellings for two of the four stories were randomly chosen and scored by the same independent reviewers who scored students' story retellings. Once again, the sample was randomly selected by drawing 5 students from each strategy condition, with the numbers being checked against the master list to ensure that both males and females were represented as well as "average or above" and "below average" readers. A minimal interrater agreement level of 85% was adopted. Both markers (the researcher and the interrater) independently scored students' retellings and classified scores under one of four categories: key points, details, errors, and inferences/elaborations. The two markers came together to compare their scores. When the recorded scores differed, the markers went through the retelling together, examined the marking scheme carefully, and then decided on the correct score that should be awarded. Interrater reliability was calculated by determining the percentage of agreement between the two markers. Two of the four stories were randomly selected for interrater
reliability. Specifically, the second and third story, “Snowshoe Trek to Otter River” and “Fanny Flora’s Kitten,” were selected. The interrater reliability across the two stories was 91.5% and 90.0%, respectively.

**Students’ Recall of Story Title and Strategic Tool**

**Story Title and Strategic Tool Name**

At the beginning of each of the four retelling sessions, students were asked to provide the title of the story in question and the name of the strategic tool they had used during the story session (story-frame or the notepad). Students’ recall of the title and tool name was scored using a simple marking scheme which was developed by the researcher. The marking scheme developed by the researcher was designed so that students could receive a maximum score of 3 points for each of the title and strategic tool descriptions. A score of 0 (very poor) was awarded if the student could not provide any title. For example, the response, “I can’t remember….I don’t know the title” received a score of 0. If students recalled the wrong title (e.g., “Camping Outside” instead of “Snowshoe Trek to Otter River”), they received a score of 1 (poor). A score of 2 (good) was awarded if the student recalled at least part of the title accurately, but made one or more errors in the title. For example, the response “Flora’s Kitten” instead of “Fanny Flora’s Kitten” received a score of 2. A score of 3 was awarded to students who recalled the title accurately.

Students’ recall of the instructional tool name was scored in a similar manner. A score of 1 (poor) was awarded if students could not remember the name of the strategic tool they had used in the instructional sessions or if they recalled the wrong name for the
strategic tool. For example, if students responded, “Um… I forget what it was called,” or called the story-frame a “grate,” they received a score of 1. A score of 2 (good) was awarded if the students recalled at least part of the tool name accurately but made one or more errors in the name. For example, the student who called the Notepad the “Notebook” was awarded a score of 2. A score of 3 (excellent) was awarded to students who recalled the name of the strategic tool accurately.

**Strategic Tool Description**

In both the initial and final retelling sessions, students were also asked to describe in detail how they used their strategic tool. Students’ explanations were evaluated in two manners: one which evaluated students’ description of how to use the tool, including the correct sequence of actions (e.g., making predictions before reading, reading the story until the halfway point and then refining predictions, and generating summative comments after reading). The second manner examined how accurately students were able to recall the strategic tool elements (e.g., the story elements for the “story-frame,” and “thought-bubbles” for notepads). In each case, students’ responses were evaluated using a 4-point marking scheme. A score of 0 (very poor) was awarded for an inaccurate or incomplete description, for example, if students were unable to identify any information about how to use the strategic tool or were unable to identify any of the information that they recorded. A score of 1 (poor) was awarded for an incomplete, but at least partially accurate description. For example, a student explaining that one used the strategic tool by “thinking about what the story would be about” (correct but vague) or a student stating that only the characters’ names were recorded on the story-frame would
both receive a score of 1. If students were able to describe the strategic tool as having different sections to complete at different times ("You write part of what you guess the story is before you listen to the story, and then you write in the middle section when you pause in the middle of the story, and then after the story, that’s when you fill in the middle") or if they were able to identify at least two of the elements that were recorded on their strategic tool (e.g., the characters, the setting, and the problem), then they received a score of 2 for a partial but accurate description. Students who offered a complete and accurate description about how to use the strategic tool and those who reported at least four of the five possible elements received a score of 3 (excellent). Here are two students’ descriptions that received a score of 3 for both their description of tool use and for their description of the tool elements:

We used the notepad. On the outside, we put the name, and the author’s name, to help us remember. And we put what we think it would be about, and what it reminds us of. We put what kind of tools we thought he’d have. And, we put the bubble—the thought-bubble. Then we turned on the TV and watched the story. And then, we stopped for a couple of minutes to think about the story so far....First, we fill in what was in the outside, and if it was the same, we just put an arrow in. And then we put what other things we thought it would be about, again. And we put a second thought-bubble. And we put what tools he used so far. Then we watched the rest of the story. We filled in the last page, and we put that everything---mostly---was the same...the name of it, and then we put what it was about, and how long it [the trip] took, and the tools he used. And we put another
thought-bubble. We put how long it took for him to get home, and we put why we liked the story, like your favourite part (Snowshoe Trek to Otter River, Transcription, p. 14).

The story-frame...had frames on it that got lighter and lighter as they went in. And [in] the darkest part, we put our predictions. And in the middle of the story, we paused, and wrote in our second one. And then, at the end of the story, we wrote in the middle, the lightest. We wrote what they did in the story, and what we thought they would do in the story at the beginning. And in the middle, what they did, we wrote the problem, the setting, characters, and solution. At the ending of the story, we did it again and wrote the events (Snowshoe Trek to Otter River, Transcription, p. 7)

The marking scheme for both the description of tool use and for the description of the tool elements are presented in Appendix J.

**Cued Recall**

Students' responses to the five cued recall questions were scored using two different formats: correct/error scoring and a cued recall rubric. Each of these formats looked at students' recall of the critical story elements from a slightly different perspective. Interrater reliability scoring was conducted for both formats and is presented after a brief discussion of each marking format.
Correct/Error Marking Scheme

The correct/error marking scheme for cued recall used a format similar to the marking scheme for the verbal retellings. Specifically, a tally was kept for both correct points and errors under each of the seven prompted sections (characters, setting, problem, solution, beginning events, middle events, and ending events). Students were awarded one “correct” point for each item that was correctly identified in the story (e.g., one point for each character’s name). Students also received one “error” point for each item they mentioned which was incorrect (e.g., stating the character’s name was “Bobby” instead of “Daniel” would result in one “error” point under the students’ “characters-errors” score). This marking format resulted in a total of 14 scores for each student.

Cued Recall Rubric Marking Scheme

Students’ responses to each of the five cued recall questions (which related to characters, setting, problem, solution, and main events) were evaluated separately, using a 4-point rubric (see Appendix K). The rubric was created by the researcher and followed a similar format to the marking scheme for the open-ended comprehension questions. Each of the students’ responses was given a mark from 0 (very poor) to 3 (excellent). The rubric was designed to be consistent across the sections and across the four stories. A score of 0 (very poor) was awarded to an answer which was incorrect, incomplete, or vague to the point of being incomprehensible. For example, if a student mentioned only characters who were not in the story or described them incorrectly such as “the man and his wife” instead of “the boy and his mother” (in “Snowshoe Trek to Otter River”), then a score of 0 was awarded. A score of 1 (poor) was awarded for an
answer which was vague or missing important information but which was not incorrect.

For example, if a student could correctly recall only one character from the story, then a score of 1 was awarded. A score of 2 (good) was awarded to answers which incorporated correct information from the text which answered the question but lacked some of the details or insight which were representative of "excellent" answers. For example, a student who was able to mention all of the main characters but may have incorrectly identified "Mr. Breton" as "Mr. MacKenzie" (i.e., forgot the character’s correct name) would be awarded a 2. A score of 3 (excellent) was awarded to answers which presented accurate, detailed information from the story which correctly answered the question. For example, students had to be able to mention all of the main characters by name to be awarded a score of 3 on any of the stories.

The interrater reliability for cued recall was determined in the same manner as for the retellings. Two of the four stories (the second and third story) were selected for interrater reliability. Ten out of 47 (21.3%) of the students’ responses were randomly selected for interrater reliability, and it was insured that half of the students were from each of the two strategy conditions and that males and females, and "average or above readers" and "below average readers" were represented in the sample. Once again, a minimum standard of 85% interrater reliability was adopted. The two markers (the researcher and the inter-rater) independently marked the students’ cued recalls using both the correct/error format and the cued recall rubric. The two markers then met and went over each of the students’ scores. When there was a disagreement, both markers examined the students’ answer and studied the marking scheme and then negotiated a mark for the student. For the correct/error format, interrater reliability was calculated by
recording the number of times (out of 14 for each student) that the two markers had agreed. For the cued recall rubric, interrater reliability was calculated by recording the number of times out of the five for each student (with five being the number of categories representing the story elements) that the two markers had agreed. The mean interrater reliability agreement for “Snowshoe Trek to Otter River” was 87.9% on the correct/error format and 92.0% on the cued recall rubric. Similarly, the interrater reliability for “Fanny Flora’s Kitten” was 85.7% for the correct/error format and 92.0% for the cued recall rubric.

**Primary Analysis**

The primary analysis examined the effects of the independent variables on students’ reading comprehension scores and story recall. A 2 (strategy) by 2 (ability) by 2 (time) by 3 (question type) Split-Plot ANOVA with repeated measures on the last two variables was used to examine the effect of the independent variables on students’ reading comprehension. In addition, primary analysis examined students’ ability to remember each story one week after its initial presentation. Specifically, students’ ability to retell each story and to answer cued recall questions about the elements of each story (characters, setting, problem, solution, and main events) was examined. A 2 (strategy) by 2 (ability) Split-Plot ANOVA was used to examine students’ scores on the retellings and on the cued recall questions using the correct/error marking scheme. Nonparametric measures were used to analyze students’ ability to recall specific story elements according to the cued recall rubric. Specifically, the Kruskal-Wallis and the Mann-Whitney Test were used to examine the ordinal cued recall data.
Secondary Analysis

The secondary analysis consisted of examining students’ responses to open-ended interview questions. These questions asked students for feedback on the perceived usefulness of the strategies and also asked students to describe what other strategies they had used in the past to help them understand and remember stories, in addition to what they thought they would likely use in the future. Secondary analysis also consisted of the researcher’s observations of students’ strategy use during the research period, in addition to the researcher’s own reflections on the research process.

Methodological Assumptions and Limitations

In this study, there were a number of methodological assumptions and limitations which may limit the findings of this study, and these need to be addressed. One methodological assumption was that the CAT/2 reading score was a reliable way of sorting students into “average or above average” and “below average” readers. In an attempt to ensure that the students’ ratings of ability were reliable, classroom teachers were also asked to rate their students’ reading abilities. Specifically, they were asked to rate each student participating in the study as either an “average or above” or “below average” reader. The teachers’ ratings of ability agreed with the rating that emerged from the CAT/2 35 out of 47 times (75%). In cases where there was a disagreement, it was most likely that the teachers rated the student as being of “average or above average ability” and the students’ CAT/2 scores produced a below average rating of reading ability. This occurred eight times, with students’ scores on the CAT/2 ranging from the
21st to 49th percentile while the classroom teacher recorded the student as having an "average to above" reading ability. There are many possible reasons for this discrepancy. Students could be receiving more assistance in their reading work than the classroom teachers realize. In addition, students may excel at types of assessment (e.g., dramatic or artistic interpretations of stories) which are common in the classroom and are not required on the CAT/2. Another consideration is students' familiarity with pencil-and-paper measures, such as the CAT/2. Vocabulary scores were included in the CAT/2 assessment of reading ability, and this is something that is not frequently formally tested in the classroom environment. In addition, the reality of a classroom is that a wide range of student abilities exist, and that it is very difficult and somewhat arbitrary to sort students into only two groups according to reading level. However, the cut-off between good and poor readers must be made at some point, just as the cut-off between an A and a B exists at a specified performance level or grade percentage. When the discrepancy between teacher ratings and CAT/2 ratings of reading ability was examined, in half of the cases (6 of the 12 cases), students' scores were within ten percentile points of the dividing score of the 50th percentile. For example, in 3 out of the 4 cases where the classroom teacher identified a student as having a "below average" reading level and the CAT/2 score identified the same student as having an "average or above" reading ability, the students' scores on the CAT/2 were just above the 50th percentile cut-off, with scores at the 50th, 52nd, and 56th percentile.

An additional limitation to the reliability of this study could be attributed to the materials used in the study. Specifically, the stories used may have appealed to some

---

1 All statistical tests were repeated using teacher-ratings in place of CAT/2 ratings of ability, and the same pattern of findings emerged.
students more than others. Students’ familiarity with the concepts in the stories, their background knowledge, and their personal interests may have influenced their attention to the story and the effort they devoted to the study measures. The stories used in this study were all selected from grade 3 or 4 basal readers and contained certain elements (e.g., a central problem, a solution, characters with whom the children could identify) which were expected to appeal to most grade 4 students. In addition, the stories were piloted with a group of grade 4 children to determine their appeal and suitability to students of this age, and each of the stories was ranked as being “great” or “excellent” by the majority of the participants. In the current study, each comprehension test was concluded with a Likert-type opinion scale which asked students to rate their enjoyment of the story and which asked them to then comment on why they selected that response. Each story appealed to a wide number of the children and did not appeal to some of the children, for a variety of reasons (from perceived “level of excitement” to familiarity with the story context). Nonparametric Mann-Whitney U tests were conducted to examine if there were group differences between the two strategy conditions in terms of story enjoyment, and no significant differences existed, largest $U = 261.50$, $p > 0.05$.

In the first three group training and practice sessions, the stories were presented to the students on video-tape, with a teacher reading the story aloud. The fourth and final group session consisted of students reading their own story independently. This transfer session was designed to determine whether students could successfully employ the strategies to improve their understanding and memory of stories they were reading independently. Several studies (e.g., Pearson & Fielding, as cited in Hedrick & Cunningham, 1995) provide evidence to suggest that students’ reading comprehension
can be enhanced by providing them with practice listening to and discussing stories. However, this design does present a methodological limitation. Students were screened and identified as “average to above average” or “below average” readers based on a reading comprehension test. It is possible that some students in the study had a low reading comprehension score (due to decoding difficulties, etc.), but that these same students may have had high listening comprehension abilities. When these students were then presented with stories in the aural mode, they may have been very successful. In order to provide a more complete understanding of how strategic instruction can improve students’ listening and reading comprehension, future studies should have initial screening procedures which examine both students’ listening and reading comprehension skills. In addition, it would be beneficial for lengthier studies to include instruction and practice sessions in both listening and reading comprehension to obtain measures of how students’ scores in each area improve in relation to the strategic instruction they receive in that area.

The use of researcher-designed measures of reading comprehension may also have limited the reliability of this study. The comprehension questions which accompanied each story were designed by the researcher in consultation with a language-arts professor and were not normed or standardized on the population for which they were used. The questions were similar in format and style to questions which are included in the CAT/2 and other standardized measures such as the Timed Readings in Literature (Spargo, 1989). The questions used in this study were pilot tested on grade 4 students to determine their suitability. Copies of the comprehension tests have been included for reference (see Appendix C).
The procedures for the notepad comparison group were carefully designed to be similar in almost every way to the story-frame condition. Initially, this study was designed to compare the difference between students working with the structured story-frame and students who discussed general information about the story verbally. It was then decided that the comparison group should also use a paper-and-pencil “tool” to eliminate this significant difference between the groups (if students write down information about the story, research shows that it is more likely they will remember the story; e.g., Boyle & Weishaar, 1997). The initial plans called for a blank piece of paper to be used as students’ “notepad,” on which they could record any ideas or thoughts about the story. This led to a concern that students’ reading performance could be attributed to their level of excitement about using an eye-appealing piece of paper such as the story-frame versus a plain piece of paper. With this in mind, the “notepad” was developed to resemble the story-frame in that it too had three layers designed to accommodate the notes students were expected to make before, during, and after the reading of the story. Since students in the story-frame group were receiving a significant amount of instructional time with the researcher discussing the story, there was a concern that any significant differences between the two groups could be attributed to the amount of time spent discussing the story rather than to the use of a strategic organizer. For this reason, a script was planned for both strategy groups, with the students in the story-frame group participating in discussions which centred around the story elements and the students in the notepad group participating in more general discussions about why they liked the story, what it made them think about, and their favourite parts of each story. In the pilot study, instructional time with each group was recorded to ensure that each group spent an
equal amount of time discussing the story, and this was also controlled in the present study. With the attention given to ensuring that the mode of instruction, excitement level of the instruction, and instructional time were controlled between the two groups, it appears highly likely that instead of having just one effective strategic organizer, this study has produced two strategies that may be equally effective in getting students to think about, understand, and remember stories.

Due to time restraints, the present study did not have a true control group. This means that it can not be concluded that either the story-frame or the notepad significantly improved students' story comprehension and recall above and beyond typical classroom procedures. Future research should include a true “control group” which receives the stories and the accompanying comprehension questions without receiving instruction on how to improve their understanding or memory of the stories. This design would allow for a better understanding of how strategic instruction can assist students' story comprehension.

This study was explicitly designed to ensure equal treatment between the two groups of participants. Specific instructional scripts were designed and were verified by observer checks; instructional time was balanced between the two groups; and the presentation of each story was designed to be identical to other presentations, which was facilitated by using the videotapes. In addition, the order of the instruction was balanced, so that on day one at school one, the story-frame students received their instruction first, and after they were done the notepad students received their instructional time. On day two at the same school, the order of the groups was reversed, so that the students in the notepad group would receive their instruction first. This continued throughout the four
group training and practice sessions that were involved in this study. At the second school, the order was reversed, so that students in the notepad condition received first instruction on day one, followed by students in the story-frame. Once again, the order of the two groups was switched each day. Unfortunately, certain conditions are beyond the control of even the most experienced researcher. In this study, the weather turned out to be a factor which likely affected students’ performance. Specifically, on the day that one of the schools was participating in their fourth session, where the students were to read the stories and fill in their story-frame or notepad independently, a violent thunderstorm hit the neighbourhood. The storm came in the middle of the story-frame session, when students were still reading their stories and completing their organizers. There was loud thunder, lots of lightning, and a significant amount of rain. The lights in the school flickered a few times, and the students were concerned that they would go out. Many of the students rushed over to the classroom window to look out at the storm. The storm persisted as students were asked to return to their seats and do their best to ignore the storm. It is evident that these were not the best conditions for reading and studying a story. The storm continued while students were writing their comprehension test, but had subsided significantly by the time the notepad students were ready for their group instruction. It was still raining heavily, but the thunder and lightning had subsided. It is evident that the studying conditions were not ideal for students in either condition that day, but they were particularly poor for students in the story-frame condition, and it is likely that this affected students’ performance.

It must be stated that the researcher conducting this study did have a personal bias in that it was expected that students in the strategic predictive story-frame condition
would demonstrate better story comprehension and recall than students in the notepad condition. As the researcher was the instructor for both conditions, this was a potential source of experimental bias. Beyond this personal bias, the researcher's primary concern was to examine the effect of providing strategic or general prediction and summarization instruction on students' comprehension and memory for narrative stories, using systematic experimental research. A conscious effort was made to conduct this research in an equitable, objective, and scientific manner in order to ensure that the data obtained would be used to provide insight into the types of strategic instruction which can enhance students' reading comprehension. Several measures were put in place to ensure objectivity whenever possible. Specifically, a research assistant was employed to help administer the immediate and delayed comprehension tests to the students. This research assistant was blind to the hypotheses of the study. She was present in the classroom during each of the group sessions and was able to complete checklists determining equitable time and instruction was spent on each strategy group. When individual sessions were conducted, students were randomly assigned to either the researcher or the research assistant. The research design allowed for each student to be seen twice individually by both the research assistant and by the primary researcher. In both cases, the researcher and her assistant followed structured scripts, and all individual sessions were recorded and transcribed for further analysis. In addition, an interrater reliability scorer who did not know the students or the study conditions was employed to mark a subsection of the data. Interrater agreement was set at 85% to ensure that the researcher's bias did not enter into the scoring of any open-ended comprehension questions, retellings, or students' responses to the cued recall questions. Every effort was made to ensure that
personal bias in no way interfered with the impartiality and objectivity of this study.

Two final limitations for this study are the small sample size (N=47) and the time line for the research. When the sample was divided into two instructional conditions (story-frame and notepad) and two ability groups ("average to above average" and "below average" readers), this meant that there were only 11 or 12 participants in each cell. Future studies including more participants would be helpful to confirm the results obtained here. In this study, three group training sessions were used to teach students how to use an advanced organizer, the story-frame, to assist them in understanding and recalling the information in narrative text. With additional practice using the story-frame (or the notepad) over a longer period of time (i.e., over an entire school term), comprehension scores might improve greatly, as could be measured on a standardized test of reading comprehension, such as the CAT/2. Further research which examines the effects of providing students with a combination of strategies on their reading recall and comprehension should involve more students and should continue over a longer period of time to see the long-term results of this strategic intervention. Findings from future research can be used to support and extend the findings of this current study.
CHAPTER FOUR: RESULTS

Introduction

The primary analysis consisted of reviewing the comprehension data, specifically examining students’ performance across the stories and across question types over time. The primary analysis also consisted of examining students’ performance on both the verbal retellings and on cued recall questions which were presented one week following the initial story sessions. Secondary analysis consisted of examining students’ answers to open-ended interview questions. These questions asked students about the usefulness of the strategies, other strategies they had used in the past to help them understand and remember stories, and the strategies that they thought they would use in the future. Secondary analysis also consisted of the researcher’s observations of students’ strategy use during the research period and the researcher’s reflections on the research process.

Literal, Inferential and Critical/Creative Comprehension Questions

A 2 (instructional condition) by 2 (ability) by 2 (time) by 3 (question type) ANOVA with repeated measurement on the last two variables was performed to examine students’ performance on the comprehension tests. The Spjotvoll-Stoline test, a modification of the Tukey-Kramer HSD procedure, was used for posthoc analysis, as the number of students across the two instructional conditions differed by one (Kirk, 1982). Cohen’s $d$, as a measure of effect size, was calculated whenever there were significant main effects for instructional condition or ability group. Students’ mean and standard deviation performance scores on the immediate and delayed comprehension tests are presented in Tables 1 through 8 for the four stories. Tables 1 and 2 display the
<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td><strong>Literal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>3.50</td>
<td>3.14</td>
<td>3.18</td>
<td>2.92</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>0.71</td>
<td>0.66</td>
<td>0.60</td>
<td>0.67</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>87.50</td>
<td>78.50</td>
<td>79.50</td>
<td>73.00</td>
</tr>
<tr>
<td><strong>Open-ended</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>5.70</td>
<td>4.14</td>
<td>4.55</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.42</td>
<td>0.95</td>
<td>1.63</td>
<td>2.34</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>63.33</td>
<td>46.00</td>
<td>50.55</td>
<td>44.44</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>9.20</td>
<td>7.29</td>
<td>7.73</td>
<td>6.92</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.55</td>
<td>1.20</td>
<td>1.62</td>
<td>2.64</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>70.77</td>
<td>56.08</td>
<td>59.46</td>
<td>53.23</td>
</tr>
<tr>
<td><strong>Inferential</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>3.90</td>
<td>3.14</td>
<td>3.73</td>
<td>3.08</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>0.32</td>
<td>0.77</td>
<td>0.47</td>
<td>0.79</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>97.50</td>
<td>78.50</td>
<td>93.25</td>
<td>77.00</td>
</tr>
<tr>
<td><strong>Open-ended</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>5.30</td>
<td>4.36</td>
<td>5.55</td>
<td>4.75</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.25</td>
<td>1.50</td>
<td>1.51</td>
<td>1.06</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>58.89</td>
<td>48.44</td>
<td>61.67</td>
<td>52.78</td>
</tr>
</tbody>
</table>

*(table continues)*
<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
</tr>
<tr>
<td>Inferential total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 13)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>9.20</td>
<td>7.50</td>
<td>9.27</td>
</tr>
<tr>
<td>SD</td>
<td>1.40</td>
<td>1.16</td>
<td>1.56</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>70.77</td>
<td>57.69</td>
<td>71.31</td>
</tr>
<tr>
<td>Critical/creative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open-ended</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 12)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>7.80</td>
<td>5.36</td>
<td>8.64</td>
</tr>
<tr>
<td>SD</td>
<td>1.23</td>
<td>1.22</td>
<td>2.34</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>65.00</td>
<td>44.67</td>
<td>72.00</td>
</tr>
<tr>
<td>Test total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 38)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>26.20</td>
<td>20.14</td>
<td>25.64</td>
</tr>
<tr>
<td>SD</td>
<td>2.94</td>
<td>1.88</td>
<td>3.78</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>68.95</td>
<td>53.00</td>
<td>67.47</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
</tr>
</tbody>
</table>
Table 2
Students’ Mean and Standard Deviation Performance Scores for Story One “Blue Moose” Delayed Test as a Function of Question Type, Reading Ability, and Instructional Condition: Literal, Inferential, and Critical/Creative Comprehension Test Measures

<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th></th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td></td>
</tr>
<tr>
<td>Literal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>4.40</td>
<td>3.50</td>
<td>4.00</td>
<td>3.17</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>0.70</td>
<td>0.94</td>
<td>0.77</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>88.00</td>
<td>70.00</td>
<td>80.00</td>
<td>63.40</td>
<td></td>
</tr>
<tr>
<td>Open-ended</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>6.90</td>
<td>4.64</td>
<td>5.55</td>
<td>3.42</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.73</td>
<td>1.55</td>
<td>2.54</td>
<td>2.15</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>57.50</td>
<td>38.67</td>
<td>46.25</td>
<td>28.50</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 17)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>11.30</td>
<td>8.14</td>
<td>9.55</td>
<td>6.58</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>2.21</td>
<td>2.18</td>
<td>2.88</td>
<td>2.68</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>66.47</td>
<td>47.88</td>
<td>56.18</td>
<td>38.71</td>
<td></td>
</tr>
<tr>
<td>Inferential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>4.60</td>
<td>3.57</td>
<td>4.36</td>
<td>3.42</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>0.70</td>
<td>0.94</td>
<td>0.67</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>92.00</td>
<td>71.40</td>
<td>87.20</td>
<td>68.40</td>
<td></td>
</tr>
<tr>
<td>Open-ended</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>5.80</td>
<td>3.43</td>
<td>4.64</td>
<td>3.67</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.23</td>
<td>0.94</td>
<td>1.43</td>
<td>2.06</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>64.44</td>
<td>38.11</td>
<td>51.56</td>
<td>40.78</td>
<td></td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to</td>
<td>Below average</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td></td>
<td>above average readers</td>
<td>readers</td>
<td>readers</td>
<td>readers</td>
</tr>
<tr>
<td>Total (max = 14)</td>
<td>M</td>
<td>10.40</td>
<td>7.00</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.51</td>
<td>1.47</td>
<td>1.73</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>74.29</td>
<td>50.00</td>
<td>64.29</td>
<td>50.57</td>
</tr>
<tr>
<td>Critical/creative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open-ended (max = 9)</td>
<td>M</td>
<td>5.70</td>
<td>3.00</td>
<td>4.73</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.16</td>
<td>1.96</td>
<td>1.27</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>63.33</td>
<td>33.33</td>
<td>52.56</td>
<td>43.56</td>
</tr>
<tr>
<td>Test total (max = 40)</td>
<td>M</td>
<td>27.40</td>
<td>18.14</td>
<td>23.27</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>3.63</td>
<td>2.85</td>
<td>4.13</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>68.50</td>
<td>45.35</td>
<td>58.18</td>
<td>43.95</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 3
Students’ Mean and Standard Deviation Performance Scores for Story Two “Snowshoe Trek to Otter River” Immediate Test as a Function of Question Type, Reading Ability, and Instructional Condition: *Literal, Inferential, and Critical/Creative Comprehension Test Measures*

<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Literal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.44</td>
<td>3.43</td>
<td>3.18</td>
<td>2.92</td>
</tr>
<tr>
<td>SD</td>
<td>0.73</td>
<td>0.94</td>
<td>0.98</td>
<td>1.08</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>86.00</td>
<td>85.75</td>
<td>79.50</td>
<td>73.00</td>
</tr>
<tr>
<td>Open-ended</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>6.56</td>
<td>4.64</td>
<td>5.00</td>
<td>3.25</td>
</tr>
<tr>
<td>SD</td>
<td>1.51</td>
<td>1.95</td>
<td>2.14</td>
<td>1.86</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>72.89</td>
<td>51.56</td>
<td>55.56</td>
<td>36.11</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>10.00</td>
<td>8.07</td>
<td>8.18</td>
<td>6.17</td>
</tr>
<tr>
<td>SD</td>
<td>1.50</td>
<td>2.64</td>
<td>2.36</td>
<td>2.37</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>76.92</td>
<td>62.08</td>
<td>62.92</td>
<td>47.46</td>
</tr>
<tr>
<td>Inferential</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.89</td>
<td>3.36</td>
<td>3.55</td>
<td>2.42</td>
</tr>
<tr>
<td>SD</td>
<td>0.33</td>
<td>0.63</td>
<td>0.69</td>
<td>1.31</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>97.25</td>
<td>84.00</td>
<td>88.75</td>
<td>60.50</td>
</tr>
<tr>
<td>Open-ended</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.44</td>
<td>3.07</td>
<td>4.45</td>
<td>3.17</td>
</tr>
<tr>
<td>SD</td>
<td>1.59</td>
<td>1.33</td>
<td>1.44</td>
<td>1.40</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>49.33</td>
<td>34.11</td>
<td>49.44</td>
<td>35.22</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Total (max = 13)</td>
<td>8.33</td>
<td>6.43</td>
</tr>
<tr>
<td>M</td>
<td>1.66</td>
<td>1.55</td>
</tr>
<tr>
<td>SD</td>
<td>64.08</td>
<td>49.46</td>
</tr>
<tr>
<td>Critical/creative Open-ended (max = 12)</td>
<td>9.00</td>
<td>5.71</td>
</tr>
<tr>
<td>M</td>
<td>1.12</td>
<td>1.98</td>
</tr>
<tr>
<td>SD</td>
<td>75.00</td>
<td>47.58</td>
</tr>
<tr>
<td>Test total (max = 38)</td>
<td>27.33</td>
<td>20.21</td>
</tr>
<tr>
<td>M</td>
<td>1.80</td>
<td>4.53</td>
</tr>
<tr>
<td>SD</td>
<td>71.92</td>
<td>53.18</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>Number of subjects</td>
<td>9</td>
</tr>
</tbody>
</table>
Table 4
Students’ Mean and Standard Deviation Performance Scores for Story Two “Snowshoe Trek to Otter River” Delayed Test as a Function of Question Type, Reading Ability, and Instructional Condition: Literal, Inferential, and Critical/Creative Comprehension Test Measures

<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above</td>
<td>Below average</td>
</tr>
<tr>
<td></td>
<td>average readers</td>
<td>readers</td>
</tr>
<tr>
<td>Literal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.56</td>
<td>4.21</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
<td>1.12</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>91.20</td>
<td>84.20</td>
</tr>
<tr>
<td>Open-ended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>7.33</td>
<td>4.64</td>
</tr>
<tr>
<td>SD</td>
<td>2.60</td>
<td>1.78</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>61.08</td>
<td>38.67</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>11.89</td>
<td>8.86</td>
</tr>
<tr>
<td>SD</td>
<td>2.47</td>
<td>2.38</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>69.94</td>
<td>52.12</td>
</tr>
<tr>
<td>Inferential</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.00</td>
<td>3.36</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.93</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>100.00</td>
<td>84.00</td>
</tr>
<tr>
<td>Open-ended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>6.56</td>
<td>4.50</td>
</tr>
<tr>
<td>SD</td>
<td>2.24</td>
<td>1.22</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>54.67</td>
<td>37.50</td>
</tr>
<tr>
<td>Question type</td>
<td>Story-frame</td>
<td>Notepad</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 16)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>10.56</td>
<td>7.56</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>2.24</td>
<td>1.58</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>66.00</td>
<td>47.25</td>
</tr>
<tr>
<td><strong>Critical/creative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Open-ended</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>5.78</td>
<td>3.71</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.39</td>
<td>2.20</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>64.22</td>
<td>41.22</td>
</tr>
<tr>
<td><strong>Test total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 42)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>28.22</td>
<td>20.43</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>3.53</td>
<td>4.42</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>67.19</td>
<td>48.64</td>
</tr>
<tr>
<td><strong>Number of subjects</strong></td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>
Table 5
Students’ Mean and Standard Deviation Performance Scores for Story Three “Fanny Flora’s Kitten” Immediate Test as a Function of Question Type, Reading Ability, and Instructional Condition: *Literal, Inferential, and Critical/Creative Comprehension Test Measures*

<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Literal Multiple choice (max = 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.90</td>
<td>3.50</td>
</tr>
<tr>
<td>SD</td>
<td>0.32</td>
<td>0.94</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>97.50</td>
<td>87.50</td>
</tr>
<tr>
<td>Open-ended (max = 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>5.90</td>
<td>5.14</td>
</tr>
<tr>
<td>SD</td>
<td>1.85</td>
<td>1.51</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>65.55</td>
<td>57.11</td>
</tr>
<tr>
<td>Total (max = 13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>9.80</td>
<td>8.64</td>
</tr>
<tr>
<td>SD</td>
<td>1.75</td>
<td>1.95</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>75.38</td>
<td>66.46</td>
</tr>
<tr>
<td>Inferential Multiple choice (max = 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.50</td>
<td>3.36</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
<td>1.15</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>87.50</td>
<td>84.00</td>
</tr>
<tr>
<td>Open-ended (max = 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>5.10</td>
<td>4.29</td>
</tr>
<tr>
<td>SD</td>
<td>1.73</td>
<td>2.02</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>56.67</td>
<td>47.67</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame Average to above average readers</th>
<th>Story-frame Below average readers</th>
<th>Notepad Average to above average readers</th>
<th>Notepad Below average readers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (max = 13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>8.60</td>
<td>7.64</td>
<td>7.55</td>
<td>6.25</td>
</tr>
<tr>
<td>SD</td>
<td>1.96</td>
<td>2.50</td>
<td>2.88</td>
<td>2.67</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>66.15</td>
<td>58.77</td>
<td>58.08</td>
<td>48.08</td>
</tr>
<tr>
<td>Critical/creative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open-ended (max = 12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>7.10</td>
<td>6.14</td>
<td>8.18</td>
<td>5.75</td>
</tr>
<tr>
<td>SD</td>
<td>1.37</td>
<td>1.99</td>
<td>2.36</td>
<td>2.77</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>59.17</td>
<td>51.17</td>
<td>68.17</td>
<td>47.92</td>
</tr>
<tr>
<td>Test total (max = 38)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>25.50</td>
<td>22.43</td>
<td>24.82</td>
<td>19.17</td>
</tr>
<tr>
<td>SD</td>
<td>3.54</td>
<td>5.15</td>
<td>5.25</td>
<td>6.64</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>67.11</td>
<td>59.03</td>
<td>65.32</td>
<td>50.45</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
### Table 6
Students’ Mean and Standard Deviation Performance Scores for Story Three “Fanny Flora’s Kitten” Delayed Test as a Function of Question Type, Reading Ability, and Instructional Condition: Literal, Inferential, and Critical/Creative Comprehension Test Measures

<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td><strong>Literal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice (max = 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.30</td>
<td>4.29</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
<td>1.07</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>86.00</td>
<td>85.00</td>
</tr>
<tr>
<td><strong>Open-ended</strong> (max = 12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>7.80</td>
<td>6.07</td>
</tr>
<tr>
<td>SD</td>
<td>1.75</td>
<td>2.37</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>65.00</td>
<td>50.58</td>
</tr>
<tr>
<td><strong>Total</strong> (max = 17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>12.10</td>
<td>10.36</td>
</tr>
<tr>
<td>SD</td>
<td>1.66</td>
<td>2.84</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>71.18</td>
<td>60.94</td>
</tr>
<tr>
<td><strong>Inferential</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice (max = 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.90</td>
<td>3.50</td>
</tr>
<tr>
<td>SD</td>
<td>0.88</td>
<td>1.56</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>78.00</td>
<td>70.00</td>
</tr>
<tr>
<td>Open-ended (max = 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.60</td>
<td>4.21</td>
</tr>
<tr>
<td>SD</td>
<td>1.26</td>
<td>1.93</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>51.11</td>
<td>46.78</td>
</tr>
</tbody>
</table>

*(table continues)*
<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th></th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Total (max = 14)</td>
<td></td>
<td>8.50</td>
<td>7.71</td>
<td>8.64</td>
<td>6.50</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>1.35</td>
<td>3.15</td>
<td>3.61</td>
<td>3.37</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>60.71</td>
<td>55.07</td>
<td>61.71</td>
<td>46.43</td>
<td></td>
</tr>
<tr>
<td>Critical/creative</td>
<td>Open-ended</td>
<td>(max = 9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.40</td>
<td>3.50</td>
<td>4.73</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>1.71</td>
<td>1.65</td>
<td>1.42</td>
<td>1.76</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>48.89</td>
<td>38.89</td>
<td>52.56</td>
<td>30.56</td>
<td></td>
</tr>
<tr>
<td>Test total (max = 40)</td>
<td></td>
<td>25.00</td>
<td>21.57</td>
<td>24.36</td>
<td>18.25</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>2.27</td>
<td>5.93</td>
<td>6.20</td>
<td>8.23</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>62.50</td>
<td>53.93</td>
<td>60.90</td>
<td>45.63</td>
<td></td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
Table 7
Students’ Mean and Standard Deviation Performance Scores for Story Four “The Shape in the Harbor” Immediate Test as a Function of Question Type, Reading Ability, and Instructional Condition: Literal, Inferential, and Critical/Creative Comprehension Test Measures

<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Literal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice (max = 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.70</td>
<td>3.50</td>
</tr>
<tr>
<td>SD</td>
<td>0.48</td>
<td>0.65</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>92.50</td>
<td>87.50</td>
</tr>
<tr>
<td>Open-ended (max = 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.90</td>
<td>3.29</td>
</tr>
<tr>
<td>SD</td>
<td>2.08</td>
<td>1.64</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>54.44</td>
<td>36.55</td>
</tr>
<tr>
<td>Total (max = 13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>8.60</td>
<td>6.79</td>
</tr>
<tr>
<td>SD</td>
<td>2.07</td>
<td>2.04</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>66.15</td>
<td>52.23</td>
</tr>
<tr>
<td>Inferential</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple choice (max = 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.30</td>
<td>3.43</td>
</tr>
<tr>
<td>SD</td>
<td>1.06</td>
<td>0.94</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>82.50</td>
<td>85.75</td>
</tr>
<tr>
<td>Open-ended (max = 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>5.20</td>
<td>2.64</td>
</tr>
<tr>
<td>SD</td>
<td>1.40</td>
<td>1.74</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>57.77</td>
<td>29.33</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th></th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to</td>
<td>Below</td>
<td>Average</td>
<td>Below</td>
<td></td>
</tr>
<tr>
<td></td>
<td>above</td>
<td>average</td>
<td>above</td>
<td>average</td>
<td></td>
</tr>
<tr>
<td></td>
<td>readers</td>
<td>readers</td>
<td>readers</td>
<td>readers</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>8.50</td>
<td>6.07</td>
<td>7.55</td>
<td>5.17</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>2.27</td>
<td>1.94</td>
<td>2.11</td>
<td>2.17</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>65.38</td>
<td>46.69</td>
<td>58.08</td>
<td>39.77</td>
<td></td>
</tr>
<tr>
<td>Critical/creative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open-ended</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>7.90</td>
<td>6.00</td>
<td>7.18</td>
<td>5.08</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.45</td>
<td>2.60</td>
<td>1.78</td>
<td>2.13</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>65.83</td>
<td>50.00</td>
<td>59.83</td>
<td>42.33</td>
<td></td>
</tr>
<tr>
<td>Test total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(max = 38)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>25.00</td>
<td>18.86</td>
<td>24.27</td>
<td>16.58</td>
<td></td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>3.80</td>
<td>5.08</td>
<td>3.72</td>
<td>6.14</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>65.79</td>
<td>49.63</td>
<td>63.87</td>
<td>43.63</td>
<td></td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
Table 8
Students' Mean and Standard Deviation Performance Scores for Story Four "The Shape in the Harbor" Delayed Test as a Function of Question Type, Reading Ability, and Instructional Condition: Literal, Inferential, and Critical/Creative Comprehension Test Measures

<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td></td>
</tr>
<tr>
<td>Literal Multiple choice (max = 5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.00</td>
<td>4.07</td>
<td>4.36</td>
</tr>
<tr>
<td>SD</td>
<td>0.47</td>
<td>1.14</td>
<td>0.51</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>80.00</td>
<td>81.40</td>
<td>87.20</td>
</tr>
</tbody>
</table>

|                  | Notepad |                  |                  |
|                  | Average to above average readers | Below average readers |                 |
| Percentage correct | 80.00 | 81.40 | 87.20 |

|                  |                  |
| Open-ended (max = 12) |                  |
| M                   | 5.40        | 2.93             | 5.27             |
| SD                  | 2.17        | 1.59             | 2.05             |
| Percentage correct  | 45.00       | 24.42            | 43.92            |

|                  |                  |
| Total (max = 17) |                  |
| M                  | 9.40         | 7.00             | 9.64             |
| SD                 | 2.27         | 1.92             | 2.29             |
| Percentage correct | 55.29     | 41.18            | 56.71            |

|                  |                  |
| Inferential Multiple choice (max = 5) |                  |
| M                   | 4.30        | 4.29             | 4.45             |
| SD                  | 0.82        | 0.61             | 0.69             |
| Percentage correct  | 86.00       | 85.80            | 89.00            |

|                  |                  |
| Open-ended (max = 12) |                  |
| M                   | 6.80        | 3.50             | 5.18             |
| SD                  | 0.79        | 1.29             | 2.04             |
| Percentage correct  | 56.67       | 29.17            | 43.17            |

(table continues)
<table>
<thead>
<tr>
<th>Question type</th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Average to above average readers</td>
</tr>
<tr>
<td>Total (max = 17)</td>
<td>M 11.12</td>
<td>9.64</td>
</tr>
<tr>
<td></td>
<td>SD 1.20</td>
<td>1.86</td>
</tr>
<tr>
<td></td>
<td>Percentage correct 65.29</td>
<td>56.71</td>
</tr>
<tr>
<td>Critical/creative</td>
<td>Open-ended (max = 9)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M 5.20</td>
<td>3.45</td>
</tr>
<tr>
<td></td>
<td>SD 2.15</td>
<td>2.02</td>
</tr>
<tr>
<td></td>
<td>Percentage correct 57.78</td>
<td>38.33</td>
</tr>
<tr>
<td>Test total (max = 43)</td>
<td>M 25.70</td>
<td>22.73</td>
</tr>
<tr>
<td></td>
<td>SD 3.20</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Percentage correct 59.77</td>
<td>52.86</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
</tr>
</tbody>
</table>
immediate and delayed scores for Story One (Modelling). Tables 3 and 4 for Story Two (Guided Practice), Tables 5 and 6 for Story Three (Independent Practice), and Tables 7 and 8 for Story Four (Independent Reading). Scores are displayed as a function of question type, reading ability, and instructional condition.

**Story One (Blue Moose): Modelling the Strategic Tools**

For story one, there were significant main effects for question type, \( F(2, 43) = 8.55, p < 0.01 \), time \( F(1, 43) = 32.93, p < 0.01 \), and ability, \( F(1, 43) = 34.36, p < 0.01, d = 1.72 \). There was no significant main effect for instructional condition, \( F(1, 43) = 0.30, p > 0.05 \). Students performed significantly better on the inferential questions than on the literal or critical/creative questions (\( q = 3.02 \) and \( q = 4.12, p's < 0.05 \)). Students’ performance on the literal and critical/creative questions did not differ significantly, \( q = 1.10, p > 0.05 \). Students performed significantly better on the immediate comprehension test than the delayed test, \( q = 4.90, p < 0.05 \). Average to above average readers performed significantly better than below average readers, \( q = 8.92, p < 0.05 \). However, these main effects must be interpreted cautiously due to the large number of two-way interactions.

Out of six possible two-way interactions, three were significant: question type by instructional condition, time by ability, and time by instructional condition. The remaining 3 two-way interactions (instructional condition by ability, question type by ability and question type by time) were not statistically significant, largest \( F(1,43) = 2.34, p > .05 \).

\(^2\)Cohen’s \( d \) is a measure of the effect size in \( \sigma \) units, or a measure of the standardized difference between two means (Kirk, 1982; Rosnow & Rosenthal, 1996). In general, a \( d \) of 0.5 is interpreted as a medium effect size, while a \( d \) greater than 0.8 is interpreted as a large effect size.
The two-way interaction between question type and instructional condition was significant, $F(2, 43) = 5.78, p < 0.01$ (see Figure 2). Students in the story-frame condition performed equally well across the three question types, largest $q = 1.33, p > 0.05$. However, students in the notepad condition performed significantly less well on both the literal questions ($q = 2.81, p < 0.05$) and the critical/creative questions ($q = 3.33, p < 0.05$) than they did on the inferential questions.

The two-way interaction between time and ability was also significant, $F(1, 43) = 4.22, p < 0.05$ (see Figure 3). Overall, average to above average readers performed significantly better than below average readers. This held true for both the immediate comprehension test, $q = 3.44, p < 0.05$, and the delayed comprehension test, $q = 4.90, p < 0.01$. In addition, below average readers performed significantly better on the immediate comprehension test than the delayed test, $q = 2.98, p < 0.05$. The performance scores of average to above average readers did not differ significantly between the immediate and delayed comprehension tests, $q = 1.29, p > 0.05$.

Finally, the two-way interaction between time and instructional condition was significant, $F(1, 43) = 5.55, p < 0.02$ (see Figure 4). Students in the story-frame condition performed equally well on both the immediate and delayed comprehension tests, $q = 1.26, p > 0.05$. The performance scores of students in the notepad instructional condition were significantly lower in the delayed comprehension test than the immediate comprehension test, $q = 3.11, p < 0.05$. 
Figure 2. Two-way interaction between question type and instructional condition for story one (Blue Moose), initial group session comprehension tests.
Figure 3. Two-way interaction between time and ability for story one (Blue Moose), initial group session comprehension scores.
Figure 4. Two-way interaction between time and instructional condition for story one (Blue Moose), initial group session comprehension scores.
There were no three-way interactions between instructional condition, ability, and time; instructional condition, time, and question type; instructional condition, ability, and question type; or ability, time, and question type, largest $F(1,43) = 0.92, p > .05$. Finally, there were no four-way interactions between instructional condition, ability, time, and question type, $F(2,43) = 1.21, p > .05$.

**Story Two (Snowshoe Trek to Otter River): Guided Practice**

For the second story there were significant main effects for question type, $F(2, 43) = 4.14, p < 0.02$, time, $F(1, 43) = 17.44, p < 0.01$, ability, $F(1, 43) = 22.67, p < 0.01$, $d=1.44$ and instructional condition, $F(1, 43) = 8.91, p < 0.01, d=0.87$. Students performed significantly better on the literal questions than on the critical/creative questions, $q = 2.84, p < 0.05$. Students' performances between the literal and inferential and critical/creative questions did not differ significantly, largest $q = 2.39, p > 0.05$).

Students performed significantly better on the immediate comprehension test than the delayed test, $q = 3.44, p < 0.05$. Average to above average readers performed significantly better than below average readers, $q = 3.68, p < 0.05$. Students in the story-frame condition attained higher comprehension scores than students in the notepad condition, $q = 2.98, p < 0.05$.

Out of six possible two-way interactions, none were statistically significant, largest $F(2, 43) = 2.07, p > .05$. In addition, there were no significant three-way interactions, largest $F(2,43) = 2.50, p > 0.05$. Finally, there were also no significant four-way interactions between instructional condition, ability, time, and question type, $F(2,43) = 0.60, p > .05$. 
Story Three (Fanny Flora’s Kitten): Independent Practice

For the third story there were significant main effects for question type, $F(2, 43) = 20.00, p < 0.01$, time $F(1, 43) = 16.59, p < 0.01$, and ability, $F(1, 43) = 9.08, p < 0.01$, $d=0.87$. There was no significant main effect for instructional condition, $F(1, 43) = 1.41, p > 0.05$. Students’ performances on the literal comprehension questions were significantly higher than their performance on either the inferential ($q = 3.24, p < 0.05$) or the critical/creative questions ($q = 6.43, p < 0.05$). Similarly, students performed better on the inferential questions than they did on the critical/creative questions, $q = 3.20, p < 0.05$. Students performed significantly better on the immediate test than they did on the delayed test, $q = 3.37, p < 0.05$. Overall, average to above average readers performed better than below average readers, $q = 3.01, p < 0.05$. The main effects for question type and time must be interpreted cautiously due to the presence of a two-way interaction.

Out of six possible two-way interactions, only one was significant. The two-way interaction between question type and time was significant, $F(2, 43) = 6.16, p < 0.01$ (see Figure 5). Students’ performances across the literal and inferential questions did not differ significantly across the immediate and delayed comprehension tests, largest $q = 1.94, p > 0.05$. However, for the critical/creative questions, students performed significantly better on the immediate test than the delayed test, $q = 6.26, p < 0.05$. On the immediate test, students performed significantly better on the literal questions than either the inferential, $q = 4.78, p < 0.05$, or the critical/creative questions, $q = 4.60, p < 0.05$. On the delayed comprehension test, students performed significantly better on the inferential questions than on the critical/creative questions, $q = 6.89, p < 0.05$. They also
Figure 5. Two-way interaction between question type and time for story three (Fanny Flora’s Kitten), independent practice comprehension scores.
performed significantly better on the literal questions than the critical/creative questions, $q = 8.91, p < 0.05$. The remaining 5 two-way interactions were not significant, largest $F(2,43) = 1.71, p > .05$.

There were no significant three-way interactions between instructional condition, ability, and time; instructional condition, time, and question type; instructional condition, ability, and question type; or ability, time, and question type, largest $F(2,43) = 1.11, p > .05$. Similarly, the four-way interactions between these variables were not significant, $F(2,43) = 0.32, p > .05$.

**Story Four (The Shape in the Harbor): Independent Reading**

For the fourth story there were significant main effects for time, $F(1, 43) = 26.33, p < 0.01$, and ability, $F(1, 43) = 23.94, p < 0.01, d=1.43$. There was no significant main effect for instructional condition, $F(1, 43) = 2.01, p > 0.05$, or for question type, $F(1, 43) = 0.23, p > 0.05$. Students performed significantly better in the immediate comprehension test than the delayed comprehension test, $q = 4.20, p < 0.05$, and average to above average readers performed significantly better than students who were identified as below average readers, $q = 2.78, p < 0.05$.

Out of six possible two-way interactions, five were not statistically significant, largest $F(1,43) = 1.64, p > .05$. The two-way interaction between question type and time was significant, $F(2, 43) = 5.85, p < 0.01$ (see Figure 6). For the literal and critical/creative questions, students performed better on the immediate comprehension test than the delayed test, respectively $q = 6.40$ and $q = 4.90$, both $p < 0.05$. On the immediate test, students performed better on the literal questions than on the inferential
Figure 6. Two-way interaction between question type and time for story four (Shape in the Harbor), independent reading comprehension scores.
questions, $g = 3.77, p < 0.05$, or the critical/creative questions, $g = 2.78, p < 0.05$. On the delayed test, students performed better on the inferential questions than the critical/creative questions, $g = 3.72, p < 0.05$, but only descriptively better on the inferential questions than the literal questions, $g = 2.52, p > 0.05$.

There were no three-way interactions between instructional condition, ability, and time; instructional condition, time, and question type; instructional condition, ability, and question type; or ability, time, and question type, largest $F(1,43) = 3.28, p > .05$. Similarly, the four-way interactions between these four variables were not significant, $F(2,43) = 1.44, p > .05$.

**Summary of Comprehension Tests**

When teacher modelling and guidance were present, students in the story-frame condition performed better than students in the notepad condition. This advantage was not present during the independent sessions. In terms of students’ reading ability, average to above average readers performed better than below average readers across all measures. Performance scores tended to be highest for the literal questions compared with the inferential and critical/creative questions, although when the teacher was explicitly modelling the strategies, students did better on the inferential questions than they did on either the literal or critical/creative questions.

**Retellings: Key Points, Details, Errors, and Inferences/Elaborations**

A $2$ (instructional condition) by $2$ (ability) ANOVA was performed to examine students’ performance on the verbal retellings. The ANOVA compared students’ scores
across four measures: key points (as determined by the “key points protocol,” Appendix F), details, errors, and inferences/elaborations. As with the comprehension tests, the Spjotvoll-Stoline test was used for posthoc analysis. Cohen’s $d$, as a measure of effect size, was calculated whenever there were significant main effects for instructional condition or ability group. Students’ mean and standard deviation performance scores for the retellings are presented in Table 9 (Story One: Modelling), Table 10 (Story Two: Guided Practice), Table 11 (Story Three: Independent Practice), and Table 12 (Story Four: Independent Reading). Students’ scores are displayed as a function of ability and instructional condition.

**Story One (Blue Moose): Modelling the Strategic Tools**

For the key points analysis, the main effects for instructional condition and ability were significant, $F(1, 45) = 6.56, p < 0.01, d=0.70$ and $F(1, 45) = 5.18, p < 0.05, d=0.60$ respectively. Students in the story-frame condition recalled more key points in their retellings than students in the notepad condition, $q = 3.54, p < 0.05$. Students who were identified as average to above average readers included more key points than students who were identified as being below average readers, $q = 2.99, p < 0.05$.

For the details, errors, and inferences/elaborations analyses, there were no significant main effects for instructional condition or ability, largest $F(1, 45) = 2.20, p > 0.05$. The interaction effects between instructional condition and ability were also not significant, largest $F(1, 45) = 2.13, p > 0.05$. 
Table 9  
Means and Standard Deviations for Story One "Blue Moose" Retelling as a Function of Strategy Condition and CAT/2 Ratings of Ability: Key Points, Details, Errors, and Inferences/Elaborations

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Key points</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>11.30</td>
<td>9.71</td>
<td>9.45</td>
<td>6.92</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>2.06</td>
<td>4.20</td>
<td>2.25</td>
<td>2.87</td>
</tr>
<tr>
<td>Details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>17.30</td>
<td>16.36</td>
<td>13.82</td>
<td>10.42</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>12.47</td>
<td>14.17</td>
<td>8.00</td>
<td>5.74</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>5.00</td>
<td>6.21</td>
<td>5.18</td>
<td>5.92</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>3.86</td>
<td>6.23</td>
<td>3.79</td>
<td>5.02</td>
</tr>
<tr>
<td>Inferences/ elaborations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>1.20</td>
<td>0.50</td>
<td>0.73</td>
<td>0.92</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.40</td>
<td>1.09</td>
<td>0.65</td>
<td>0.90</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 10
Means and Standard Deviations for Story Two “Snowshoe Trek to Otter River” Retelling as a Function of Strategy Condition and CAT/2 Ratings of Ability: Key Points, Details, Errors, and Inferences/Elaborations

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Key points</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>12.33</td>
<td>11.57</td>
</tr>
<tr>
<td>SD</td>
<td>2.69</td>
<td>4.24</td>
</tr>
<tr>
<td>Details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>22.11</td>
<td>23.14</td>
</tr>
<tr>
<td>SD</td>
<td>14.14</td>
<td>14.76</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.56</td>
<td>4.57</td>
</tr>
<tr>
<td>SD</td>
<td>2.30</td>
<td>3.25</td>
</tr>
<tr>
<td>Inferences/ elaborations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.44</td>
<td>1.36</td>
</tr>
<tr>
<td>SD</td>
<td>1.88</td>
<td>1.50</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>
Table 11
Means and Standard Deviations for Story Three “Fanny Flora’s Kitten” Retelling as a function of strategy condition and CAT/2 Ratings of Ability: Key Points, Details, Errors, and Inferences/Elaborations

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to</td>
<td>Below</td>
<td>Average</td>
<td>Below</td>
</tr>
<tr>
<td></td>
<td>above average</td>
<td>average</td>
<td>above</td>
<td>average</td>
</tr>
<tr>
<td></td>
<td>readers</td>
<td>readers</td>
<td>readers</td>
<td>readers</td>
</tr>
<tr>
<td>Key points</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>M</em></td>
<td>11.50</td>
<td>9.79</td>
<td>10.09</td>
<td>8.58</td>
</tr>
<tr>
<td><em>SD</em></td>
<td>4.65</td>
<td>3.66</td>
<td>3.75</td>
<td>5.50</td>
</tr>
<tr>
<td>Details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>M</em></td>
<td>19.80</td>
<td>17.14</td>
<td>18.18</td>
<td>17.33</td>
</tr>
<tr>
<td><em>SD</em></td>
<td>12.21</td>
<td>10.92</td>
<td>12.22</td>
<td>14.85</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>M</em></td>
<td>5.10</td>
<td>4.14</td>
<td>5.91</td>
<td>8.67</td>
</tr>
<tr>
<td><em>SD</em></td>
<td>4.84</td>
<td>2.25</td>
<td>4.32</td>
<td>6.21</td>
</tr>
<tr>
<td>Inferences/ elaborations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>M</em></td>
<td>3.40</td>
<td>3.21</td>
<td>3.00</td>
<td>3.25</td>
</tr>
<tr>
<td><em>SD</em></td>
<td>3.44</td>
<td>3.07</td>
<td>3.46</td>
<td>3.55</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 12
Means and Standard Deviations for Story Four “The Shape in the Harbor” Retelling as a Function of Strategy Condition and CAT/2 Ratings of Ability: Key Points, Details, Errors, and Inferences/Elaborations

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to</td>
<td>Below average</td>
<td>Average</td>
<td>Below average</td>
</tr>
<tr>
<td></td>
<td>above average readers</td>
<td>readers</td>
<td>above average readers</td>
<td>readers</td>
</tr>
<tr>
<td>Key points</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>12.10</td>
<td>9.36</td>
<td>12.36</td>
<td>7.33</td>
</tr>
<tr>
<td>SD</td>
<td>2.51</td>
<td>4.14</td>
<td>3.41</td>
<td>4.96</td>
</tr>
<tr>
<td>Details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>16.40</td>
<td>12.93</td>
<td>15.00</td>
<td>8.17</td>
</tr>
<tr>
<td>SD</td>
<td>3.75</td>
<td>7.36</td>
<td>6.10</td>
<td>5.65</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.80</td>
<td>7.79</td>
<td>4.82</td>
<td>7.58</td>
</tr>
<tr>
<td>SD</td>
<td>2.10</td>
<td>4.54</td>
<td>2.32</td>
<td>3.50</td>
</tr>
<tr>
<td>Inferences/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>elaborations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.50</td>
<td>2.07</td>
<td>2.55</td>
<td>2.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.97</td>
<td>1.86</td>
<td>1.81</td>
<td>2.17</td>
</tr>
<tr>
<td>Number of</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Story Two (Snowshoe Trek to Otter River): Guided Practice

For the key points analysis, the main effects for instructional condition and ability were not significant, largest $F(1, 45) = 3.10, p > 0.05$. Similarly, in the details, errors, and inferences/elaborations analyses, students’ performance scores did not differ as a function of instructional condition or ability, largest $F(1, 45) = 2.25, p > 0.05$. The interaction effects between instructional condition and ability (for key points, details, errors, and inferences/elaborations) were not significant, largest $F(1, 45) = 0.45, p > 0.05$.

Story Three (Fanny Flora’s Kitten): Independent Practice

For the analyses of key points, details, and inferences/elaborations, the main effects for instructional condition and ability were not significant, largest $F(1, 45) = 1.53, p > 0.05$. For the error analysis, the main effects for instructional condition were significant, $F(1, 45) = 3.98, p < 0.05, d=0.61$ although they were not for ability, $F(1, 45) = 0.45, p > 0.05$. Students in the notepad condition included significantly more errors in their retellings than students in the story-frame condition, $q = 3.00, p < 0.05$. The interaction effects between instructional condition and ability were also not significant, largest $F(1, 45) = 1.93, p > 0.05$.

Story Four (The Shape in the Harbor): Independent Reading

For the analyses of key points, details, and errors, there were no significant main effects for instructional condition, largest $F(1, 45) = 3.04, p > 0.05$. The main effects for ability were significant, $F(1, 45) = 11.26, p < 0.01, d=0.99; F(1, 45) = 8.50, p < 0.01, d=0.81$; and $F(1, 45) = 11.42, p < 0.01, d=1.03$ respectively. Average to above average
readers recalled significantly more key points (q = 4.67, p < 0.05), more details (q = 3.96, p < 0.05), and included fewer errors in their retellings (q = 4.77, p < 0.05) than below average readers. There were no significant main effects for instructional condition or ability on the inferences/elaborations, largest $F(1, 45) = 0.85, p > 0.05$. The interaction effects between instructional condition and ability were not significant, largest $F(1, 45) = 1.12, p > 0.05$.

**Summary of Retellings**

When the teacher was explicitly modelling the use of the strategic strategies, students in the story-frame condition included significantly more key points in their retellings than students in the notepad condition. During the guided practice and independent practice sessions, the number of key points students included in their retellings did not differ as a result of instructional condition. Aside from the key points, the only other main effect for instructional condition was during the independent practice session, where students in the notepad condition included significantly more errors in their retelling than students in the story-frame condition. Students who were identified as average to above average readers included more key points in their retellings than below average readers in both the modelling session and the independent reading session. For the independent reading session (final session), average to above average readers included more details and fewer errors in their retellings than below average readers.
Cued Recall: Correct/Error Marking Scheme

A 2 (instructional condition) by 2 (ability) ANOVA was performed to examine students' performance on the cued recall questions according to the correct/error marking scheme (based on tallies of correct points and errors, as explained in Chapter Three). The ANOVA compared students' correct and erroneous responses across seven measures: characters, setting, problem, solution, beginning events, middle events, and ending events. Once again, the Spjotvoll-Stoline test was used for posthoc analysis (Kirk, 1982). In addition, Cohen's $d$, as a measure of effect size, was calculated whenever there were significant main effects for instructional condition or ability group. Students' mean and standard deviation performance scores on the cued recall are presented in Table 13 (Story One: Modelling), Table 14 (Story Two: Guided Practice), Table 15 (Story Three: Independent Practice), and Table 16 (Story Four: Independent Reading). Students' performance scores are displayed as a function of ability and instructional condition.

**Story One (Blue Moose): Modelling the Strategic Tools**

For the total cued recall scores, the main effect for instructional condition was significant, $F(1, 45) = 11.00, p < 0.01, d=1.00$ with students in the story-frame condition recalling significantly more correct information about the story elements than students in the notepad condition, $q = 4.78, p < 0.05$. There was also a significant main effect for the total number of errors, $F(1, 45) = 8.38, p < 0.01, d=0.83$. Students in the notepad condition generated significantly more incorrect information about the story elements than students in the story-frame condition, $q = 4.03, p < 0.05$. The main effect for ability
Table 13
Means and Standard Deviations for Story One “Blue Moose” Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Correct and Errors Scores for Characters, Setting, Problem, Solution, Beginning Events, Middle Events, and End Events

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td><strong>Characters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.60</td>
<td>2.71</td>
<td>1.91</td>
<td>2.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.70</td>
<td>0.61</td>
<td>0.30</td>
<td>0.43</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.29</td>
<td>0.36</td>
<td>0.50</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.47</td>
<td>0.50</td>
<td>0.67</td>
</tr>
<tr>
<td><strong>Setting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.70</td>
<td>2.29</td>
<td>1.73</td>
<td>2.17</td>
</tr>
<tr>
<td>SD</td>
<td>1.16</td>
<td>0.83</td>
<td>0.90</td>
<td>0.94</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.10</td>
<td>0.36</td>
<td>0.45</td>
<td>0.42</td>
</tr>
<tr>
<td>SD</td>
<td>0.32</td>
<td>0.84</td>
<td>0.69</td>
<td>0.90</td>
</tr>
<tr>
<td><strong>Problem</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.50</td>
<td>1.29</td>
<td>1.18</td>
<td>1.08</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
<td>0.73</td>
<td>1.17</td>
<td>0.90</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.14</td>
<td>0.82</td>
<td>1.42</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.36</td>
<td>1.33</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Solution</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.30</td>
<td>2.29</td>
<td>1.73</td>
<td>0.83</td>
</tr>
<tr>
<td>SD</td>
<td>0.95</td>
<td>1.27</td>
<td>1.35</td>
<td>0.83</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.14</td>
<td>0.55</td>
<td>0.58</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.36</td>
<td>0.93</td>
<td>0.90</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to</td>
<td>Average to</td>
</tr>
<tr>
<td></td>
<td>above average</td>
<td>above average</td>
</tr>
<tr>
<td></td>
<td>readers</td>
<td>readers</td>
</tr>
<tr>
<td>Beginning events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.60</td>
<td>1.27</td>
</tr>
<tr>
<td>SD</td>
<td>0.52</td>
<td>0.79</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.18</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.40</td>
</tr>
<tr>
<td>Middle events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.00</td>
<td>1.55</td>
</tr>
<tr>
<td>SD</td>
<td>0.82</td>
<td>0.82</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.60</td>
<td>0.18</td>
</tr>
<tr>
<td>SD</td>
<td>0.97</td>
<td>0.40</td>
</tr>
<tr>
<td>Ending events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.80</td>
<td>1.91</td>
</tr>
<tr>
<td>SD</td>
<td>0.79</td>
<td>0.83</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.30</td>
<td>0.09</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
<td>0.30</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 14  
Means and Standard Deviations for Story Two “Snowshoe Trek to Otter River” Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Correct and Errors Scores for Characters, Setting, Problem, Solution, Beginning Events, Middle Events, and End Events

<table>
<thead>
<tr>
<th></th>
<th>Story-frame Average to above average readers</th>
<th>Story-frame Below average readers</th>
<th>Notepad Average to above average readers</th>
<th>Notepad Below average readers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.22</td>
<td>2.29</td>
<td>1.64</td>
<td>2.09</td>
</tr>
<tr>
<td>SD</td>
<td>0.44</td>
<td>0.47</td>
<td>0.81</td>
<td>1.04</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.44</td>
<td>0.36</td>
<td>0.45</td>
<td>0.73</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
<td>0.50</td>
<td>0.93</td>
<td>0.65</td>
</tr>
<tr>
<td><strong>Setting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.11</td>
<td>3.93</td>
<td>3.27</td>
<td>3.27</td>
</tr>
<tr>
<td>SD</td>
<td>1.62</td>
<td>1.27</td>
<td>1.01</td>
<td>1.42</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.36</td>
<td>0.18</td>
<td>0.36</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.84</td>
<td>0.40</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>Problem</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.78</td>
<td>1.36</td>
<td>1.45</td>
<td>1.45</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
<td>0.50</td>
<td>0.82</td>
<td>0.93</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.22</td>
<td>0.21</td>
<td>0.45</td>
<td>0.64</td>
</tr>
<tr>
<td>SD</td>
<td>0.44</td>
<td>0.43</td>
<td>0.93</td>
<td>1.50</td>
</tr>
<tr>
<td><strong>Solution</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.89</td>
<td>4.29</td>
<td>3.82</td>
<td>2.73</td>
</tr>
<tr>
<td>SD</td>
<td>1.83</td>
<td>1.27</td>
<td>2.44</td>
<td>1.68</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.22</td>
<td>0.50</td>
<td>0.55</td>
<td>1.36</td>
</tr>
<tr>
<td>SD</td>
<td>0.44</td>
<td>0.52</td>
<td>0.69</td>
<td>1.69</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td><strong>Beginning events</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.78</td>
<td>1.57</td>
</tr>
<tr>
<td>SD</td>
<td>0.97</td>
<td>0.51</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.14</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Middle events</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.44</td>
<td>1.36</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
<td>0.63</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.07</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.27</td>
</tr>
<tr>
<td><strong>Ending events</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.56</td>
<td>2.07</td>
</tr>
<tr>
<td>SD</td>
<td>1.13</td>
<td>1.49</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.11</td>
<td>0.14</td>
</tr>
<tr>
<td>SD</td>
<td>0.33</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Number of subjects</strong></td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>
Table 15
Means and Standard Deviations for Story Three “Fanny Flora’s Kitten” Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Correct and Errors Scores for Characters, Setting, Problem, Solution, Beginning Events, Middle Events, and End Events

<table>
<thead>
<tr>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
</tr>
<tr>
<td>Characters</td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>6.60</td>
</tr>
<tr>
<td>SD</td>
<td>1.26</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.50</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
</tr>
<tr>
<td>Setting</td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.60</td>
</tr>
<tr>
<td>SD</td>
<td>0.84</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.30</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
</tr>
<tr>
<td>Problem</td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.10</td>
</tr>
<tr>
<td>SD</td>
<td>1.10</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.10</td>
</tr>
<tr>
<td>SD</td>
<td>0.32</td>
</tr>
<tr>
<td>Solution</td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.70</td>
</tr>
<tr>
<td>SD</td>
<td>1.16</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.40</td>
</tr>
<tr>
<td>SD</td>
<td>0.70</td>
</tr>
</tbody>
</table>

(Table continues)
<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>above average readers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Below average readers</td>
<td></td>
</tr>
<tr>
<td>Beginning events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.30</td>
<td>1.27</td>
</tr>
<tr>
<td>SD</td>
<td>0.48</td>
<td>0.65</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.27</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.47</td>
</tr>
<tr>
<td>Middle events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.50</td>
<td>1.73</td>
</tr>
<tr>
<td>SD</td>
<td>1.18</td>
<td>0.79</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.20</td>
<td>0.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.42</td>
<td>0.00</td>
</tr>
<tr>
<td>Ending events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.70</td>
<td>1.91</td>
</tr>
<tr>
<td>SD</td>
<td>1.06</td>
<td>0.54</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.50</td>
<td>0.55</td>
</tr>
<tr>
<td>SD</td>
<td>1.27</td>
<td>1.51</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 16
Means and Standard Deviations for Story Four “The Shape in the Harbor” Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Correct and Errors Scores for Characters, Setting, Problem, Solution, Beginning Events, Middle Events, and End Events

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Characters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.50</td>
<td>3.62</td>
</tr>
<tr>
<td>SD</td>
<td>1.35</td>
<td>0.87</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.80</td>
<td>1.15</td>
</tr>
<tr>
<td>SD</td>
<td>0.63</td>
<td>1.07</td>
</tr>
<tr>
<td>Setting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.40</td>
<td>2.31</td>
</tr>
<tr>
<td>SD</td>
<td>0.97</td>
<td>0.63</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.07</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.28</td>
</tr>
<tr>
<td>Problem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.30</td>
<td>2.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
<td>0.00</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>0.07</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.28</td>
</tr>
<tr>
<td>Solution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.30</td>
<td>3.08</td>
</tr>
<tr>
<td>SD</td>
<td>2.06</td>
<td>1.61</td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.00</td>
<td>1.08</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>1.09</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to</td>
<td>Average to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>above average</td>
<td>above average</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>readers</td>
<td>readers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning events</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.70</td>
<td>2.18</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.82</td>
<td>1.40</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.20</td>
<td>0.82</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.42</td>
<td>0.87</td>
<td>0.49</td>
<td></td>
</tr>
<tr>
<td>Middle events</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.70</td>
<td>1.91</td>
<td>1.33</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
<td>1.14</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.10</td>
<td>0.27</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.32</td>
<td>0.47</td>
<td>0.49</td>
<td></td>
</tr>
<tr>
<td>Ending events</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.40</td>
<td>1.55</td>
<td>0.92</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>1.07</td>
<td>0.69</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.60</td>
<td>0.36</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.84</td>
<td>0.50</td>
<td>0.97</td>
<td></td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
was not significant for either correct or erroneous responses, largest $F(1, 45) = 1.88, p > 0.05$.

For students’ responses to the character prompts, there were significant main effects for instructional condition, $F(1, 45) = 20.19, p < 0.01, d=1.36$. Students in the story-frame condition recalled significantly more correct information about the characters than students in the notepad condition, $q = 6.47, p < 0.05$. Similarly, students in the notepad condition generated significantly more incorrect information about the characters than their peers in the story-frame condition, $F(1, 45) = 3.99, p < 0.05, d=0.52$. The main effect for ability was not significant for either correct or erroneous responses, largest $F(1, 45) = 2.13, p > 0.05$.

For students’ responses to the solution prompts, there were significant main effects for instructional condition, $F(1, 45) = 9.31, p < 0.01, d=0.90$ with students in the story-frame condition recalling significantly more correct information about the solution than students in the notepad condition, $q = 4.42, p < 0.05$. Similarly, students in the notepad condition generated significantly more incorrect information about the solution than their peers in the story-frame condition, $F(1, 45) = 6.25, p < 0.05, d=0.73$ and $q = 3.52, p < 0.05$. The main effect for ability was not significant for either correct or erroneous responses, largest $F(1, 45) = 1.89, p > 0.05$.

Students in the notepad condition also provided significantly more incorrect information about the problem in comparison with students in the story-frame condition, $F(1, 45) = 17.99, p < 0.01, d=1.22; q = 6.05, p < 0.05$. For the correct responses to the solution prompts, the main effect for instructional condition was not significant for the
correct responses, $F(1, 45) = 1.06, p > 0.05$. Similarly, the main effect for ability was not significant for either correct or erroneous responses, largest $F(1, 45) = 2.26, p > 0.05$.

For the remaining cued recall prompts (correct and erroneous responses for setting, beginning events, middle events, ending events, and erroneous responses for problem), the main effects for instructional condition and ability were not significant, largest $F(1, 45) = 3.82, p > 0.05$. There were no interactions between instructional condition and ability across any of the dependent measures, largest $F(1, 45) = 2.34, p > 0.05$.

**Story Two (Snowshoe Trek to Otter River): Guided Practice**

For the total cued recall scores, the main effect for instructional condition was significant, $F(1, 45) = 7.04, p < 0.01, d=0.79$ with students in the story-frame condition recalling more correct information about the story elements than students in the notepad condition, $q = 3.72, p < 0.05$. There was also a significant main effect for the number of errors, $F(1, 45) = 4.08, p=0.05, d=0.57$. Students in the notepad condition generated significantly more incorrect information about the story elements than students in the story-frame condition, $q = 2.82, p < 0.05$. The main effect for ability was not significant for either correct or erroneous responses, largest $F(1, 45) = 3.46, p > 0.05$.

For students' responses to the setting prompts, there was a significant main effect for instructional condition, $F(1, 45) = 4.09, p < 0.05, d=0.60$. Students in the story-frame condition recalled significantly more correct information about the setting than students in the notepad condition, $q = 2.83, p < 0.05$. Students in the two instructional conditions did not differ significantly with respect to the number of erroneous responses to the
setting prompts \( (F(1, 45) = 0.22, p > 0.05) \). The main effect for ability was not significant for either correct or erroneous responses, largest \( F(1, 45) = 2.25, p > 0.05 \).

Students in the story-frame condition also provided significantly more correct information about the story solution than did students in the notepad condition, \( F(1, 45) = 6.75, d=0.74 \) and \( q = 3.62, p's<0.05 \). For the erroneous responses, the main effect for instructional condition was not significant, \( F(1, 45) = 3.39, p > 0.05 \). Similarly, the main effect for ability was not significant for either correct or erroneous responses, largest \( F(1, 45) = 3.05, p > 0.05 \).

For the remaining cued recall prompts (correct and erroneous responses for characters, problem, beginning events, middle events, ending events, and erroneous responses for setting and problem), the main effects for instructional condition and ability were not significant, largest \( F(1, 45) = 3.39, p > 0.05 \). There were no interactions between instructional condition and ability across any of the dependent measures, largest \( F(1, 45) = 2.01, p > 0.05 \).

**Story Three (Fanny Flora’s Kitten): Independent Practice**

For the total cued recall scores, the main effects for instructional condition and ability were not significant for either correct or erroneous responses, largest \( U(1, 45) = 1.37, p > 0.05 \). Descriptively, students in the story-frame condition recalled more correct information about the story elements than students in the notepad condition (total story-frame \( M=18.79 \), total notepad \( M=16.87 \)). Similarly, students in the notepad condition generated descriptively more incorrect information about the story elements (\( M=3.22 \))
than students in the story-frame condition (M=2.33), although these results were not significant.

For students’ responses to the character prompts, there was a significant main effect for instructional condition, \( F(1, 45) = 9.18, p < 0.01, d=0.89 \). Students in the story-frame condition recalled significantly more correct information about the characters than students in the notepad condition, \( q = 4.27, p < 0.05 \). For the erroneous responses, the main effect for instructional condition was not significant, \( F(1, 45) = 0.31, p > 0.05 \). Similarly, the main effect for ability was not significant for either correct or erroneous responses, largest \( F(1, 45) = 3.20 p > 0.05 \). For the remaining cued recall prompts (correct and erroneous responses for setting, problem, solution, beginning events, middle events, and ending events), the main effects for instructional condition and ability were not significant, largest \( F(1, 45) = 2.60, p > 0.05 \).

The two-way interaction between instructional condition and ability was significant for the middle event erroneous responses, \( F(1, 43) = 8.29, p < 0.01 \) (see Figure 7). For the number of erroneous responses generated, the performance of students in the story-frame condition did not differ across ability groups, \( q = 2.06, p > 0.05 \). However, students in the notepad condition who were identified as below average readers made significantly more erroneous responses than their peers who were identified as average to above average readers, \( q = 3.77, p < 0.05 \). Below average readers in the notepad condition made significantly more erroneous responses than below average readers in the story-frame condition, \( q = 3.55, p < 0.05 \); while the scores of average to above average readers did not differ across instructional condition, \( q = 2.17, p > 0.05 \).
Figure 7. Two-way interaction between instructional condition and ability for the middle event erroneous responses on cued recall for story three (Fanny Flora’s Kitten).
There were no additional interactions between instructional condition and ability across any of the remaining dependent measures, largest $F(1, 45) = 3.20, p > 0.05$.

**Story Four (The Shape in the Harbor): Independent Reading**

For the total cued recall scores, the main effect for instructional condition was significant, $F(1, 45) = 3.93, p < 0.05, d=0.52$. Students in the story-frame condition recalled more correct information about the story elements than students in the notepad condition, $q = 2.72, p < 0.05$. There was also a significant main effect for the number of errors, $F(1, 45) = 17.43, p < 0.01, d=1.03$. Students in the notepad condition generated significantly more incorrect information about the story elements than students in the story-frame condition, $q = 5.85, p < 0.05$. The main effect for ability was also significant for correct responses, $F(1, 45) = 10.52, p < .01, d=0.91$ and for erroneous responses, $F(1, 45) = 17.71, p < 0.05, d=1.02$. Average to above average readers recalled more correct information about the story elements than below average readers, $q = 4.47, p < 0.05$, and below average readers generated significantly more incorrect information about the story elements than average to above average readers, $q = 5.71, p < 0.05$.

For students' responses to the character prompts, there were no significant differences for instructional condition, largest $F(1, 45) = 2.45, p > 0.05$. Similarly, there was no main effect for ability for the correct responses, largest $F(1, 45) = 3.59, p > 0.05$. For erroneous responses, the main effect for ability was significant, with below average readers generating more incorrect information about the characters than average to above average readers, $F(1, 45) = 4.67, p < 0.04, d=0.62$. 
For students' responses to the setting prompts, there were significant main effects for instructional condition $F(1, 45) = 13.29, p < 0.01, d=1.10$, with students in the story-frame condition recalling more correct information about the characters than students in the notepad condition, $q^2 = 5.20, p < 0.05$. Similarly, students in the notepad condition generated significantly more incorrect information about the setting than their peers in the story-frame condition, $F(1, 45) = 11.45, p < 0.01, d=0.99$ and $q = 4.87, p < 0.05$. The main effect for ability was not significant for either correct or erroneous responses, largest $F(1, 45) = 3.41, p > 0.05$.

For the problem prompt, there was a main effect for instructional condition for the erroneous responses, $F(1, 45) = 18.45, p < 0.01, d=1.16$. Students in the notepad condition provided more incorrect information about the problem than students in the story-frame condition, $q = 6.22, p < 0.05$. There were no significant differences between the two conditions on students' ability to recall correct information, largest $F(1, 45) = 0.04, p > 0.05$. The main effect for ability was significant as well, $F(1, 45) = 7.07, p < 0.01, d=0.77$, with average to above average readers recalling more correct information about the problem than below average readers, $q = 3.77, p < 0.05$. Similarly, below average readers generated more incorrect information about the problem than their peers who were average to above average readers, $F(1, 45) = 7.75, p < 0.01, d=0.65$ and $q = 3.72, p < 0.05$.

There was no main effect for instructional condition for the solution prompts, largest $F(1, 45) = 3.01, p > 0.05$. The main effect for ability was significant for both correct and erroneous responses, $F(1, 45) = 4.96, p < 0.03, d=0.64$ and $F(1, 45) = 17.58, p < 0.01, d=1.24$ respectively. Average to above average readers recalled significantly
more correct information about the solution compared to below average readers, $q = 3.07, p < 0.05$. Similarly, below average readers made significantly more erroneous responses to the solution prompts than average to above average readers, $q = 5.82, p < 0.05$.

For students' responses to the beginning event prompts, there were no significant differences for instructional condition, largest $F(1, 45) = 3.83, p > 0.05$. A main effect for ability was significant, with average to above average readers recalling more correct information about beginning events than below average readers, $F(1, 45) = 4.76, p < 0.04, d = 0.64$ and $q = 3.12, p < 0.05$. There was no significant main effect for ability for the erroneous responses to the beginning event prompts, $F(1, 45) = 1.52, p > 0.05$. For the remaining cued recall prompts (correct and erroneous responses for middle events and ending events) the main effects for instructional condition and ability were not significant, largest $F(1, 45) = 2.57, p > 0.05$.

The two-way interaction between instructional condition and ability was significant for the erroneous responses to prompts about the problem, $F(1, 43) = 4.79, p < 0.03$ (see Figure 8). Below average readers in the notepad condition generated significantly more erroneous responses about the problem than below average readers in the story-frame condition, $q = 6.82, p < 0.05$. Average to above average readers in the notepad condition made significantly fewer erroneous responses than below average readers, $q = 5.04, p < 0.05$. Performance scores of students in the story-frame condition did not differ significantly as a function of their reading ability, $q = 0.06, p > 0.05$. There were no additional interactions between instructional condition and ability across any of the dependent measures, largest $F(1, 45) = 3.78, p > 0.05$. 
Figure 8. Two-way interaction for ability and instructional condition on the cued recall for story four (Shape in the Harbor), independent reading, erroneous responses about the story problem.
**Summary of Cued Recall (Correct/Error Marking Scheme)**

Across all study sessions, students in the story-frame condition recalled more correct information about story elements than students in the notepad condition and generated fewer erroneous responses to the cued recall questions. In general, students’ performance scores did not differ across ability levels, except in the independent reading session, where average to above average readers recalled significantly more correct information and included fewer errors in their responses than below average readers.

When students’ scores across the individual story elements were compared, certain patterns emerged. Students in the story-frame condition recalled more correct information about the story setting and generated less incorrect information about the setting than students in the notepad condition. This was true for three out of the four story sessions. In the modelling and independent practice sessions, students in the story-frame condition recalled significantly more correct information about the characters than students in the notepad condition. During the teacher modelling session, students in the notepad group produced significantly more errors than students in the story-frame group with respect to the knowledge of the characters. When asked about the stories’ problems, students in both instructional conditions were equally able to provide correct information. However, for both the modelling and independent reading sessions, students in the notepad condition generated significantly more erroneous responses than students in the story-frame condition.

Overall, students’ responses to the cued recall did not differ across ability levels. The exception appears to be the independent reading session. For this final session, below average readers generated more errors and included fewer correct points than
average to above average readers for questions about characters, the problem, solution, and beginning events. When recalling information about the problem, below average readers in the notepad condition generated significantly more errors than average to above average readers in the notepad condition. However, the performance of students in the story-frame condition did not differ across ability levels.

Cued Recall: Rubric Marking Scheme

Mann-Whitney $U$ tests were performed to examine students’ performances on the cued recall questions according to the rubric marking scheme contained in Appendix K. Two sets of Mann-Whitney $U$ tests were used to compare students’ scores (as a function of ability and instructional condition) across each of the five categories: characters, setting, problem, solution, and events. Students’ mean and standard deviation performance scores on the cued recall (rubric marking scheme) are presented in Table 17 (Story One: Modelling), Table 18 (Story Two: Guided Practice), Table 19 (Story Three: Independent Practice), and Table 20 (Story Four: Independent Reading).

Story One (Blue Moose): Modelling the Strategic Tools

For four of the five dependent measures, the effects for instructional condition were significant (characters, $U=120.00, p<0.01$, setting, $U=175.50, p<0.02$, problem, $U=108.50, p<0.01$, and solution, $U=90.00, p<0.01$), with students in the story-frame condition performing better than students in the notepad condition across all measures. The main effect for events was not significant, $U=260.00, p>0.05$. 
Table 17
Means and Standard Deviations for Story One “Blue Moose” (Modelling) Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Characters, Setting, Problem, Solution, and Beginning, Middle, and Ending Events (Rubric Marking Scheme—Nonparametric)

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th></th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td></td>
</tr>
<tr>
<td>Characters (max = 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.90</td>
<td>1.64</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.99</td>
<td>0.50</td>
<td>0.00</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>63.33</td>
<td>54.67</td>
<td>33.33</td>
<td>33.33</td>
<td></td>
</tr>
<tr>
<td>Setting (max = 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.10</td>
<td>1.86</td>
<td>1.27</td>
<td>1.58</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.74</td>
<td>0.77</td>
<td>0.65</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>70.00</td>
<td>62.00</td>
<td>42.33</td>
<td>52.67</td>
<td></td>
</tr>
<tr>
<td>Problem (max = 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.20</td>
<td>1.86</td>
<td>1.18</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.42</td>
<td>0.66</td>
<td>0.87</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>73.33</td>
<td>62.00</td>
<td>39.33</td>
<td>33.33</td>
<td></td>
</tr>
<tr>
<td>Solution (max = 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.10</td>
<td>2.00</td>
<td>1.18</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.32</td>
<td>0.55</td>
<td>0.87</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>70.00</td>
<td>66.67</td>
<td>39.33</td>
<td>27.67</td>
<td></td>
</tr>
<tr>
<td>Events (max = 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.60</td>
<td>2.71</td>
<td>2.73</td>
<td>2.33</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.52</td>
<td>0.47</td>
<td>0.47</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>86.67</td>
<td>90.33</td>
<td>91.00</td>
<td>77.67</td>
<td></td>
</tr>
<tr>
<td>No. of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
Table 18
Means and Standard Deviations for Story Two “Snowshoe Trek to Otter River” (Guided Practice) Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Characters, Setting, Problem, Solution, and Beginning, Middle, and Ending Events (Rubric Marking Scheme—Nonparametric)

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th></th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above</td>
<td>Below average</td>
<td>Average to</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td></td>
<td>average readers</td>
<td>readers</td>
<td>above average</td>
<td>readers</td>
<td></td>
</tr>
<tr>
<td>Characters</td>
<td>max = 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.33</td>
<td>2.29</td>
<td>1.36</td>
<td>1.58</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.50</td>
<td>0.61</td>
<td>0.67</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>77.67</td>
<td>76.33</td>
<td>45.33</td>
<td>52.67</td>
<td></td>
</tr>
<tr>
<td>Setting</td>
<td>max = 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.11</td>
<td>2.21</td>
<td>2.09</td>
<td>1.92</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.33</td>
<td>0.58</td>
<td>0.54</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>70.33</td>
<td>73.67</td>
<td>69.67</td>
<td>64.00</td>
<td></td>
</tr>
<tr>
<td>Problem</td>
<td>max = 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.11</td>
<td>1.93</td>
<td>1.36</td>
<td>1.67</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.33</td>
<td>0.27</td>
<td>0.92</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>70.33</td>
<td>64.33</td>
<td>45.33</td>
<td>55.67</td>
<td></td>
</tr>
<tr>
<td>Solution</td>
<td>max = 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.78</td>
<td>2.36</td>
<td>1.82</td>
<td>1.33</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.44</td>
<td>0.50</td>
<td>1.25</td>
<td>1.07</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>92.67</td>
<td>78.67</td>
<td>60.67</td>
<td>44.33</td>
<td></td>
</tr>
<tr>
<td>Events</td>
<td>max = 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.00</td>
<td>3.00</td>
<td>2.82</td>
<td>2.50</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.00</td>
<td>0.40</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>Percentage correct</td>
<td>100.00</td>
<td>100.00</td>
<td>94.00</td>
<td>83.33</td>
<td></td>
</tr>
<tr>
<td>No. of subjects</td>
<td>9</td>
<td>14</td>
<td>11</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
Table 19
Means and Standard Deviations for Story Three “Fanny Flora’s Kitten” (Independent Practice) Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Characters, Setting, Problem, Solution, and Beginning, Middle, and Ending Events (Rubric Marking Scheme—Nonparametric)

<table>
<thead>
<tr>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
</tr>
<tr>
<td>Characters (max = 3)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.90</td>
</tr>
<tr>
<td>SD</td>
<td>0.57</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>63.33</td>
</tr>
<tr>
<td>Setting (max = 3)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.40</td>
</tr>
<tr>
<td>SD</td>
<td>0.97</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>80.00</td>
</tr>
<tr>
<td>Problem (max = 3)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.80</td>
</tr>
<tr>
<td>SD</td>
<td>0.63</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>60.00</td>
</tr>
<tr>
<td>Solution (max = 3)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>66.67</td>
</tr>
<tr>
<td>Events (max = 3)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.60</td>
</tr>
<tr>
<td>SD</td>
<td>0.70</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>86.67</td>
</tr>
<tr>
<td>No. of subjects</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 20
Means and Standard Deviations for Story Four “The Shape in the Harbor” (Independent Reading) Cued Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability: Characters, Setting, Problem, Solution, and Beginning, Middle, and Ending Events (Rubric Marking Scheme—Nonparametric)

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th></th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
</tr>
<tr>
<td>Characters (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.30</td>
<td>2.00</td>
<td>1.82</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
<td>0.71</td>
<td>0.60</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>76.67</td>
<td>66.67</td>
<td>60.67</td>
</tr>
<tr>
<td>Setting (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.40</td>
<td>1.69</td>
<td>1.55</td>
</tr>
<tr>
<td>SD</td>
<td>0.52</td>
<td>0.48</td>
<td>0.52</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>46.67</td>
<td>56.33</td>
<td>51.67</td>
</tr>
<tr>
<td>Problem (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.00</td>
<td>1.85</td>
<td>1.91</td>
</tr>
<tr>
<td>SD</td>
<td>0.47</td>
<td>0.38</td>
<td>0.30</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>66.67</td>
<td>61.66</td>
<td>63.67</td>
</tr>
<tr>
<td>Solution (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.50</td>
<td>1.77</td>
<td>1.91</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
<td>0.73</td>
<td>0.54</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>83.33</td>
<td>59.00</td>
<td>63.66</td>
</tr>
<tr>
<td>Events (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.50</td>
<td>2.54</td>
<td>2.82</td>
</tr>
<tr>
<td>SD</td>
<td>0.53</td>
<td>0.66</td>
<td>0.40</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>83.33</td>
<td>84.67</td>
<td>94.00</td>
</tr>
<tr>
<td>No. of subjects</td>
<td>10</td>
<td>13</td>
<td>11</td>
</tr>
</tbody>
</table>
There were no significant effects for students' performance scores as a function of their reading ability (largest $U=264.50$, $p > 0.05$). Similarly, when students' scores were compared as a function of ability level within each instructional condition, no significant main effects emerged. Specifically, when the scores of students in the story-frame condition with average to above average reading ability were compared to students with below average reading ability, no significant differences were found (largest $U=64.00$, $p > 0.05$). Similarly, when the scores of average to above average readers in the notepad condition were compared with the scores of below average readers, there were no significant differences (largest $U=66.00$, $p > 0.05$).

When the scores of students who were identified as average to above average readers were compared across the instructional conditions, several significant differences emerged. Students in the story-frame condition performed better than students in the notepad condition on their knowledge of characters, $U=27.50$, $p < 0.01$, setting, $U=24.00$, $p < 0.02$, problem, $U=20.00$, $p < 0.01$, and solution, $U=18.50$, $p < 0.01$. There were no significant differences between the two instructional conditions for events ($U=48.00$, $p > 0.05$).

Significant differences also appeared between the instructional conditions for students identified as below average readers. Specifically, students in the story-frame condition performed better than students in the notepad condition when recalling characters, $U=34.50$, $p < 0.01$, problem, $U=33.00$, $p < 0.01$, and solution, $U=25.00$, $p < 0.01$. There were no significant differences between students in the two instructional conditions for recalling setting or events, largest $U=67.50$, $p > 0.05$. 
Story Two (Snowshoe Trek to Otter River): Guided Practice

For four of the five dependent measures, the effects for instructional condition were significant (characters, $U=111.50$, $p < 0.01$, problem, $U=175.00$, $p < 0.02$, solution, $U=140.00$, $p < 0.01$, and events $U=195.00$, $p < 0.01$), with students in the story-frame condition performing better than students in the notepad condition across all measures. The effect for setting was not significant, $U=222.50$, $p > 0.05$.

There were no significant effects for students’ performance scores as a function of reading ability (largest $U=255.00$, $p > 0.05$). Similarly, when students’ scores were compared as a function of ability level within the notepad instructional condition, no significant main effects emerged (largest $U=55.50$, $p > 0.05$). When the scores of students in the story-frame condition with average to above average reading ability were compared to students with below average reading ability, no significant differences were found (largest $U=63.00$, $p > 0.05$), with the exception of their knowledge of the solution. In the solution category, students with average to above average reading ability performed significantly better than students with below average reading ability ($U=36.50$, $p < 0.05$).

When the scores of students who were identified as average to above average readers were compared across the instructional conditions, several significant differences emerged. Specifically, students in the story-frame condition performed better than students in the notepad condition on their knowledge of characters, $U=15.00$, $p < 0.01$, problem, $U=24.50$, $p < 0.03$, and solution, $U=26.00$, $p < 0.05$. There were no significant differences between the two instructional conditions for setting or events (largest $U=49.00$, $p > 0.05$).
Significant differences also appeared between the instructional conditions for students who were identified as below average readers. Specifically, students in the story-frame condition performed better than students in the notepad condition for characters, \( U = 43.50, p < 0.02 \), solution, \( U = 38.50, p < 0.01 \), and events, \( U = 56.00, p < 0.02 \). There were no significant differences between students in the two instructional conditions for setting and problem, largest \( U = 68.00, p > 0.05 \).

**Story Three (Fanny Flora's Kitten): Independent Practice**

There were no significant effects for instructional condition across all five dependent measures, largest \( U = 273.00, p > 0.05 \). Similarly, there were no significant effects as a function of reading ability (largest \( U = 267.00, p > 0.05 \)). When students' scores were compared as a function of ability level within each instructional condition, no significant effects emerged (largest \( U = 66.50, p > 0.05 \)).

There were no significant effects for instructional condition when examining the scores of average to above average readers (largest \( U = 54.50, p > 0.05 \)). When the scores of students who were identified as below average readers were compared across the instructional conditions, one significant difference emerged. For knowledge of events, students in the story-frame condition performed better than students in the notepad condition, \( U = 56.00, p < 0.05 \). There were no significant differences between the two instructional conditions for characters, setting, problem or solution (largest \( U = 79.00, p > 0.05 \)).
Story Four (The Shape in the Harbor): Independent Practice

There was a significant difference for students' performance as a function of their instructional condition for one of the five dependent measures: characters ($U=185.00$, $p=0.05$), with students in the story-frame condition performing better than students in the notepad condition. For the remaining four dependent measures (setting, problem, solution, and events) the effects of instructional condition were not significant (largest $U=249.00$, $p > 0.05$), although students in the story-frame condition performed descriptively better than students in the notepad condition (see Table 20).

There were significant effects for students' performance scores as a function of reading ability for problem ($U=195.00$, $p < 0.05$) and solution ($U=155.00$, $p < 0.01$), with average to above average readers performing better than below average readers. There were no significant effects for ability for characters, setting, or events (largest $U=262.00$, $p > 0.05$).

Average to above average readers in the story-frame condition performed better than below average readers on their knowledge of the solution ($U=30.00$, $p < 0.02$). There were no significant differences found across the other dependent measures for students in the story-frame condition as a function of reading ability (largest $U=60.00$, $p > 0.05$).

Average to above average readers in the notepad condition performed better than below average readers for their knowledge of the problem ($U=39.00$, $p < 0.04$) and events ($U=30.00$, $p < 0.01$). There were no significant differences found across the other dependent measures for students in the notepad condition as a function of reading ability (largest $U=57.00$, $p > 0.05$).
When the scores of students who were identified as average to above average readers were compared across the instructional conditions, students in the story-frame condition performed better on their recall of the solution than students in the notepad condition ($U=27.50, p < 0.02$). For characters, setting, problem, and events there were no significant differences for average to above average readers between the two instructional conditions (largest $U=50.50, p > 0.05$).

For setting, significant differences existed between the instructional conditions for students who were identified as below average readers ($U=46.00, p=0.05$), with students in the story-frame condition performing better than students in the notepad condition. There were no significant differences between below average readers across the two instructional conditions for characters, problem, solution, or events, largest $U=59.50, p > 0.05$.

**Summary of Cued Recall (Rubric Marking Scheme)**

In general, students in the story-frame condition included more correct information in their responses than students in the notepad condition. This was particularly true for the modelling and guided practice sessions. In these two sessions, students in the story-frame condition performed better than students in the notepad condition for their recall of characters, problem, and solution, in addition to their knowledge of setting and events. In the independent practice session, there were no significant differences across instructional conditions, with one exception: Below average readers in the story-frame condition recalled more information about the events than below average readers in the notepad condition.
Overall, no significant differences emerged across ability levels, with the exception of the independent reading session. In this session, average to above average readers in the notepad condition recalled more correct information about the problem and events than students who were below average readers. In the same session, average to above average readers in the story-frame condition recalled more information about the solution than below average readers.

**Title and Tool Recall**

Mann-Whitney U tests were performed to examine students’ recall of the story titles and the naming of the strategic tool. For the first and the final retelling sessions (Story One and Story Four), students were also asked to describe how they used their strategic tool. Their responses were evaluated in terms of their description of the tool use and elements. The marking schemes for the title name, tool name, tool use, and tool elements are contained in Appendix J. Mann-Whitney U tests were used to compare students’ scores (as a function of ability and instructional condition) across each of the four categories for the initial and final story and for title and tool recall for the second and third stories. Students’ mean and standard deviation performance scores on these measures are presented in Table 21 (Story One: Modelling), Table 22 (Story Two: Guided Practice), Table 23 (Story Three: Independent Practice), and Table 24 (Story Four: Independent Reading).

**Story One (Blue Moose): Modelling the Strategic Tools**

For three out of four dependent measures, the effects for instructional condition were not significant, largest $U=264.00$, $p>0.05$. There was a significant effect for tool
Table 21
Means and Standard Deviations for Story One “Blue Moose” (Modelling) Title and Tool Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability (Nonparametric)

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
</tr>
<tr>
<td><strong>Title</strong> (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.00</td>
<td>2.57</td>
<td>3.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>1.09</td>
<td>0.00</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>100.00</td>
<td>85.67</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Tool name</strong> (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.00</td>
<td>2.43</td>
<td>2.91</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.76</td>
<td>0.30</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>100.00</td>
<td>81.00</td>
<td>97.00</td>
</tr>
<tr>
<td><strong>Tool use</strong> (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.30</td>
<td>1.79</td>
<td>2.09</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
<td>0.80</td>
<td>1.14</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>76.67</td>
<td>59.67</td>
<td>69.67</td>
</tr>
<tr>
<td><strong>Tool elements</strong> (max = 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.50</td>
<td>2.57</td>
<td>1.91</td>
</tr>
<tr>
<td>SD</td>
<td>0.85</td>
<td>1.09</td>
<td>0.70</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>83.33</td>
<td>85.67</td>
<td>63.67</td>
</tr>
<tr>
<td><strong>Number of subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>14</td>
<td>11</td>
</tr>
</tbody>
</table>
Table 22
Means and Standard Deviations for Story Two “Snowshoe Trek to Otter River” (Guided Practice) Title and Tool Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability (Nonparametric)

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th>Notepad</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td><strong>Title (max = 3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>2.56</td>
<td>1.50</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.01</td>
<td>1.22</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>85.33</td>
<td>50.00</td>
</tr>
<tr>
<td><strong>Tool name (max = 3)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>3.00</td>
<td>2.64</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>0.00</td>
<td>0.63</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>100.00</td>
<td>88.00</td>
</tr>
<tr>
<td><strong>Number of subjects</strong></td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>
Table 23
Means and Standard Deviations for Story Three “Fanny Flora’s Kitten” (Independent Practice) Title and Tool Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability (Nonparametric)

<table>
<thead>
<tr>
<th></th>
<th>Story-frame</th>
<th></th>
<th>Notepad</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average to above average readers</td>
<td>Below average readers</td>
<td>Average to above average readers</td>
<td>Below average readers</td>
</tr>
<tr>
<td>Title (max = 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1.90</td>
<td>1.29</td>
<td>2.00</td>
<td>1.75</td>
</tr>
<tr>
<td>SD</td>
<td>1.37</td>
<td>1.20</td>
<td>1.10</td>
<td>1.36</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>63.33</td>
<td>43.00</td>
<td>66.67</td>
<td>58.33</td>
</tr>
<tr>
<td>Tool name (max = 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.00</td>
<td>2.86</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>SD</td>
<td>0.00</td>
<td>0.53</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Percentage correct</td>
<td>100.00</td>
<td>95.33</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Number of subjects</td>
<td>10</td>
<td>14</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 24
Means and Standard Deviations for Story Four “The Shape in the Harbor” (Independent Reading) Title and Tool Recall as a Function of Strategy Condition and CAT/2 Ratings of Ability (Nonparametric)

|                      | Story-frame | | | | | | Notepad | | | | | |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                      | Average to above average readers | Below average readers | Average to above average readers | Below average readers |
| Title (max = 3)      |             |             |             |             |
| M                    | 2.10        | 1.36        | 2.09        | 1.67        |
| SD                   | 0.99        | 1.08        | 1.14        | 0.98        |
| Percentage correct   | 70.00       | 45.33       | 69.67       | 55.67       |
| Tool name (max = 3)  |             |             |             |             |
| M                    | 3.00        | 2.86        | 2.91        | 3.00        |
| SD                   | 0.00        | 0.36        | 0.30        | 0.00        |
| Percentage correct   | 100.00      | 95.33       | 97.00       | 100.00      |
| Tool use (max = 3)   |             |             |             |             |
| M                    | 2.30        | 2.07        | 2.18        | 1.92        |
| SD                   | 0.48        | 0.47        | 0.40        | 0.67        |
| Percentage correct   | 76.67       | 69.00       | 72.67       | 64.00       |
| Tool elements (max = 3) |       |             |             |             |
| M                    | 2.80        | 2.50        | 2.73        | 2.08        |
| SD                   | 0.63        | 0.94        | 0.47        | 0.90        |
| Percentage correct   | 93.33       | 83.33       | 91.00       | 69.33       |
| Number of subjects   | 10          | 14          | 11          | 12          |
elements, \( U=123.00, p <0.01 \), with students in the story-frame condition performing significantly better than students in the notepad condition. For tool name and description of tool use there were significant effects for students’ performance scores as a function of their reading ability, \( U=200.50, p <0.02 \) and \( U=187.00, p=0.05 \), respectively. In both cases, average to above average readers performed significantly better than below average readers. There were no significant effects as a function of reading ability for either the title name or description of tool elements, largest \( U=262.00, p >0.05 \).

When students’ scores were compared as a function of ability within each instructional condition, only one significant effect emerged (for non-significant results, largest \( U=62.00, p >0.05 \)). Average to above average readers in the story-frame condition performed significantly better in their ability to recall the tool name than students who were below average readers, \( U=40.00, p <0.02 \).

When the scores of students were compared as a function of instructional condition within each ability classification (average to above average readers versus below average readers), only one comparison was significant (for non-significant results, largest \( U=78.00, p >0.05 \)). Specifically, below average readers in the story-frame condition performed significantly better in their description of the tool elements than below average readers in the notepad condition, \( U=30.00, p <0.01 \).

**Story Two (Snowshoe Trek to Otter River): Guided Practice**

Students’ ability to recall the story title and the tool name did not differ significantly as a function of instructional condition, largest \( U=255.00, p >0.05 \). For title recall, students’ scores differed significantly as a function of reading ability, \( U=165.00, p \)
< 0.02. Average to above average readers performed significantly better than below average readers in their ability to recall the title of the story. There were no significant effects for the tool name as a function of reading ability, $U=234.50, p > 0.05$.

When students' scores were compared as a function of ability level within each instructional condition, only one significant effect emerged (for nonsignificant results, largest $U=60.00, p > 0.05$). Average to above average readers in the story-frame condition performed significantly better in their ability to recall the story title than students who were below average readers, $U=28.00, p < 0.02$.

When the scores of students were compared as a function of instructional condition within each ability classification (average to above average readers versus below average readers), only one comparison was significant (for nonsignificant results, largest $U=65.00, p > 0.05$). Below average readers in the notepad condition performed significantly better in their ability to recall the tool name than below average readers in the story-frame condition, $U=60.00, p < 0.05$.

**Story Three (Fanny Flora's Kitten): Independent Practice**

Students' ability to recall the story title and the tool name did not differ significantly as a function of either instructional condition or reading ability, largest $U=264.00, p > 0.05$. When students' scores were compared as a function of ability level within each instructional condition, no significant effects emerged, largest $U=66.00, p > 0.05$. The performance of average to above average readers did not differ significantly from that of below average readers across either instructional condition. Similarly, when the scores of students were compared as a function of instructional condition within each
ability classification (average to above average readers versus below average readers), there were no significant differences, largest $U=78.00$, $p > 0.05$.

**Story Four (The Shape in the Harbor): Independent Reading**

Across all four dependent measures, the effects for instructional condition were not significant, largest $U=265.00$, $p > 0.05$. For title recall and tool elements there were significant effects for students’ performance scores as a function of reading ability, $U=179.00$, $p < 0.03$ and $U=196.00$, $p < 0.05$. In both cases, average to above average readers performed significantly better than below average readers. There were no significant effects for reading ability for either tool name or tool use, largest $U=265.00$, $p > 0.05$.

When students’ scores were compared as a function of ability level within each instructional condition, only one significant effect emerged (for nonsignificant results, largest $U=60.00$, $p > 0.05$). Average to above average readers in the notepad condition provided significantly more accurate, detailed information about the tool elements than below average readers, $U=37.00$, $p < 0.05$.

No significant effects emerged when the scores of students were compared as a function of instructional condition within each ability classification (average to above average readers versus below average readers), largest $U=73.00$, $p > 0.05$. Average to above average readers did not differ significantly compared to below average readers across any of the four measures, regardless of whether they were in the story-frame or notepad conditions.
Summary of Title and Tool Recall

Overall, students' ability to recall the story title, strategic tool name, and their ability to describe the strategic tool and its elements did not differ across instructional conditions. Only when the researcher was explicitly modelling the strategic tools was there any difference in students' performance as a result of their instructional condition. Specifically, students in the story-frame condition provided a more complete description of the tool elements than students in the notepad condition. In addition, students in the story-frame condition were more likely to recall the tool name than students in the notepad condition, although this was true only for average to above average readers.

The effect of students' reading ability on their performance is mixed. Average to above average students were more able to recall the story title than below average readers, but only for the guided and independent reading sessions. In the explicit modelling session, average to above average students were more likely to recall the tool name correctly and were able to provide a more detailed description of the strategic tool than students who were below average readers. In the final independent reading session, average to above average readers were significantly more likely to provide a detailed description of the tool elements than below average readers. Below average readers in the notepad condition provided a significantly more detailed description of the tool elements than average to above average readers in the notepad condition, while students in the story-frame condition were equally likely to provide a detailed description of the tool elements, regardless of reading ability.
Open-Ended Questions at the Final Interview

**Perceived Benefits of the Strategic Tool**

At the final interview session, students were asked whether or not they had found using either the story-frame or the notepad helpful. The vast majority of the participants (44 out of 47, or 93.62% of participants) responded that they had found their tool helpful. Participants were then asked to provide more detail about how the story-frame or notepad had been beneficial (i.e., “How has the [story-frame/notepad] helped you?”). The majority of participants (32, or 68.09%) responded that the strategic tool they had used (either the story-frame or the notepad) had helped them to increase their memory for stories or that it allowed them to “remember the story better.”

The second most frequent response contained the idea that the strategic tool provided a concrete summary (i.e., a physical summary) of the story. This type of response was elicited from 10 participants (21.28%), with half of these respondents being from each of the two study conditions. One student explained that using the story-frame meant that he didn’t “have to bunch everything up in [his] mind.” Another student said that using the notepad allowed him to “just look back to what [he] put on the notepad. And it help[ed him] remember the story more [for] the tests.” When probed further the student responded, “It’s kinda like, still in my memory--I remember what I put down.” The remaining responses reinforced the value of each strategic tool as a method for understanding, thinking about, and paying attention to the story at hand.

Of the 3 students (6.38%) who stated that they did not find the use of the strategic tool helpful, 2 reported that this was because they were able to remember as much about
stories without using the story-frame. One students in the notepad condition reported that he didn’t find using the notepad helpful because his brain got “bunched with stuff”.

**Strategies Used Prior to This Study**

Students were also asked to identify any strategies that they had used before being introduced to either the story-frame or the notepad. Specifically, students were asked what they had done in the past to try to understand and remember stories. Nineteen students (40.43%; 12 story-frame, 7 notepad) were unable to articulate a specific strategy. These students reported that they “just read the story,” that they did “nothing,” or that they “just remembered it” and were unable to identify any specific strategy. Three students from the notepad condition stated that they thought about the story in their head, but were unable to be more specific as to how this helped them to either understand or remember stories.

A few students mentioned using strategies that are supported in the research. These included selectively rereading sections that they did not understand (1 story-frame student, 1 notepad student), repeating information to yourself (1 notepad student), going over difficult information slowly (1 story-frame student), and making pictures in your mind (1 story-frame student). Several students mentioned components of both study strategies that were introduced in this study. Specifically, 6 students (12.77%; 1 story-frame, 5 notepad) mentioned writing notes on paper, 2 notepad students mentioned thinking about their favourite part in the story, and 1 notepad student mentioned that it was important to try to remember at least one word from the title.
The remaining students reported using less powerful, or at least less research-supported, strategies to try to increase their understanding of and/or memory for the stories they read. Seven students (14.89% of students; 1 story-frame, 6 notepad) indicated that they would reread the entire story if they were told it was important for them to remember it. Twelve participants (25.53% of all participants; 10 story-frame, 2 notepad) identified classroom activities (e.g., written follow-up questions, artistic responses to a story) as the only manner by which they helped themselves remember or understand the story. Three notepad students (13.04% of notepad students) mentioned asking for help if they got stuck on a passage, with 2 of the 3 students specifically focusing on the meaning of words.

**Future Predictions of Strategy Use**

Students were then asked what they would do in the future to help them better understand and remember a story. The vast majority of students from the story-frame group (91.67% or 22 students) stated that they would use the story-frame again in the future, and 91.30% of students from the notepad group stated that they would use the notepad again (21 students). Some students supported their decision to use the notepad or story-frame with statements such as “it really helped me to remember the story” and that using the strategic tool means “you know a lot of the answers.” Nine (37.50% of) story-frame students and five (21.74% of) notepad students expressed that they believed making written notes about a story would help them to better understand and/or remember a story. Several students (8.33% or 2 of the story-frame students; 21.74% or 5
of the students in the notepad condition) also mentioned that they would concentrate on
the critical elements in a story to improve their performance but would prefer to “do it in
their head” rather than write notes on paper.

Students mentioned additional strategies that they would use in the future to help
them to better understand and remember stories they read. Some were strategies that are
supported in the research, such as using mental imagery (1 story-frame student). Other
students’ responses included less effective strategies, such as listening carefully or
reading the story “very carefully” (1 story-frame student, 4 notepad students), looking up
difficult words in the dictionary or on the internet (1 notepad student), rereading the story
(1 story-frame student, 1 notepad student), and memorizing the story or recording the
story (2 story-frame students). One story-frame student also mentioned that he would
“keep it in his brain,” but was unable to elaborate on how this was to be accomplished.

Finally, students who responded affirmatively to using the strategic tool in the
future were asked, “When, or in what situation would you choose to use the story-
frame/notepad?” Thirteen story-frame students (54.17%) and 10 notepad students
(43.48%) responded that they thought it could be useful with stories or books in general.
Two (8.33% of) story-frame students and 1 (4.35% of) notepad student believed that the
story-frame would be more useful when they were reading short stories, while 4 (16.67%
of) story-frame students and 6 (26.09% of) notepad students believed that using the
strategic tool would be most effective for longer stories and novels. Two students (1
story-frame, 1 notepad) stated that they would use the strategic tool when a story was
unfamiliar. Two (8.76% of) notepad students responded that they would use a notepad
again if they were having difficulties with a story. Three students (1 story-frame, 2
notepad) believed that they would use the strategic tool again if it was very important to remember the information and if they could learn a lot from the stories (e.g., "If I was like, in college, and you have to remember a story really good--really important stuff," story-frame student). Four students (2 story-frame, 2 notepad) mentioned that they would like to use the strategic tool again if it was for a school assignment, such as a "story-project," written questions, or "if you wanted to be able to tell all about the story you read."

**Summary of Interview Questions**

Students’ responses to open-ended interview questions revealed that the majority of students found that using the strategic tool (either story-frame or notepad) assisted them in remembering the story or specific elements of the story. Almost half of the students were unable to identify any effective strategies that they had used in the past to help them understand or remember stories, and a quarter of all participants were able to identify only generic classroom activities (such as follow-up questions to stories) as activities which may have helped them to remember the stories in the past. Only a few students could identify strategies which are supported in the research, such as the use of imagery, selective rereading of difficult sections, and repeating information to yourself. The vast majority of students (over 90%) reported that they would use the story-frame or notepad again in the future.
Researcher Observations

During the research process, the researcher and the research assistant were both working directly with the participants, which provided opportunity for the researcher to document observations. First, the researcher noted that students in both instructional conditions were eager to participate in the reading activities. There appeared to be no difference noted in the amount of effort or enthusiasm that was being put forth by the students across the study conditions. Within each study condition, there was a range of student abilities (as was evident by students' written work on the strategic tool and on the comprehension tests). In addition, comments by the classroom teachers indicated that certain students in each group had identified learning problems. However, with the possible exception of one ESL student who had identified language difficulties, all were very capable of completing their strategic tool, both with assistance (as in the first two sessions), and then later, independently.

In the classroom sessions and in the student interviews, a few students commented that they found the writing component of the strategic tools to be laborious and "unnecessary." They believed they could do just as well without using the tools. It must be noted, however, that only a small minority of the students held this opinion. Most students took great care in completing each task to the best of their ability, and reported that it helped them to remember the story.

In general, the strategic tools and the reading and writing tasks inherent in this study were appropriate for the vast majority of the students. The pilot study helped to ensure that the selected stories were at an appropriate interest and listening/reading level for grade 4 students. It also helped to have a "hard copy" of the first three stories in the
classroom to show students that the selections were from basal readers intended for grade 4 students. A couple of students at one school questioned the first story as being appropriate for their grade level (perhaps because it is a fictional, humorous story about a magical blue moose). They were reassured when they could see that the story was found in a basal reader with the number "4" on the back, indicating that it was indeed a story that was intended for grade 4 students to read. Having the first three stories and all test questions read aloud made it possible for students of different abilities to be successful. In the final, independent reading session, the number of students who asked for words in the story to be read for them was relatively equal across both instructional conditions at both schools (indicating a level of comfort with the researcher and an appropriate reading level for the majority of the students). The tools were relatively open ended, with students being able to fill in more detailed or less detailed information as their interest and ability allowed. Observations throughout the study indicated that the vast majority of students were comfortable with the various components of the study, indicating that they were appropriate for the majority of students of this age level.

It was obvious from discussions with the students that in general students were not aware of the central story elements of narrative text. Many of the students had not heard some of the terms such as "problem" and "solution" before. Discussions with the classroom teachers also verified that little class time was spent on explicit reading comprehension strategies or on discussing these central elements of narrative text (characters, setting, problem, solution, beginning, middle, and ending events). Some of the students were intrigued by the new terminology that they were now able to use independently to discuss stories. For example, one student who had never heard the
world “solution” before kept asking the researcher on the first two days, “What was that “s” word again? The opposite of problem....” He was obviously eager to do his best to remember the key components of the story-frame strategy.

**Summary**

There were significant differences, with medium to large effect sizes, in comprehension and recall scores between the two instructional groups. Students in the story-frame condition outperformed students in the notepad condition on the comprehension tests (both immediate and delayed measures) and on the oral retellings when the teacher modelling and guidance were present. During the independent sessions, the performance of students in the two instructional conditions did not differ significantly for either dependent measure (comprehension tests or oral retellings). In the cued recall sessions, students in the story-frame instructional condition recalled more correct information and generated fewer errors than students in the notepad condition. This pattern emerged when both the correct/error marking scheme and the rubric marking scheme were used. Students’ ability to recall the story title, the name of the strategic tool, and their ability to describe the tool did not differ across instructional conditions except in the explicit modelling session when students in the story-frame condition were more likely to recall the tool name and to provide a more detailed description of the tool elements.

There were significant differences in students’ comprehension and retelling scores as a function of reading ability, again with medium to large effect sizes. Average to above average readers performed better than below average readers across all measures.
on both the immediate and delayed comprehension tests and also provided more key points in their retellings. In the cued recall, students’ performance scores did not differ as a function of ability levels except in the independent reading session, where average to above average readers recalled more correct information and included fewer errors than below average readers. This result emerged with both the correct/error marking scheme and the rubric marking scheme. In general, average to above average students were more able to recall the story title and tool name and were more able to provide a detailed description of the tool elements than below average readers. In the interview questions, the majority of students in both instructional conditions and both ability groups reported that the strategic tool was useful and that they would use it again in the future.
CHAPTER FIVE: IMPLICATIONS OF THE FINDINGS AND DIRECTIONS FOR FUTURE RESEARCH

Summary of the Findings

The purpose of this study was to examine the effects of providing students with strategic or generic prediction (both before and during the stories) and summarization instruction on their comprehension and memory for narrative stories. Students in the strategic instruction or story-frame condition based their predictions and summaries around the central elements of the story (characters, setting, problem, solution, beginning, middle, and ending events). Students in the generic instruction or notepad condition recorded more general ideas or thoughts about the stories. In both conditions, students were involved in writing about the stories before, during, and after the reading.

Comprehension was measured by students’ performance on the literal, inferential, and critical/creative questions which were presented both immediately following each story (immediate comprehension) and one week after each story’s presentation (delayed comprehension measure). Also one week after the presentation of the stories, students’ delayed recall was determined by their ability to retell the stories and by their ability to answer cued recall questions about the elements of each story (e.g., “What was the main problem in this story?”). Overall, the findings of this study support the hypotheses that students in the story-frame condition demonstrated greater story comprehension and recall than students in the notepad condition, especially when teacher modelling and guidance were present. Inconsistent with the final hypotheses, students who were identified as average to above average readers generally performed better than below average readers on overall measures, except for the cued recall, where no difference
existed between the two ability groups on the first three sessions. Participating in the
story-frame condition did not appear to equalize the performance of poor readers to their
peers with average to above average reading abilities.

**Comprehension Tests**

The findings from this study demonstrated that when teacher modelling and
guidance were present, students in the story-frame condition performed better across all
question types than students in the notepad condition. As no difference was found across
instructional conditions for the independent practice and independent reading sessions, it
is likely that students needed more guided practice sessions before assuming independent
ownership of the strategy. Studies have shown that, especially for poor readers, multiple
guided practice sessions with explicit teacher feedback and cues that are gradually faded
over time are necessary for student success (e.g., Gardill & Jitendra, 1999). It is not
surprising that in terms of students’ reading ability, average to above average readers
performed better than below average readers across all measures. Research has shown
that good readers are more likely than poor readers to employ successful strategies to
monitor their comprehension. For maximum success, students need to be provided with
explicit instruction which involves extensive modelling, guided practice, and independent
practice sessions whereby students gain confidence in attributing their success to strategy
use over time (e.g., Mastropieri & Scruggs, 1997).

In general, students performed significantly better on the literal (or inferential)
questions than they did on the critical/creative questions. This is not surprising, given
findings from current research. For example, Cain and Oakhill (1999) found that even
poor comprehenders did not differ significantly on their ability to answer literal questions from memory, but they were worse at both text-connecting and gap-filling inference questions than good readers. Davis (1994) proposed that using story-maps should cue readers about text content and structure and thus should reduce the demands on working memory, which would allow for more higher order processing, such as the processing of inferences included in the text. In Davis’s study, grade 3 students in a story-mapping condition scored significantly higher on both literal and inferential questions than peers in a control group; however, grade 5 students had a statistical advantage only for inferential questions. These findings were related to previous research which has indicated that comprehension monitoring abilities tend to increase with development (Dechant, 1991). Since the present study involved students in their last term of grade 4, it is possible that students may have generally mastered their ability to answer literal questions from the text. In the current study, students performed better on inferential questions when explicit teacher modelling was present. This finding suggests that students can still benefit from intervention for questions which tap higher levels of comprehension, such as inferential and critical/creative questions.

Boyle and Weishaar (1997) suggest that students in the story-frame condition should demonstrate a greater comprehension, especially on inferential questions, than students in the notepad condition. These researchers state that students who are involved in creating their own story-maps may be forced to make more inferences than those students who are provided with a finished story-map, and this may lead to a greater understanding and comprehension of text.
Retellings

Retellings were used as a measure of story recall in the present study. Baumann and Bergeron (1993) found that the oral retellings of students in a story-mapping condition were more organized and included more information (including more story elements) than students in the comparison group who were using a modified directed reading and thinking approach. In the current study, students in the story-frame condition included significantly more key points in their retellings than students in the notepad condition when the teacher was explicitly modelling the use of the tool. There was also a descriptive advantage for students in the story-frame condition over students in the notepad condition (for the number of key points and details included in the retellings) for the guided practice and independent practice sessions. In the final independent reading session, students in the story-frame condition included significantly fewer errors in their retelling than students in the notepad condition. The statistical differences that emerged in the presence of explicit modelling suggests the need for more modelling and guided practice sessions before students were ready to be successful in employing the strategy independently. It is possible that using the story-frame attunes students to the central story elements so that they are less likely to stray from the relevant main ideas in their retellings (i.e., they are less likely to “invent” information that is not plausible, given the features of the story frame which require students to fill in the central story elements).

In general, students who were identified as average to above average readers included more key points in their retellings than below average readers. For the independent reading session, average to above average readers included more details and fewer errors in their retellings than below average readers. Once again, these findings
collaborate with previous research (e.g., Cain, 1999), indicating that average to above average readers are significantly more likely than poor comprehenders to use research-based comprehension strategies over other less effective strategies. This suggests that students who are identified as good readers would be more likely than below average readers to include these key points in an oral retelling of the story.

In another study, Cain (1996) found that good comprehenders were able to identify key features of text, such as characters, much more readily than poor comprehenders (83% vs. only 29% of poor readers). It appears that good readers are more able than poor readers to independently attend to key features of narrative text. These key features of the text then become underlying elements of a successful retelling, as the findings in the current study suggest.

**Cued Recall**

Perfetti et al. (1996) cautioned that if readers do not have an internal schema which can be used to integrate new information while reading, they are unlikely to recognize inconsistencies, and thus are unlikely to engage in strategies to remedy their comprehension difficulties. Similarly, Cain (1996) suggested that a good knowledge of story structure is causally related to comprehension ability.

In the present study, students in the story-frame instructional condition were provided with a concrete tool which made the story structure explicit. When students were asked to identify the key elements in each story (i.e., characters, setting, problem, solution, beginning, middle, and ending events), students in the story-frame condition outperformed students in the notepad condition. This was true when both the
correct/error marking scheme and the rubric marking scheme were used to evaluate students’ responses. While the notepad condition encouraged students to think about the story they were reading, it did not direct them to focus on the key elements of the narrative stories. Students in the notepad condition were able to recall less correct information about the story elements and included more errors than their peers in the story-frame instructional condition. Presumably, if students’ attention is directed to the key elements in a narrative story, they will be more likely to accurately recall those elements after reading the story. This finding is supported in the research (e.g., Cain, 1996). Studies have shown that a concrete tool such as the story-frame, which makes the story structure explicit, can be particularly advantageous for poor readers, who often lack knowledge about the organization of stories (e.g., Cain).

Below average readers performed as well as average to above average readers in all sessions except the independent reading session. When poor readers were provided with explicit cues (e.g., the story-frame) which enabled them to attend to the key features of the stories, their performance was the same as students with average to above average reading abilities. Cain (1996) suggested that without intervention, poor comprehenders’ less developed knowledge about story features may negatively affect their comprehension.

The story-frame includes several strategies which are well-supported in the research and which have been demonstrated to be especially beneficial for poor readers. For example, Denner and McGinley (1992) examined the importance of prereading activities such as making predictions prior to reading a story. They found that poor readers in the “story impressions” conditions (where students were given key words from
the story and asked to either compose a story guess or to write predictions about the story) recalled significantly more information from the story than students who were not involved in prereading activities. In one condition, poor readers even performed slightly better than the good readers. The authors suggested that these results may reflect the fact that good readers make predictions and employ strategies automatically while reading, whereas poor readers do not. The results suggested that poor readers can be instructed on the use of prereading strategies, such as prediction, which can increase reading comprehension.

Research on story-maps also supports the idea that visual representations of story structure can be used as a framework to focus readers’ attention to key story elements and can lead to increased comprehension. This is especially true for poor readers who do not activate their prior knowledge effectively when they read, nor do they perceive the potential connection between new information and existing mental representations (Idol, 1987; Mathes et al., 1997).

In the independent reading session, average to above average readers recalled more correct information and generated fewer errors than below average readers. These results are not surprising for a number of reasons. First, these findings for cued recall support initial findings from the comprehension tests and retellings. Many studies (e.g., Cain, 1999) have demonstrated that students who are good readers possess a greater number of successful reading comprehension strategies than their peers who are identified as poor readers. These average to above average students are more likely to identify, maintain, and recall correct information about the stories they read than below average readers. In addition, the final independent reading session was the first time that
students were required to read the material independently, instead of listening to the story being read to them. It is evident that reading ability would make a greater difference for this final session. Research has demonstrated that in general, listening comprehension is higher than reading comprehension. When students listen to a story, their working memory is not burdened with the decoding process, and this is especially true for struggling readers (Nation et al., 1999; van den Broek & Kremer, 2000).

**Summary of Title and Tool Recall**

When the researcher was explicitly modelling the strategic tools, students in story-frame condition provided a more complete description of the tool elements than students in the notepad condition. This could be because the elements on the story-frame were more explicitly obvious (i.e., the story elements were printed on the story-frame itself). In contrast, the elements of the notepad were less obvious, as students were allowed to make personal connections to the story and were told that they could record any information that they thought might be beneficial in helping them to understand and remember the story. Research has demonstrated that when students have a deep understanding about how and when to use strategies, their performance is improved (e.g., Gaskins, 1998; Jitendra et al., 2000). It appears that the structure of the story-frame tool allowed students to better recall and articulate how to use the strategy. Gaskins discusses the importance of providing cues for strategy instruction that students are able to internalize with time. The story-frame strategy provides these cues explicitly in the labels which prompt the student to provide each of the story elements. Researcher observations from interview sessions also suggested that students in the story-frame
condition were able to picture the story-frame in their mind as they were describing it and were able to use the labels as prompts to tell them the steps for using the strategy. This task was made more difficult for the notepad students, because even when they did "picture" the notepad tool in their mind, they were unable to rely on labels. Instead, they had to recall the modelling instructions and recall what they had done in the instructional sessions to remember the steps involved in using the notepad.

**Interview Questions**

When students were interviewed in the current study, the vast majority of them believed that the story-frame or notepad assisted them to comprehend and remember stories. This finding collaborates with the findings of Gardill and Jitendra (1999) where students with learning disabilities who were constructing story maps and completing story grammar comprehension questions reported that they found the strategy helpful in understanding stories. Similarly, students who were taught to engage in self-monitoring along with summarization strategy instruction demonstrated positive attitudes towards the instruction they received and believed they had been shown a helpful strategy (Jitendra et al., 2000).

Some of the participants in the current study commented negatively about the amount of writing involved. Of interest is that approximately half the students in Gardill and Jitendra's (1999) study also stated that they did not like the amount of writing that was associated with the story map. The authors state that this finding is not surprising, as their population consisted of students with identified learning disabilities, who find writing difficult and thus usually dislike tasks which rely on writing skills. Good strategy
use requires cognitive effort (e.g., Pressley et al., 1995; van den Broek & Kremer, 2000). In The Nation's Report Card: Fourth-Grade Reading 2000, the National Center for Education Statistics found that students in grade 4 who reported writing lengthy answers on weekly or monthly reading assignments outperformed students who reported that they were rarely involved in writing long answers for reading assignments or tests (Donahue, Finneegan, Lutkus, Allen, & Campbell, 2001). I believe that the written component is an essential one in the success of the story-frame and that merely “thinking about the story-frame,” as some students suggested, would not produce the same results. This is an area for further study. A valuable alternative might be creating the story-frame on a computer so that students who have difficulty writing could enter their notes using the keyboard or voice-recognition software. Further research is needed in how the story-frame could be best adapted to the needs of all students in today's diverse classrooms.

Implications for Theory

A substantial body of research exists on the teaching of specific strategies to improve students' reading comprehension (e.g., Boyle & Weishaar, 1997; Coffman, 1997; Denner & McGinley, 1992; Gardill & Jitendra, 1999). Pressley et al. (1989) have cautioned that not all students benefit from all forms of strategic instruction. These authors reviewed several types of reading strategies and concluded that students of different ability levels appear to benefit from various types of strategic instruction. One of the potential benefits, then, of providing students with a repertoire of strategies is that all students should find some aspect of the instruction meaningful. Little research exists which examines teaching students a repertoire of strategies to facilitate reading
comprehension, despite the findings that good readers possess a repertoire of strategies which they are able to apply flexibly across different learning situations (Pressley et al., 1995). Some programs, such as Reading Recovery, do teach students a variety of strategies to increase their reading performance, but do so over an extended period of time. In the few studies that include a repertoire of strategies, it is unusual to have multiple strategies included in one tool, as is the case in the current study. It is more common for studies to teach students a combination of two or more strategies that are to be used in conjunction with each other (e.g., Jitendra et al., 2000). The time needed to teach students a number of distinct strategies is a drawback of this type of instruction. Having students using one tool which incorporates several instructional strategies (e.g., predictions made before and during the stories, and summarization strategies) appears advantageous in terms of the time and complexity of required instruction. The findings of the current study are consistent with the findings of other studies (e.g., Brown et al.; Pasliscar & Brown, as cited in Pressley & Woloshyn, 1995), which have demonstrated that providing students with multicomponent strategies can lead to increased reading success.

Idol (1987) concluded that both poor and good comprehenders were able to improve their comprehension under direct instruction. The findings of the current study appear to support this statement. The lack of a “true” control (i.e., a control group which received only the stories and the comprehension measures without any special instruction before, during, or after the story) in the current study limits the strength of the conclusions which can be made. At an implicit level, the notepad encourages students to engage in several cognitive strategies. By using the notepad, students may be activating
prior knowledge, generating their own connections to text, and generating and answering questions about the text. For this reason, the “comparison group” used in this study engaged in more strategic processing than a control group that is given no instruction. When left to their own devices (i.e., given no specific instruction), students, especially poor readers, usually do not engage in strategic processing (this is supported in the research, e.g., Cain, 1996; as well by students’ responses to interview questions in the current study).

It is possible that students in this study were able to increase their reading comprehension and recall scores by “the generation effect.” The “generation effect” is a basic cognitive phenomenon whereby information is more easily remembered when it is self-generated rather than explicitly provided. For example, Craik and Hannon (2001) found that better recall of words resulted when participants were involved in generating the words themselves, compared to other participants who were given the words. Similarly, Boyle and Weishaar (1997) suggested that students who are involved in creating their own story-maps may be forced to make more inferences (than those students who are provided with a finished story-map), and this may lead to a greater understanding and comprehension of text. It is evident that the story-frame in the current study was more structured and helped students to generate more relevant information structured around the story elements.

McNamara (2001) explains that self-generation encourages the active processing of information. Her study demonstrated that high-ability readers demonstrated greater recall and understanding for “low-coherence” informational text that required students to make inferences and to apply their own experiences and background knowledge in order
to comprehend the textual information. When the reader is able to make connections between their background knowledge and new information, their understanding and memory for the text is increased. Low-ability readers in McNamara’s (2001) study benefited the most from the “high-coherence” text, which was more explicit and required less inferences or interpretations on behalf of the reader. However, the author refers to other research (e.g., McNamara & Scott, 1999), which demonstrated that low-knowledge readers can be trained to make inferences and use their background knowledge to increase their understanding of low-coherence text. McNamara (2001) notes that retaining the textual information over time is improved when students use methods which increase cognitive effort or which “slow acquisition by making the learning process more difficult and thereby increasing the learner’s active engagement” (p. 54). In the current study, students in both instructional conditions were given the means to slow down their acquisition by having to complete a pencil-and-paper task about the story rather than just reading it, and it is believed that this increases students’ comprehension and recall. This is further evidence that future research with a true control group (i.e., with no special instructions before, during, or after the story) is necessary in order to examine the true potential of the story-frame strategy for increasing students’ comprehension and recall.

Good readers use their background knowledge not only about the story topic but also about how texts are organized and how to use specific strategies in order to guide their understanding of the text (Duffy & Roehler, 1987). Studies have shown that students who are good readers and who demonstrate good comprehension skills are more likely than poor readers to monitor their comprehension as they read and are more likely to employ strategies when they encounter comprehension difficulties (e.g., Cain, 1999).
Teaching all students in a classroom how to use the story-frame provides poor readers and good readers alike with an opportunity to approach a narrative story in a logical fashion which will aid their comprehension and recall of the story.

In the current study, reading ability was defined in terms of students’ performance on the reading section of the Canadian Achievement Tests, Second Edition (CAT/2) Reading Assessment. Students whose overall score placed them at or above the 50th percentile were defined as “average to above average readers,” while students who scored below the 50th percentile were defined as “below average readers.” It is evident that this definition of ability has its limitations. Students whose scores differed by just a few percentage points could be placed in completely disparate categories. This definition of reading ability would tend to diminish the presence of significant findings between the two groups. It may be suggested that any significant findings that were found between the two groups in the current study might be even more accentuated if the comparison was being made between “above average readers” (e.g., perhaps students scoring in the top 25th percentile of the CAT/2 scores) and “below average readers” (perhaps students with scores in the lowest 25th percentile). Further research using different definitions of ability are needed to further explore the findings from the current study.

Implications for Classroom Practice

The use of the story-frame within the classroom provides students with a framework around which they can organize key story elements and increase their comprehension for story content (e.g., Gardill & Jitendra, 1999). Using this strategic tool consistently throughout the school year allows students to develop confidence in using
the tool and to recognize the advantages of its use. This may be particularly beneficial for poor readers (e.g., those who have learning disabilities). In one study, Gardill and Jitendra found that students required an average of 20 to 23 sessions with a story map procedure before they were able to internalize the procedure. This research supports the concern that students in the current study needed more time to internalize the use of the strategic tool before attempting to use the tool independently. Gardill and Jitendra note that teachers who are planning instruction for students with learning disabilities need to keep in mind that these students may need more examples and practice than their peers without disabilities in order to benefit from the strategic tool. The same authors also emphasize the importance of additional strategic instruction to assist low comprehenders who may have memory deficits and need additional reminders about how to use a strategic tool effectively. All readers, but especially those who struggle in school, need the opportunity to perceive strategy use as personally beneficial. Teachers play an important role in this process by helping students to attribute their successes (e.g., increased comprehension) to the use of the strategic tool, such as the story-frame (Gaskins, 1998; Johnston, 1985). This is consistent with the principles of explicit instruction (e.g., Pressley et al., 1989).

Research has shown that it is important not only to teach students how to use the strategies they need to succeed but also to provide students with the will or motivation to use it. Gaskins (1998) found that "motivation to use strategies was specific to students' beliefs about the relationship of effort to success for a particular task" (p. 541). This is consistent with the principles of explicit instruction and passing control of the strategy from the teacher to the student (Pressley et al., 1989). When students believe that the
strategy can increase their performance, they are more willing to engage themselves in learning it effectively (e.g., Dole, Brown, & Trathn, 1996; Gaskins, 1998; Pressley et al., 1989). The current study supports this finding. Throughout the training sessions, the researcher noted that students in both instructional conditions were generally very positive about using their strategic tool and were trying to do their best to meet the researcher’s expectations. This finding was further supported at the final interviews when the majority of respondents reported that they found their strategic tool (either the story-frame or the notepad) beneficial and that they would like to use it again in the future to help them with their reading.

After reviewing more than 100 studies on the use of various strategies to increase students’ reading comprehension abilities, Mastropieri and Scruggs (1997) concluded that when teachers provided explicit instruction to students, which included modelling, guided practice and feedback, attributional instruction, and monitoring of students’ progress, students’ comprehension increased. Pressley et al. (1989) also emphasized the need for extensive and intensive explicit instruction allowing for student practice and teacher feedback. The present study employed this practice of explicit instruction, which included teacher modelling, guided practice, and independent practice. Within the first three sessions, students learned how to use the story-frame or notepad and were using these tools independently on the fourth and final story, although the level of mastery is questionable. It is suggested that more time learning strategies may have been beneficial for transfer to independent reading materials. Teachers who are instructing their students on the use of specific strategies need to remember that focussed time needs to be spent teaching students how to use the strategy correctly so that they are comfortable with
using it correctly. The control of the strategy needs to be gradually shifted from teachers to the students so that the students can be in control of the strategy use and can witness that strategy use can increase their performance (Dole et al., 1996).

In the final interview, very few students were able to articulate any strategy they had used in the past to help them to understand stories that they had read. Many students were able to describe typical classroom procedures of “reading stories and answering questions,” and a few students were able to identify special story projects they had done in the past (sometimes even in previous grades) to respond to a story, such as creating a diorama. Conversations with the teachers also alerted the researcher to the fact that little strategy use was being employed in the classroom, in spite of the overwhelming research base which supports its use in educational environments. It may be that when strategy use is being taught, it is not being identified as such to students, who are unable to articulate its usage. Once again, this emphasizes the importance of the explicit teaching of reading strategies to students. Students need to know the benefits of learning these strategies and need to be provided with cues and prompts in order that they will be able to generalize their use over time. Gaskins (1998) and Pressley et al. (1989) emphasize that students need to know when and where strategies should be used, and give a rationale for their use, in order to have students who can use strategies independently and effectively.

It is apparent that in order for students to receive explicit instruction on strategy use, teachers must first be alerted to the need for explicit strategy instruction inside the classroom. Pressley et al. (1991) interviewed 31 classroom teachers who were teaching strategy instruction at Benchmark School. Benchmark is a school dedicated to research-based teaching for its students who are delayed readers between the ages of 6 and 14.
Ninety percent of the teachers overall believed that postsecondary education had not taught them to become a strategic teacher. On a more positive note, about half of teachers in their first 3 years had at least heard about some strategies mentioned in their course work at college. It is evident that, first, this instruction needs to occur at the preservice level, so that new teachers can enter the classroom environment prepared to provide their students with a repertoire of learning strategies to assist them in their learning. In addition to their knowledge of learning strategies that are supported in the research, new teachers must enter the classroom with a knowledge of explicit instruction, so that students are taught how to implement these strategies successfully by using explicit modelling and guided practice with feedback. In addition to the preservice education programs, it is important to provide quality inservice training to teachers who are already in the classrooms. New teachers and experienced teachers alike need to be made aware that explicit strategy instruction can be easily implemented into the classroom and that the benefits of doing so are well documented in the research.

The story-frame and notepad tools were taught to a heterogeneous group of students. Anecdotal observations by the researcher and the research assistant indicated that all students were able to learn how to use the strategy. It appears that the story-frame is a strategy that can be employed by students at a variety of ability levels as they are completing their own notes about each of the story elements in their own words. In addition, it is likely that teachers could adapt the story-frame to the needs of younger children (or children with severe writing difficulties) by allowing them to fill the spaces with pictures instead of words.
The findings of this study also provide evidence that the story-frame and notepad tools can be taught to large groups. Much of the previous research on strategic instruction appears to focus on small-group or individual instruction (e.g., Jitendra et al., 2000). Overall, the story-frame appears to be an ideal tool in terms of instructional economy. The story-frame incorporates the use of three research-supported strategies (prediction, summarization, and the use of story-maps) in one tool for students to use.

The structure of the story-frame suggests that it may be beneficial for students to use it as a planning tool for their own writing of narrative stories. It seems likely that having students become familiar with the format of the story-frame during classroom reading lessons would facilitate the transfer of this tool to the domain of writing. There is some research that already supports this idea. For example, in a study which included the explicit instruction of story-maps for reading comprehension, Idol (1987) found that the number of story elements that students included in their story writing increased significantly over the course of the study compared to students who did not receive story-map instruction. Once again, the instructional efficacy of one tool which serves several purposes cannot be underestimated in the light of heavy curriculum demands. Teachers are more likely to incorporate into their repertoire a strategy that is relatively simple and generalizable and yet yields benefits over nonstrategic classroom instruction. The story-frame appears to be tool that may provide students with numerous benefits in both their reading comprehension and in their writing of narrative stories. The transfer of students' knowledge of the story-frame to the writing of narrative stories would be interesting to explore in future research.
Mathes et al. (1997) believe that as classrooms become more heterogeneous, teachers are going to need a knowledge of effective strategies which will benefit all students. The story-frame provides students with a common language of the story elements, and a standardized format by which they can build their understanding of narrative text. By incorporating prediction and summarization strategies centered around the story elements the story-frame incorporates several strategies which have been shown to be effective in the literature. In addition, the story-frame is inexpensive, requires no specialized resources, and can be used successfully with a range of narrative texts—details which are important considerations for today’s classroom teachers (Mathes et al.).

Implications for Future Research

Future studies should examine the use of the story-frame and notepad instructional conditions compared to a control group. Students in the control group would be presented with the same stories and comprehension measures, but unlike the experimental groups, they would not receive additional instruction before, during, or after the presentation of the stories. In this way, the performance of students in both instructional groups could be compared to a control group, and stronger conclusions about the relative strengths of each strategy could be made.

Replication of this study is important because of the relatively small sample size. Future research could provide stronger conclusions about how students of different reading abilities perform using each tool as compared to a control group. The current study separated the students into two ability groups using students’ scores on the CAT/2. Future research should look at more specific definitions of ability. This could be
accomplished by taking smaller samples from the extremes of the reading spectrum (e.g., the top and bottom 15% of students to represent "above average" and "below average" readers. Including a greater number of ability groups (e.g., above average, average, and below average reading groups) would also allow researchers to more closely examine how reading ability influences students' ability to learn and use reading strategies in order to enhance their comprehension. Replication in different grades could provide important information about strategy use and reading comprehension at different developmental levels.

Future studies should be longer in duration, including more guided practice sessions for students to become increasingly familiar with the strategic tools before they use them independently. Studies have shown that, especially for poor readers, multiple guided practice sessions with explicit teacher feedback and cues that are gradually faded over time are necessary for student success (e.g., Gardill & Jitendra, 1999).

Some research (e.g., Idol, 1987) had students participate in a "final maintenance stage," where they were no longer permitted to use the concrete strategic tool (story map). This stage was not included in the present research, but it would be interesting to include in future research to determine whether students who are taught to look explicitly at the story elements will maintain their attention to these story details even when they are not making note of the story elements in a concrete manner (e.g., on the story-frame). Chmielewshi and Dansereau (1998) found that students who received instruction on the construction and use of knowledge maps later demonstrated an increased recall for textual information even when the mapping strategy was not being used explicitly. This is important information as, across their educational career, students have a variety of
different teachers, and the strategies that one teacher uses may not be used in another teacher's class. If students are to maintain the learning advantages of the story-frame strategy across teachers and grade levels, it is important for them to be able to retain their ability to make and modify predictions focused around the story elements and to be able to summarize the information in the story, even without having the advantage of a concrete story-frame or visual cue in front of them.

Other studies had students participate in a maintenance measure several weeks after the instruction was completed (e.g., Gardill & Jitendra, 1999). This type of information is useful to determine if students are able to maintain over time the advantages they received from being in the strategic instruction group. In the present study, it would be particularly interesting to determine whether below average readers were able to maintain their advantage over time (compared to average to above average readers). It may be hypothesized that students who are below average readers would need frequent cues from their classroom teachers to use the strategic tool effectively, or at least continued practice with the strategic tool.

Regardless of the questions that have been raised as a result of this study, the findings suggest that when students are engaged in making predictions prior to reading, refining predictions during reading, and making summative notes about the story elements at the end of the passage, improved reading comprehension and story recall can result. Replicating this study and following up on future study suggestions is worthwhile, as findings may influence how reading comprehension should be taught to primary students, especially those who are struggling with reading.
Final Comment

It is clear that some students will discover effective learning methods on their own and develop into good readers, writers and problem solvers no matter what the nature of their instructional experience. But many students, particularly those who have learning problems, will not. Even those students who may on their own develop into effective learners may be assisted by being explicitly taught learning strategies (Scheid, 1993, p. 19).

It is our role as educators to prepare all students for the literacy-rich society that surrounds us. The present study has demonstrated that a repertoire of strategies can be combined in a single tool and can be presented to students effectively as a part of large-group instruction. Given the current cutbacks in special education, heavy curriculum demands, and students with diverse learning needs, these features (of a single tool that combines many strategies and which can be taught to a large group at one time) may be especially important for future intervention programs. In addition, this study has demonstrated that students who have been identified as below average readers can experience feelings of reading success when they are given strategic tools to assist them in recognizing the key features of narrative stories. Experienced teachers and new teachers alike need to be provided with the opportunity to develop their knowledge base around explicit strategy instruction. The findings from ongoing educational research needs to be shared with those in the “front-line” of education. Teachers need to be provided with research-supported instructional tools, so that the students in today’s classrooms can be given the best possible opportunity to have a successful future while being full participants in our print-rich society.
References


Oklahoma City, OK: Economy.

Oakhill (Eds.), Reading comprehension difficulties: Processes and  

to reading comprehension. British Journal of Developmental Psychology, 17,  
295-312.

Cain, K., & Oakhill, J. V. (1999). Inference making ability and its relation to  
comprehension failure in young children. Reading and Writing: An  
Interdisciplinary Journal, 11, 489-503.

comprehension failure: The comprehension-age match design. Reading and  
Writing: An Interdisciplinary Journal, 12, 31-40.

Canadian Test Centre. (1992a). Canadian achievement tests, second edition:  
Handbook for test coordinators. Markham, ON: Canadian Test Centre.

Canadian Test Centre. (1992b). Canadian achievement tests, second edition:  
technical bulletin. Markham, ON: Canadian Test Centre.

on the reading competence of learning disabled and regular class students.  
Remedial and Special Education, 7(4), 33-40.

Chmielewski, T. L., & Dansereau, D. F. (1998). Enhancing the recall of text:  
Knowledge mapping training promotes implicit transfer. Journal of  
Educational Psychology, 90(3), 407-413.


www.unicef-cdc.org/publications/pdf/repcard4e.pdf


Selected Bibliography


Brock University

Senate Research Ethics Board

FROM: David Butz, Chair
Senate Research Ethics Board (REB)

TO: Vera Woloshyn, Education
Karen Forgrave

FILE: 00-200, Forgrave

DATE: March 15, 2001

The Brock University Research Ethics Board has reviewed the research proposal:

Exploring the Use of Prediction and Summarization to Increase Students Reading Comprehension

The Subcommittee finds that your proposal conforms to the Brock University guidelines set out for ethical research.

** Accepted as clarified. (Thank you for your very clear clarifications.)

Please note: If Changes or Modifications are required to this approved research, they must be reviewed and approved by the committee. If so, please complete form #5 - Request for Ethics Clearance of a Revision or Modification to an Ongoing application for Ethics Review of Research with Human Participants and submit it to the Chair of the Research Ethics Board. You can download this form from the Office of Research Services or visit the web site:

DB/dvo
Appendix B

Sample Items from Reading Component of
The Canadian Achievement Tests, Second Edition (CAT/2)

SECTION ONE: VOCABULARY

Sample A
The diver watched the _____(A)_____, sway lazily with the ocean current. Schools of colourful fish darted to and fro. The bustle of the world above seemed to _____(B)_____, once the diver reached the quiet ocean floor.

(A) A dancer  (B) A vanish
B seaweed       B explode
C freighter     C multiply
D aquarium      D reappear

Sample B

Choose the word that gives the best meaning of the underlined prefix or suffix

cheerful       peaceful

A lacking
B starting
C filled with
D different from

Sample C

Read the sentences. Then choose the word that correctly completes both sentences.

Carl stacked the dishes near the kitchen _____________.

We watched the sun _____________ slowly behind the clouds.

A sink
B float
C slide
D counter
SECTION TWO: COMPREHENSION

Sample A

Jan drove her car to the service station. She filled the tank with gas and checked the oil. Then she cleaned the windows and paid the bill.

What did Jan do last?
A paid the bill
B filled the tank
C checked the oil
D cleaned the windows

Sample B

To celebrate Children’s Day, the Deerfield Library will present a display of art by pre-school children in the Reading Room, from 1 to 3 o’clock on Sunday, April 12. Many of the artists will be on hand and refreshments will be served.

1) A passage like this would most likely be found in
A a tall tale
B a biography
C a newspaper
D a story book

2) The best title for this passage would be:
A “Deerfield Library Presents Children’s Art”
B “Reading Room Refreshments”
C “Art Display in the Reading Room”
D “Library Sponsors Art Classes”
Appendix C

Story Summaries and Comprehension Tests

Session One: Modeling the Strategic Tools

Story 1: *Blue Moose* (Pinkwater, 1981)

This is a story about a restaurant owner who is sad because no one ever compliments him on his cooking. One day, a moose comes to his door, and the life of the restaurant is changed forever. Crowds come to the restaurant to see the moose helping in the restaurant, and they compliment the restaurant owner on his cooking. The moose and the restaurant owner are very happy to have found each other. At the end of the story, the moose leaves to visit his uncle, but he promises that it will only be a short trip, and that he will return again soon to the restaurant.

Session Two: Guided Practice

Story 2: *Snowshoe Trek to Otter River* (Budbill 1986).

This is an adventure story of Daniel, a boy who goes on a snowshoe trip and falls through the ice on Otter River. He has to think quickly and use his survival skills to stop himself from freezing. At the end of the story, he sees a light in the distance, and knows that he has made it home safely.

Session Three: Independent Practice

Story 3: *Fanny Flora's Kitten* (Crampton, 1980).

This is a story about Fanny Flora, a girl who really likes kittens, and her silly family called “The Floogles”. When Mr. Floogle goes to pick up their new kitten from the train
station, a mix-up results in the Floogles getting the tiger kitten that was intended for the zoo. At the end of the story, the zooman realizes that there must be some mistake, and comes to the Floogles’ home to exchange kittens.

Session Four: Independent Reading


This story is about a girl and boy (Toni and Cal) who, despite hearing shark warnings on the radio, go for a swim in the harbour. They think the harbour is too shallow for sharks, and will be a safe place to swim, but they end up having a close encounter with a shark. Two men working on a nearby boat come to their rescue. At the end of the story, both children are standing safely on shore, looking at the water.
Comprehension Tests: Immediate and Delayed Measures for All Four Stories

Blue Moose

Recalling Facts
1. At the beginning of the story, Mr. Breton wished that:
   A) □ people would say his food was delicious
   B) □ he could have a pet
   C) □ he could find a new recipe for clam chowder
   D) □ the moose would come to visit him

2. How did the people from the town feel when they first saw the moose?
   A) □ they wondered if he was a new chef
   B) □ they ignored the moose
   C) □ they were surprised to see the moose and felt like running away
   D) □ they wanted to take pictures of the unusual moose

3. The townspeople told the moose that
   A) □ they didn’t like his antlers
   B) □ they really enjoyed Mr. Breton’s clam chowder
   C) □ they preferred Mr. Breton’s crackers
   D) □ they came because it was the only restaurant in town

4. What time of year was it when the moose became moody?
   A) □ spring
   B) □ summer
   C) □ fall
   D) □ winter

5. Why was Mr. Breton very busy that winter?

6. What did Mr. Breton do when the moose told him he was going to leave?

7. Where did the moose go when the spring came?
Understanding the Passage:
1. Why did the moose want to come inside?
A) □ because Mr. Breton was his friend
B) □ he came every day to eat clam chowder
C) □ he was cold and wanted to warm up
D) □ he was tired and wanted to sleep

2. How did Mr. Breton feel when the moose ate his clam chowder?
A) □ upset, because the moose was eating all of his clam chowder
B) □ frightened, by the large moose standing in the room
C) □ happy, because he was able to help the moose get warm
D) □ proud, because the moose said the chowder was the best he’d ever eaten

3. When the moose talked with the townspeople, he was:
A) □ rude and impatient
B) □ polite, but not overly friendly
C) □ cheerful and enthusiastic
D) □ shy, but friendly

4. How did Mr. Breton feel about cooking for so many people?
A) □ he was very happy because he loved to cook for lots of people
B) □ he was tired cooking for all the people who came from town
C) □ he was happy he was making lots of money from the customers
D) □ he was unhappy because he had to cook all the time and never saw moose

5. How did the moose make the people feel a little uncomfortable?

6. Why did Mr. Breton blush when the moose first said, “Sir, this is wonderful clam chowder”?

7. Why will the moose return to Mr. Breton’s?
Applying Your Understanding
1. Could this story really happen? Why or why not?

2. Do you think that Mr. Breton and the moose were happy they met each other? Why or why not?

3. What would be another good title for this story?

4. What are some ways the author could have made this story even more humorous?

Show how much you enjoyed this story. This story was:

□ Terrible
□ Not so good
□ Ok
□ Good
□ Great

Why?
Recalling Facts
1. When did Daniel start off on his adventure?
   A) □ in the early morning
   B) □ just before lunch
   C) □ in the afternoon
   D) □ just before dinner

2. Why did Daniel put on many layers of clothes?
   A) □ so that he didn’t have as much to carry
   B) □ he wanted to have dry clothes in case he got wet
   C) □ he didn’t have a coat
   D) □ to keep warm

3. How did Daniel decide that it was safe to cross the river?
   A) □ he cut a hole and measured how thick the ice was
   B) □ he always crossed this part of the river
   C) □ the path went right across the river
   D) □ he jumped up and down to make sure the ice was thick

4. When it came time for Daniel to go home, he:
   A) □ followed the same path back across the river
   B) □ went to where the ice was thicker
   C) □ swam across the river
   D) □ put a log across the river to make a bridge

5. What happened as soon as Daniel heard a loud crack in the middle of the story?

6. How did Daniel get out of the river?

7. What did Daniel do to get warm?
Understanding the Passage:
1. Why was Daniel so careful about checking his gear before starting off?
   A) he couldn’t remember everything he had put in his bag
   B) he wanted to make sure there was room for his lunch
   C) he knew that if he ran into trouble, his gear could help him survive
   D) his mother made Daniel show her everything in his bag before he left

2. How did Daniel know that he had been asleep for an hour or two when he woke up?
   A) he was hungry and remembered he hadn’t eaten
   B) the ice was beginning to form again on the river
   C) it had started to snow
   D) his clothes were dry, and the fire had burned down to coals

3. Daniel threw snow on the fire to put it out. This shows that Daniel:
   A) was responsible, and knew about getting along in the woods
   B) was scared that the fire was spreading too quickly
   C) was mad that making the fire had taken all his matches
   D) was ready for a drink of water

4. How do you think Daniel felt when he saw the light coming from his kitchen window?
   A) sad, because his adventure was over
   B) upset, because he had missed dinner
   C) happy that he had made it home safely
   D) angry that his mother hadn’t come to look for him

5. Daniel was sleepy and cold when he had finished building the fire.
   Why didn’t he lie down right away?

6. Why did Daniel think that his food tasted so good?

7. Why was it a “perfect day” for a snowshoe trek?
Applying Your Understanding
1. What three items in Daniel’s backpack were the most important? Explain why.


2. What lesson did Daniel learn from his snowshoeing adventure?


3. How would this story have been different if it happened in the summer? How would the problem change?


4. What would another good title for this story be?


Show how much you enjoyed this story. This story was:

- [ ] Terrible
- [ ] Not so good
- [ ] Ok
- [ ] Good
- [ ] Great

Why?
Fanny Flora’s Kitten

Recalling Facts
1. The beginning of this story takes place
A) in the woods
B) at the zoo
C) in the Floogle’s house
D) at the train station

2. How did the Floogles ask for a kitten?
A) they wrote a letter
B) they used the telephone
C) they asked the zooman
D) they put an add in the paper

3. Who was sending the Floogles a kitten?
A) the man at the zoo
B) a neighbour
C) their grandmother
D) their uncle

4. Where did the new kitten choose to sleep?
A) in the box with the pillow
B) on Fanny Floogle’s bed
C) on Mr. Floogle’s chair
D) behind the stove

5. What was unusual about the kitten that came out of the crate the Floogles opened?

6. Why did the man from the zoo come to the Floogles’ door?

7. At the end of the story, what did the zooman promise the Floogles?
Understanding the Passage:
1. Why did Mr. Floogle come to the train station with a whip, a gun, and a chair?
   A) □ to make sure he looked like the man from the zoo
   B) □ he felt he needed them to pick up the kitten for Flora
   C) □ he wanted to be prepared to pick up the tiger
   D) □ he wanted to tame the tiger by himself

2. How did Mr. Floogle feel as he waited for the train?
   A) □ excited about bringing the family to get the kitten
   B) □ worried that the kitten would not be on the train
   C) □ nervous, even though he was trying to look brave
   D) □ cold, because he didn’t have his winter coat

3. Why wouldn’t Snitkin, the dog, come out from under the kitchen table?
   A) □ he was jealous of the new kitten
   B) □ he was mad the kitten took over his favourite chair
   C) □ he did not want to be friends with a cat
   D) □ he was scared of the big striped kitten

4. What does Mr. Floogle need to remember next time he goes to the train station?
   A) □ his glasses
   B) □ leather gloves
   C) □ a whip
   D) □ a chair

5. Why didn’t Mr. Floogle look into the second crate at the train station?

    ______________________________________

6. How do you know that Mr. Floogle and the zooman are friends?

    ______________________________________

7. Why did the Floogles all laugh when they read the tag on the crate?

    ______________________________________

A) □ to make sure he looked like the man from the zoo
B) □ he felt he needed them to pick up the kitten for Flora
C) □ he wanted to be prepared to pick up the tiger
D) □ he wanted to tame the tiger by himself

2. How did Mr. Floogle feel as he waited for the train?
A) □ excited about bringing the family to get the kitten
B) □ worried that the kitten would not be on the train
C) □ nervous, even though he was trying to look brave
D) □ cold, because he didn’t have his winter coat

3. Why wouldn’t Snitkin, the dog, come out from under the kitchen table?
A) □ he was jealous of the new kitten
B) □ he was mad the kitten took over his favourite chair
C) □ he did not want to be friends with a cat
D) □ he was scared of the big striped kitten

4. What does Mr. Floogle need to remember next time he goes to the train station?
A) □ his glasses
B) □ leather gloves
C) □ a whip
D) □ a chair

5. Why didn’t Mr. Floogle look into the second crate at the train station?

7. Why did the Floogles all laugh when they read the tag on the crate?
Applying Your Understanding
1. What part of this story seemed the silliest or most ridiculous to you?

2. Could this story really happen? Why or why not?

3. What do you think would have happened if Fanny Flora had wanted a fish as pet?

4. What would another good title for this story be?

Show how much you enjoyed this story. This story was:

- ☐ Terrible
- ☐ Not so good
- ☐ Ok
- ☐ Good
- ☐ Great

Why?
The Shape in the Harbor

Recalling Facts
1. In what month did this story take place?
   A) ☐ April
   B) ☐ July
   C) ☐ October
   D) ☐ December

2. Why was Cal not sure about going swimming?
   A) ☐ he had just had lunch
   B) ☐ he had been swimming the day before
   C) ☐ the Coast Guard had posted high tide warnings
   D) ☐ the Coast Guard had posted shark warnings the day before

3. Why were Art Hatch and Tim Carter at the harbour?
   A) ☐ they were fishing from their boat
   B) ☐ they were working on Art’s boat
   C) ☐ they were watching the shark in the water
   D) ☐ they were feeding the seagulls

4. What did Toni do as soon as she saw the shark’s fin?
   A) ☐ called for Art to help
   B) ☐ jumped in the water
   C) ☐ yelled a warning at Cal
   D) ☐ rode away on her bike to get help

5. Why didn’t Cal hear Toni’s first warning?

6. How did Toni try to distract the shark?

7. How did Art rescue Cal from the shark?
Understanding the Passage:
1. At the beginning of the story, Art saw a seagull scream and fly away suddenly. The gull did this because:
   A) □ it saw Art on his boat
   B) □ it saw a shark in the water
   C) □ it saw Toni and Cal on their bikes
   D) □ it saw another seagull and flew off with it

2. Why did Cal and Toni choose to swim in the harbour instead of the open water?
   A) □ they wanted to visit Art’s boat
   B) □ they had been swimming in the open water yesterday
   C) □ the harbour was their favourite place to swim
   D) □ they thought no shark would go there

3. What did Toni see that made her stop her bike on the bridge?
   A) □ the penny
   B) □ the shark
   C) □ the starfish
   D) □ the rock crab

4. Cal was puzzled by Toni’s jumping and waving because:
   A) □ Toni was usually very quiet
   B) □ Cal hadn’t seen the shark yet
   C) □ Cal hadn’t waved to Toni first
   D) □ Toni should have been in the water

5. Why was Cal lucky it was high tide?

6. Why did Cal hang on to the diving board instead of getting out at the ladder?

7. What showed that Art Hatch knew a lot about sharks?
Applying Your Understanding
1. What lesson do you think Cal and Toni learned from their adventure?

2. Could this story really happen? Why or why not?

3. At the end of the story, it says that the two men, and Cal and Toni stood and stared at the water for a long time. What were they probably thinking?

4. What would another good title for this story be?

Show how much you enjoyed this story. This story was:

☐ Terrible  ☐ Not so good  ☐ Ok  ☐ Good  ☐ Great

Why?
Blue Moose - One Week Later

Recalling Facts
1. At the beginning of the story, Mr. Breton wished that:
   A) □ he could have a pet
   B) □ he could find a new recipe for clam chowder
   C) □ the moose would come to visit him
   D) □ people would say his food was delicious

2. What did the blue moose enjoy the most?
   A) □ the bowls of clam chowder
   B) □ the cups of hot coffee
   C) □ the pieces of hot gingerbread
   D) □ the chicken noodle soup

3. How did the people from the town feel when they first saw the moose?
   A) □ they wondered if he was a new chef
   B) □ they were surprised to see the moose and felt like running away
   C) □ they ignored the moose
   D) □ they wanted to take pictures of the unusual moose

4. The townspeople told the moose that
   A) □ they came because it was the only restaurant in town
   B) □ they didn’t like his antlers
   C) □ they really enjoyed Mr. Breton’s clam chowder
   D) □ they preferred Mr. Breton’s crackers

5. What time of year was it when the moose became moody?
   A) □ spring
   B) □ summer
   C) □ fall
   D) □ winter

6. What did Mr. Breton do when he first saw the moose in the yard?
7. Why was Mr. Breton very busy that winter?

8. What did Mr. Breton do when the moose told him he was going to leave?

9. Where did the moose go when the spring came?
Understanding the Passage:
1. Why did the moose want to come inside?
   A) □ because Mr. Breton was his friend
   B) □ he came every day to eat clam chowder
   C) □ he was tired and wanted to sleep
   D) □ he was cold and wanted to warm up

2. How did Mr. Breton feel when the moose ate his clam chowder?
   A) □ frightened, by the large moose standing in the room
   B) □ happy, because he was able to help the moose get warm
   C) □ upset, because the moose said the chowder was the best he=d ever eaten
   D) □ proud, because the moose said the chowder was the best ever eaten

3. When the moose talked with the townspeople, he was:
   A) □ cheerful and enthusiastic
   B) □ polite, but not overly friendly
   C) □ rude and impatient
   D) □ shy, but friendly

4. The town newspaper wrote an article about Mr. Breton because
   A) □ Mr. Breton owned the newspaper
   B) □ he made the best clam chowder in town
   C) □ he had an unusual new waiter
   D) □ he was trying a new recipe

5. How did Mr. Breton feel about cooking for so many people?
   A) □ he was very happy because he loved to cook for lots of people
   B) □ he was happy he was making lots of money from the customers
   C) □ he was tired cooking for all the people who came from town
   D) □ he was unhappy because he had to cook all the time and never saw moose

6. How did the moose make the people feel a little uncomfortable?

7. Why did Mr. Breton blush when the moose first said, "Sir, this is wonderful clam chowder"?
8. Why will the moose return to Mr. Breton's?

Applying Your Understanding
1. What part of this story did you find the most ridiculous, or the most humorous?

2. What are some ways the author could have made this story even more humorous?

3. Use the next 4 lines to write another ending to this story.
Snowshoe Trek to Otter River - One Week Later

Recalling Facts
1. When did Daniel start off on his adventure?
   A) ☐ in the early morning
   B) ☐ just before lunch
   C) ☐ in the afternoon
   D) ☐ just before dinner

2. Why did Daniel put on many layers of clothes?
   A) ☐ so that he didn't have as much to carry
   B) ☐ he wanted to have dry clothes in case he got wet
   C) ☐ to keep warm
   D) ☐ he didn't have a coat

3. What did Daniel do before going across the ice?
   A) ☐ take off his snowshoes
   B) ☐ have lunch
   C) ☐ start a fire
   D) ☐ take off his backpack

4. How did Daniel decide that it was safe to cross the river?
   A) ☐ he cut a hole and measured how thick the ice was
   B) ☐ he jumped up and down to make sure the ice was thick
   C) ☐ he always crossed this part of the river
   D) ☐ the path went right across the river

5. When it came time for Daniel to go home, he:
   A) ☐ followed the same path back across the river
   B) ☐ put a log across the river to make a bridge
   C) ☐ swam across the river
   D) ☐ went to where the ice was thicker

6. What made Daniel's heart start pounding when he was going through the woods at the beginning of his hike?
7. What happened as soon as Daniel heard a loud crack in the middle of the story?


8. How did Daniel get out of the river?


9. What did Daniel do to get warm?


Understanding the Passage:
1. Why was Daniel so careful about checking his gear before starting off?
   A) ☐ he couldn’t remember everything he had put in his bag
   B) ☐ his mother made Daniel show her everything in his bag before he left
   C) ☐ he wanted to make sure there was room for his lunch
   D) ☐ he knew that if he ran into trouble, his gear could help him survive

2. How did Daniel know that he had been asleep for an hour or two when he woke up?
   A) ☐ his clothes were dry, and the fire had burned down to coals
   B) ☐ he was hungry and remembered he hadn’t eaten
   C) ☐ the ice was beginning to form again on the river
   D) ☐ it had started to snow

3. Daniel threw snow on the fire to put it out. This shows that Daniel:
   A) ☐ was ready for a drink of water
   B) ☐ was scared that the fire was spreading too quickly
   C) ☐ was responsible, and knew about getting along in the woods
   D) ☐ was mad that making the fire had taken all his matches

4. How do you think Daniel felt when he saw the light coming from his kitchen window?
   A) ☐ upset, because he had missed dinner
   B) ☐ sad, because his adventure was over
   C) ☐ happy that he had made it home safely
   D) ☐ angry that his mother hadn’t come to look for him

5. Daniel was sleepy and cold when he had finished building the fire.
   Why didn’t he lie down right away?

6. Why did Daniel think that his food tasted so good?
7. How do we know it was getting late when Daniel started to head for home?

8. Why was it a “perfect day” for a snowshoe trek?

Applying Your Understanding

1) Without changing the ending of the story, what are some ways the author could have made this story scarier?

2) Do you think this story could really happen? Why or why not?

3) Use the next 4 lines to write another ending to this story.
Fanny Flora’s Kitten - One Week Later

Recalling Facts
1. The beginning of this story takes place
   A) ☐ at the zoo
   B) ☐ in the woods
   C) ☐ in the Floogle’s house
   D) ☐ at the train station

2. How did the Floogles ask for a kitten?
   A) ☐ they wrote a letter
   B) ☐ they put an add in the paper
   C) ☐ they used the telephone
   D) ☐ they asked the zoorman

3. Who was sending the Floogles a kitten?
   A) ☐ the man at the zoo
   B) ☐ their uncle
   C) ☐ a neighbour
   D) ☐ their grandmother

4. Who went to take the tiger to the zoo?
   A) ☐ the whole Floogle family
   B) ☐ only Mr. Floogle
   C) ☐ only Fanny Floogle
   D) ☐ the zoorman and Mr. Floogle

5. Where did the new kitten choose to sleep?
   A) ☐ behind the stove
   B) ☐ on Mr. Floogle’s chair
   C) ☐ on Fanny Floogle’s bed
   D) ☐ in the box with the pillow

6. What was unusual about the kitten that came out of the crate the Floogles opened?
7. What was the zooman puzzled when he opened the crate?

8. Why did the man from the zoo come to the Floogles' door?

9. At the end of the story, what did the zooman promise the Floogles?
Understanding the Passage:

1. Why did Mr. Floogle come to the train station with a whip, a gun, and a chair?
   A) □ to make sure he looked like the man from the zoo
   B) □ he felt he needed them to pick up the kitten for Flora
   C) □ he wanted to tame the tiger by himself
   D) □ he wanted to be prepared to pick up the tiger

2. How did Mr. Floogle feel as he waited for the train?
   A) □ nervous, even though he was trying to look brave
   B) □ excited about bringing the family to get the kitten
   C) □ cold, because he didn’t have his winter coat
   D) □ worried that the kitten would not be on the train

3. Why was Mr. Floogle whistling on the way home from the train station?
   A) □ he was excited about getting the kitten
   B) □ he was nervous about driving with the tiger
   C) □ he was remembering a song he had heard on the radio
   D) □ he was entertaining the kitten

4. Why wouldn’t Snitkin, the dog, come out from under the kitchen table?
   A) □ he was mad the kitten took over his favourite chair
   B) □ he was jealous of the new kitten
   C) □ he was scared of the big striped kitten
   D) □ he did not want to be friends with a cat

5. What does Mr. Floogle need to remember next time he goes to the train station?
   A) □ leather gloves
   B) □ his glasses
   C) □ a whip
   D) □ a chair

6. Why didn’t Mr. Floogle look into the second crate at the train station?

7. Why did the Floogles all laugh when they read the tag on the crate?
8. How do you know that Mr. Floogle and the zooman are friends?

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

Applying Your Understanding

1. Who do you think the smartest person is in this story? ________________________________
   What in the story tells you this person is the most clever?

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

2. What are some ways the author could have made this story even more humorous?

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

3. Use the next 4 lines to write another ending to this story.

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________
The Shape in the Harbour - One Week Later

Recalling Facts
1. Why was Cal not sure about going swimming?
   A) □ he had been swimming the day before
   B) □ he had just had lunch
   C) □ the Coast Guard had posted high tide warnings
   D) □ the Coast Guard had posted shark warnings the day before

2. In what month did this story take place?
   A) □ April
   B) □ July
   C) □ October
   D) □ December

3. Cal was Toni’s
   A) □ brother
   B) □ father
   C) □ cousin
   D) □ friend

4. Why were Art Hatch and Tim Carter at the harbour?
   A) □ they were fishing from their boat
   B) □ they were watching the shark in the water
   C) □ they were working on Art’s boat
   D) □ they were feeding the seagulls

5. What did Toni do as soon as she saw the shark’s fin?
   A) □ yelled a warning at Cal
   B) □ called for Art to help
   C) □ jumped in the water
   D) □ rode away on her bike to get help

6. What did Toni do when they first got to the harbour?

7. Why didn’t Cal hear Toni’s first warning?
8. How did Toni try to distract the shark?

9. How did Art rescue Cal from the shark?
Understanding the Passage:

1. At the beginning of the story, Art saw a seagull scream and fly away suddenly.
   The gull did this because:
   A) it saw Art on his boat
   B) it saw Toni and Cal on their bikes
   C) it saw a shark in the water
   D) it saw another seagull and flew off with it

2. Why did Cal and Toni choose to swim in the harbour instead of the open water?
   A) the harbour was their favourite place to swim
   B) they had been swimming in the open water yesterday
   C) they wanted to visit Art’s boat
   D) they thought no shark would go there

3. What did Toni see that made her stop her bike on the bridge?
   A) the rock crab
   B) the shark
   C) the starfish
   D) the penny

4. Cal was puzzled by Toni’s jumping and waving because:
   A) Cal hadn’t seen the shark yet
   B) Toni should have been in the water
   C) Toni was usually very quiet
   D) Cal hadn’t waved to Toni first

5. What made Cal swim so fast?
   A) he was swimming closer to hear what Toni was saying
   B) his fear caused him to swim quickly to safety
   C) he was showing off his speed swimming
   D) he was trying to get some exercise

6. Why was Cal lucky it was high tide?

7. How come Art and Tim had not noticed the shark?
8. Why did Cal hang on to the diving board instead of getting out at the ladder?

__________________________________________________________________________

__________________________________________________________________________

9. What showed that Art Hatch knew a lot about sharks?

__________________________________________________________________________

__________________________________________________________________________

Applying Your Understanding
1. How could Cal and Toni protect other swimmers from meeting a shark like they did?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

2. Without changing the ending, how could the author have made this story even more exciting?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

3. Use the next 4 lines to write another ending to this story.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Appendix D

Participant Instructions

General Instruction/Introduction For Both Groups:
I am from Brock University, and I'm interested in learning about how Grade 4 students can best learn and understand stories. I'm going to be working with you for several days over the next few weeks, and we'll be doing some reading and writing activities together. Some of the stories you will be listening to are on video, and some of the stories you will be reading yourself. Sometimes I'll be teaching the whole class a lesson, and sometimes, you will meet with either me or Gretta (my research assistant) individually, so that we can see how well you are understanding the stories that you have read.

NOTEPAD (GENERIC INSTRUCTION) GROUP:

Initial Session: Modelling the Strategic Tools

Today, we're going to be watching a video of a teacher reading a story to a class.

The story we're going to be looking at today is called, "Blue Moose" (read story title, and show cover of story to the students).

At the end of the story, I'm going to ask you some questions about the story. It's important to do your best to remember as much as possible, so that you will be able to answer some questions about the story.

On the board, I have a big piece of paper, which I'm going to use as my notepad. I can write anything I want on my notepad. I want to write down things I think will help me remember the story, so that I will be able to answer the questions at the end of the story. Every time we read stories, we can make notes on a piece of paper to help us remember things about the story. Today only, I'm going to use this piece of paper up here on the board. Next day, you will have your own pieces of paper, and you'll be writing down your own notes.

Now, to help me remember the story, I always like to put down the title of the story and the author. So, at the top of my notepad, I'm going to write the title, Blue Moose (write title of the story on chart paper) and the author Manus Pinkwater (write the author's name). Now I'm going to look at the cover and the title of the story and think about whether I think I will like this story or not. I think what I will like best about this story is that it has "a moose" (picking a feature from the cover or title) in it, and I really like "stories about wildlife". And since it doesn't look like the moose is in the zoo, I'm think it will be about a moose in the wild. I'm going to write that down on my notepad in the outermost space around the outside of my notepad.

The title is "Blue Moose", but I know that the plural of "moose" is also "moose", not
“meese” or “mooses”. So, the title of the story really doesn’t tell me whether there is going to be just one blue moose in the story, or if there will be many blue moose in the story. I only see one in the picture, but I think that there are probably going to be more. I’m going to write down on my notepad that moose is plural, and write ‘1 or more?’ with a question mark, to remind me to look for that in the story. That’s something that I’m going to have to find out when I read the story - whether there is only one moose, or whether there is more than one.

Before we read the story, it helps to think about what we think the story might be about. I’ve already said that it is going to be about a moose, and that it might be only one moose, or there might be many moose. I’m going to put some information down on my notepad to help me think about everything I know about moose. (Start to make a small web, with jot-notes around the word moose in the centre). I know that moose have antlers, and brown fur usually, so I’ll write that down. I also know that they live in Canada, so I’ll put that down too. I’m not really sure what moose eat, but I think they eat plants and leaves, so I’ll write that down with a question mark. Maybe in the story, I’ll find out what the Blue Moose in the picture eats.

The other word in the title is “blue”. Now, I can see in the picture that the moose looks blue, so the title could mean that the moose is blue in colour. But, I also know that ‘blue’ can mean sad, so maybe the title of the story is ‘blue moose’ because it’s about a sad moose. I’m going to write down the word ‘blue’ on my notepad, because I think that it might be an important word in the story to remember.

Another thing I can do to help me think about and remember the story, even before I read it, is to think about experiences I have had that may be similar to the story. The title “Blue Moose” reminds me about a camping experience in Algonquin Park that I had when I was camping there one summer. Some friends and I were walking along a hiking trail, and all of the sudden, we looked up and there was a huge moose standing in the path in front of us. It was much taller than we were, with big antlers. We all looked at the moose, and the moose looked at us, and then we all turned and RAN all the way back to camp! I’m going to draw a ‘thought-bubble’ on my notepad to show what this story makes me think about. In the ‘thought-bubble’ I’ll draw a tent and put the words ‘camping in Algonquin’ to help me remember my own story about meeting a moose!

Now, I’ve done some good thinking about the title, and about why I think I’m going to like the story, and what it will be about, so I think I’m ready to read the story.

BEGIN THE VIDEO
PAUSE halfway through the story.

Now I have a little bit of information about the story, so I can stop and think about the story so far. I need to look at my notepad and ask myself if there is anything else I can add to it, or if there is anything I should change. I think I will change the reason I’m
going to like this story. I said before that I liked it because there was a moose in it, and I really like stories about wildlife and being outdoors. But now I can see that it’s really going to be a silly story about a blue moose that talks, so I will change this to say that I will like it because it’s going to be a funny, make-believe story. I’m going to write that in the second layer of my notepad. I’ve also found out that this story seems to be about one blue moose in particular, because there has only been one moose in the story so far. So, I’m going to draw an arrow down from my note about moose being plural, and I’m going to write ‘1 moose’ in the second layer of my notepad. I also haven’t heard about the moose being really sad, and I haven’t been told why the moose is blue. He was really cold...maybe he turned blue then, but he didn’t turn brown again when he warmed up. So, maybe that’s just the colour of the moose in this story - he’s a funny blue moose. I’ll have to wait and see if he turns colour later in the story. Right now, I’m just going to draw an arrow down into the second section of my notepad from where I wrote ‘blue’ before.

I really like the description of the moose warming up and wisps of steam coming off him, and him enjoying Mr. Breton’s hot soup. This reminds me of when I get really cold being outside in the winter, and I like to come in and have a bowl of hot chicken noodle soup for lunch. I will put that down too, ‘this story makes me think about cold winter days, and chicken noodle soup’. I’ll draw a bowl of soup inside a thought-bubble in the second layer of the notepad.

Okay, now I’ve thought a little bit about the story and made some changes to my notepad. It helps us to understand stories better when we pause and think a little bit about what we are reading. Now I think I’m ready to go on to the rest of the story.

AFTER THE VIDEO:

Now, I’ve finished the story. I’m going to ask myself, “Did I like that story?” Yes, I did like that story, because it was a silly, make-believe story that was funny, and I like humorous stories. I said that before, so I’ll just draw an arrow from that into the middle of my notepad. Now, I want to think about what made it funny. Well, the moose was blue, and that’s pretty strange for a moose, so I think that’s kind of funny. I’ll put ‘blue’ under my ‘funny’ note. The moose also talks, and is able to help Mr. Breton in the restaurant. That’s pretty strange for a moose, too. So, I’ll put that down as well.

Now, let’s look back at my other notes and see what I was thinking. I was wondering whether there was one moose, or more than one moose, and I found out that there was really only one, so I’ll draw the arrow in from that note to the centre of the notepad. I was also wondering about why the moose was blue. The story never really answered that, and the moose didn’t change colours during the story, so I’ll just circle ‘blue’ that I put under my note about the story being ‘funny’. I was right about the moose having antlers, and fur, even though this moose’s fur was blue. I don’t know whether the story took place in Canada or not, because it didn’t say, but it could have taken place in Canada, because moose live in the woods in Canada further north.
I’m also going to ask myself, “What was my favourite part of the story?” My favourite part of the story was when it talks about the moose eating seventeen bowls of clam chowder and 48 cups of coffee. I can picture that in my head! I’ll write this on my notepad to help me remember that part of the story. I’m going to draw a little bowl to help me remember about the 17 bowls of soup! That’s a lot of soup.

Now, I’m going to ask myself if there is anything else I would like to write down on my piece of paper. I’ve got the title, the author, the reason I like the book, and my favourite part. I think I’m done.

I think we’re all ready to answer some questions about the story now, because I’ve listened to the story, and I’ve made some notes on my notepad. I’m going to put my notepad away now.

I’m going to hand out the questions, and I’m going to read the questions aloud. Some of the questions are multiple-choice. You can answer them by making a mark in the bubble beside the answer you think is best. For some questions you need to write down your answer. I want you to do the best you can to answer the questions. Spelling and grammar don’t count, it’s your ideas that are important. If you just can’t remember some parts of the story, or can’t answer some of the questions, just go on to the next question. Have you got any questions before we start?

(Read the questions aloud to the class, and invite the student answer the questions to the best of their ability. The multiple choice questions students are expected to answer as they are being read, while the written answer questions will be read aloud, and then students will be given 5 minutes to answer them independently. The teacher and the researcher will circulate through the room, ensuring that students are on-task and re-reading questions to students, if necessary. No assistance will be provided for answering any questions, students will simply be encouraged to “do their best”.)

(When students complete the questions, they can put the paper upside down on their desk and read a book or do some other quiet, individual activity, until everyone has finished the questions).

Thank you for your work today. Remember that everything we do together is helping us find out how students learn about and remember stories. It’s a very important research question, and I’m really glad that you are helping us to answer it. I’m going to see you again tomorrow, and you’ll be watching a different story on video, and answering some questions about that story as well. Do you have any questions?

Second Group Session: Guided Practice

Today, we’re going to be doing some more reading and writing activities.
Today, we’re going to watch a video where a teacher will be reading a story called “Snowshoe Trek to Otter River” (show student the cover of the story, and read the title).

At the end of the story, I’m going to ask you some questions about the story, just like we did last day. It’s important to do your best to remember the story, in order that you will be able to answer the questions.

Remember that last day, I had a large piece of paper on the board that I called my ‘notepad’, and I used it to write down some information about the story. Today, I’m going to give each of you a piece of blank paper and a pencil, and you can use it to make any notes or pictures that you think will help you be able to remember the story.

Let’s think about the story first. What is something that we could put down about the story on our piece of paper, before we even begin listening to it? (Accept students’ responses). That’s right, we can write down the title and author of the story. Let’s do that on our notepads. I’ll write it up here on mine so everyone can see it, and you can write the same information on your own notepads.

Now, is there anything else that I could put down on my notepad before I even start to see the story? I could put down if I think I would like it, and my reason. (Write down student responses, such as, “I think I will like this story because it looks like it takes place in the winter, and I like the winter” OR “I think I will not like this story because the cover is dark and gloomy”). Tell students that they can write down a reason they think they might like or not like this story on their own paper. (My example will be, “I think I will like this story because I love snowshoeing at the cottage, and this story is about snowshoeing - I know that from the title”).

What else does the title tell us? The Trek is going to be to Otter River...I don’t know where that is, so that doesn’t help me very much. Maybe the story will tell me where Otter River is. I know that it’s not a hike or a ski-trip, because it says that it is a snowshoe trek. I think that for snowshoes to work, there needs to be a lot of snow. Maybe this takes place far up north. I’ll have to read and find out. I know there will need to be snow, so I’ll put ‘snow’ down on my notepad to help me think about the weather as I read.

What else can we think about before we start to read? (Prompt students to look at the picture and identify what is in it). It looks like someone is packing for a big adventure - an overnight adventure, maybe, since there is a backpack and pots and pans. A winter camp, perhaps? I’ll put that down with a question mark, and I’ll have to read to find out whether the “snowshoe trek to Otter River” is a long adventure, or just a short, day long adventure.

Now we’ve looked carefully at the title, and we have made some good guesses about what the story may be about, and about whether we think we’re going to like it or not. I
think we’re ready to listen to the story now. Remember to listen very carefully, and do your best to remember as much as possible so that you will be able to answer some questions at the end of the story.
BEGIN THE VIDEO
PAUSE halfway through the story.

Now I have a little bit of information about the story, so I can stop and think about the story so far. Is there anything else I want to add to my notepad? Should we change what I’m going to like about this story? (Model one of the students’ suggestions on the blackboard, and encourage them add to their notepads if they wish. One or two suggestions, to prompt students:  
- where is Otter River? We still don’t know where exactly, but we do know it is not too far from Daniel’s house...within a day’s walk, anyway 
- lots of snow - talks about looking at animal tracks 
- reason I like the story....because it’s an exciting adventure story. CRACK went the ice!

Okay, now I’ve thought a little bit about the story. It helps us to understand stories better when we pause and think a little bit about what we are reading. Now I think I’m ready to go on to the rest of the story.

AFTER THE VIDEO:

Now, I’ve finished the story. I’m going to ask myself, “Did I like that story?” Why did you like the story? (Accept one or two responses from students). I liked that story, because I thought it was an exciting adventure story. I would be very scared to be alone on a snowshoe trip and have something go wrong!

What else should we put in the centre of our notepad that can help us remember the story?
I’m also going to ask myself, “What was your favourite part of the story?” (Ask two or three students to share their favourite parts of the story with the class. Choose one response to write on the chart paper on the board.) I’m going to write down __________ (e.g., “When the ice on the river starts to crack”) on my notepad as my favourite part of the story, to help me remember it. You can choose whichever part of the story was your favourite, and write down your favourite part of the story on your notepads, to help you remember it.

Now, I’m going to ask myself if there is anything else I would like to write down on my piece of paper. I’ve got the title, the author, the reason I like the book, and my favourite part.
We also learned that the story was about a one-day snowshoeing adventure, and that Daniel got back safely at the end of the story. I think I should put that down so I remember it was only a day’s trip, because at the beginning, I predicted that it would be a
longer camping expedition.

We can also remember stories by thinking about what they remind us of. What does this story remind you of? Is there some adventure you’ve had that this reminds you of? Write that down on your notepad to help you remember this story. I’m going to put down that it reminds me of walking on the ice at the cottage, and having my friend’s foot go through the ice into the water below. The ice didn’t crack up completely, because we got off it quickly, but my friend did have a wet foot! I’ll draw a ‘thought-bubble’ with a wet foot to remind me about that.

I think I’m done. If there is anything else that you would like to write down on your paper, like your favourite character, or anything else that you think may help you to remember the story, you can do that. I’ll give you a minute to make any other notes you want, or to read over your notepad to get ready to answer the questions. Then I’m going to collect your notepads - please make sure your names are on them. (Collect the students’ notepads, and remove the chart paper from the front board).

I think we’re all ready to answer some questions about the story now, because we’ve listened to the story, talked about it a little bit, and made some notes on our notepad. I’m going to hand out the questions, and I’m going to read the questions aloud, just so everyone is clear about what they say. Some of the questions are multiple-choice. You can answer them by making a mark in the bubble beside the answer you think is best. Some questions need you to write down your answer. I’ll give you a few minutes after I read out all the questions, so that you can think about your answers and write down everything you need to. I want you to do the best you can to answer the questions. Spelling and grammar don’t count, it’s your ideas that are important. If you just can’t remember some parts of the story, or can’t answer some of the questions, just go on to the next question. Have you got any questions before we start?

(Read the questions aloud to the class, and invite the student answer the questions to the best of their ability. The teacher and the researcher will circulate through the room, ensuring that students are on-task and re-reading questions to students, if necessary. No assistance will be provided for answering any questions, students will simply be encouraged to “do their best”.)

(When students complete the questions, they can put the paper upside down on their desk and read a book or do some other quiet, individual activity, until everyone has finished the questions).

Thank you for your work today. Remember that everything we do together is helping us find out how students learn about and remember stories. It’s very important research that you are participating in, and I’m really glad that you’re all a part of it. Tomorrow when I come, you’re going to watch the last story on videotape, and then you’re going to make use of your own notepads. I’m not going to be modelling any more up at the front. I’ll be interested in seeing how much you can remember about the story when we don’t discuss
it as a class. Do you have any questions?

Third Group Session: Independent Practice

Today, we’re going to be doing some more reading and writing activities. Today, we’re going to watch a video where a teacher will be reading a story called “Fanny Flora’s Kittens” (show student the cover of the story, and read the title).

At the end of the story, I’m going to ask you some questions about the story, just like we did last day. It’s important that you do your best to remember the story, in order that you will be able to answer the questions.

Remember the last two days, we have been using our ‘notepads’ to write down some information about the story. Today, I’m going to give each of you a piece of blank paper and a pencil, and you can use it to make any notes or pictures that you think will help you be able to remember the story. I’m not going to be modelling up here on the board today, because I want to see how you will all use your notepad to help you remember the story. You may write down some of the same information that we wrote down last day, or you might use your notepad to record different information about the story - it’s your notepad, and it’s entirely up to you.

(Hand out the blank pieces of paper, and allow five minutes to write down any information they wish about the story).
BEGIN THE VIDEO
PAUSE halfway through the story.

Now I’m going to pause the video for two minutes, and you can work on your own notepads, or you can think about the story during that time. (Time two minutes - circulate around the room to ensure that students are on-task).

Okay, now I think we’re ready to watch the rest of this final story.

AFTER THE VIDEO:

Now, we’ve finished the story. It’s time to think about what we did the last two days when we’ve finished the story. You have five minutes now before I’m going to hand out the questions to answer about the story. This is quiet time to work by yourself, either on your notepad, or thinking about the story.

I’m going to collect your notepads now - please make sure your names are on them.

I’m going to hand out the questions now, and just like last day, I’m going to read the questions aloud, just so everyone is clear about what they say. Some of the questions are multiple-choice. You can answer them by making a mark in the bubble beside the answer
you think is best. Some questions need you to write down your answer. I'll give you a few minutes after I read out all the questions, so that you can think about your answers and write down everything you need to. I want you to do the best you can to answer the questions. Spelling and grammar don’t count, it’s your ideas that are important. If you just can’t remember some parts of the story, or can’t answer some of the questions, just go on to the next question. Have you got any questions before we start?

(Read the questions aloud to the class, and invite the student answer the questions to the best of their ability. The teacher and the researcher will circulate through the room, ensuring that students are on-task and re-reading questions to students, if necessary. No assistance will be provided for answering any questions, students will simply be encouraged to “do their best”.

(When students complete the questions, they can put the paper upside down on their desk and read a book or do some other quiet, individual activity, until everyone has finished the questions).

Thank you for your work today. Remember that everything we do together is helping us find out how students learn about and remember stories. It’s very important research that you are participating in, and I’m really glad that you’re all a part of it.

Next week, I’m going to be visiting with each of you individually, and I’ll be asking you some questions about the stories you have seen. Do you have any questions?

**Individual Follow-Up Session One: Oral Retelling**

We’re going to be talking a bit about the last story that we looked at in class. Just like a real interview, it’s going to be tape recorded. That will help me to remember what everyone says about the story. Is that okay with you?

(If child shows concern, reassure him/her that the only person who will be listening to the recordings is Miss Forgrave, the researcher. The answers will not be played to the students in the school).

Do you remember what story we looked at last time?
(If the student does not remember, prompt with cues such as, “The first one was the one Miss Forgrave modelled on the front board, when she did her ‘think-aloud’. Do you remember that one?”)

What ‘tools’ did we use to help us remember the story?
(What did we do in class to help us understand and remember the story?)
(Notepad/Story-frame)

Can you describe what you did to help you remember the story? (How did you use the notepad/story-frame? What did you do first...etc., to prompt students if needed).

Now I’m going to have you tell me the story. You are going to pretend that I have
NEVER heard the story before. I want you to retell me the story, starting from the beginning, in as much detail as possible. Tell me everything you can remember. (Prompt students with “go ahead”; and encouraging nods and smiles as they proceed. Never tell a child that he or she is wrong. Just keep smiling and nodding. If a student stops part way through the story and says that he/she cannot remember anymore, prompt, “That’s okay. Take your time. You’re doing a really good job. Now, think to yourself, ‘what happened next in the story?’ What do you remember next? If students are still stuck, tell them, “You can skip the next part and then go on. It’s okay to leave a blank in the story. What happened next that you remember.”)

AFTER THE STUDENT HAS FINISHED THE RETELLING

Good for you. You did a really great job. Now, I’m going to ask you a few questions about the story.

1) If I were to ask you who the main characters were in this story, who would you tell me?

2) What was the setting of the story?

3) What would you say the main problem in the story was?

4) What was the solution to the problem?

5) If you were to tell me just three events, one at the beginning, one in the middle, and one at the ending of the story, what would you tell me?

Thank you. You did a wonderful job. (Student is sent back to class and next student comes for his/her individual session following this exact format for each student).

Delayed Comprehension Test One (In-Class Session One-Week Later)

Today, I’m interested in finding out how much you can remember about the story we did one week ago.

Last Monday, we looked at the story “Blue Moose” together, and you answered some questions about the story. Today, we’re going to do some more questions about the story. Some of the questions are the same as last week, and some are different.

For some of the written answers, you might remember how you answered the questions last week, and you might want to put that down. OR, you might have thought of some more details from the story and you could add to your answer to make it even better. It doesn’t have to be the same answer you put down last week. I’m not looking for the
same working. I'm looking to see that you have the right idea. I'm interesting in seeing how much you can remember from the story. Remember to put down as much detail as you can, since this is your chance to show me how much you know. (When students finish, they read a book quietly at their desk).

(Hand out papers, face down).

Just as we did last day, I'm going to read the questions to you, and then I want you to answer them the best you can. These are just like the questions you did before in class, and your spelling and grammar still don’t count, just your ideas are important. I want to see how much you can remember about the story. I want you to do your best, but if you don’t remember some parts of the story, or can’t answer some of the questions, just go on to the next questions. Have you got any questions before we start?

(After tests are collected)
Thank you for your work today. I’ll see you again tomorrow and we’ll be talking about story two.

Individual Follow-Up Session Two: Retelling of Story Two

(Identical to format of Individual Session One)

Delayed Comprehension Test Two

(Identical to format of Delayed Comprehension Test One)

Individual Follow-Up Session Three: Retelling of Story Three

(Identical to format of Individual Follow-Up Session One)

Delayed Comprehension Test Three

(Identical to format of Delayed Comprehension Test One)

Fourth Group Story Session: Independent Reading

In our classroom sessions, we have been working on some tools to help you to remember the information in a story that is read to you. Today, you’re going to be using the same ‘tool’ to help you remember the information in a story that you read silently, to yourself. After you read the story, there will be some questions on the story that you will have to read and answer in writing.

I am going to hand you a copy of the story, and there will be a piece of paper at the back that you can use to help you remember the information in the story. Remember what you have been doing before reading the story to help you remember the important elements of
the story. Whatever tools you used to help you remember, you should use today to help you remember this story. Then you are going to read the story, and at the end of the story, you should also be thinking about how you can use your tool to help you remember the story.

After you finish reading the story, and doing the best you can to try to help yourself remember all the important elements of the story, you can put up your hand, and I will collect your paper. You can then read silently at your desk until the end of the period.

AFTER RECESS / NEXT PERIOD

Now, I want to find out how much you remember about the story you just read. The questions are written on this piece of paper, and I want you to write answers to all the questions you can answer. I am going to read the questions aloud to the class, and then I will give you a few minutes to think about your answers and write down everything that you can think of to answer the questions. This is just like we have done in the other class sessions. If you don’t understand a question, or can’t read it, put your hand up, and I will come and read it to you. Remember that spelling and grammar don’t count, but I want you to put everything you can remember about the story down on paper. I want you to do your best, but if you don’t remember some parts of the story, or can’t answer some of the questions, just go on to the next questions. Have you got any questions before we start?

After you have finished completing the questions the best you can, you can put up your hand, and I will collect your paper. You can then read silently at your desk until the end of the period.

Individual Follow-Up Session Four: Oral Retelling
(Same format for students in both the story-frame and notepad condition)

Today is going to be our last interview session.
We’re going to be talking a little bit about how you remember stories, and also about the last story that you read in class - the one you read by yourself last week.

TURN ON THE TAPE RECORDER.

1) Do you remember the name of the last story that you read by yourself, in class last week?
   (If student cannot remember, prompt, “For this one, you didn’t watch a video of the story. You read the story by yourself, and filled in your own sheet of paper on the story. Do you remember what that story was called? What the story was about?”)
   (If student still cannot remember the title, give the title to the student: “It was called The Shape in the Harbour”. Do you remember the story now?)

2) When you first read this story in class, what did you do to help yourself remember it?
(If students answer, "I used a notepad/story-frame." Continue to prompt - can you tell me exactly what you did?)

3) Have you found using the notepad/story-frame helpful? (Do you think it has it helped you?)
   Why? How has it helped you?

4) What other things have you done in the past to help you to remember and understand stories that you read? BEFORE Miss Forgrave ever came into the classroom, how would you try remember a story that you were reading? (Before learning about the story-frame/notepad, what would you do to help yourself to remember or understand a story?)

5) In the future, when you are reading a story or listening to a story, what do you think you will do to understand or remember the story better? (If I gave you another story now, what would you do to help yourself to remember the story the best you can?)

If students do not mention using the notepad/story-frame, then ask:
6) Would you think about using a story-frame/notepad again? Why/why not? (When would you use a story-frame/notepad again? In what situation would you use the story-frame/notepad)?

7) Okay, now I am going to have you tell me the story of "The Shape in the Harbour". Now, we didn’t read this story together as a group, so it’s very important that you tell me all the details that you can remember from the story. Even if I didn’t read the story, I should be able to understand the whole story from what you tell me. Just like before, you are going to start at the beginning, and try to include everything that you can remember. You can pause and think about the story for a minute to organize your thoughts about the story first. You can go ahead when you think you're ready.

(Just as in previous retellings, encourage students with head nods, ‘um-hms’, ‘okay’, etc. Never tell a student he/she is wrong. Just keep nodding and encouraging. If a child stops part way through the story and says that they can’t remember any more, prompt: ‘That’s okay, take your time. You’re doing a really good job. Now, think to yourself, what happened next in the story? How do you remember next?’ Stop and wait a few moments for the student to continue. If a student feels that he/she cannot go on, tell him/her: ‘Okay, you can skip the next part, and tell me what happened next that you remember in the story. It’s okay to leave a blank in the story and go on. What else do you remember in the story?’ (If the student is able to identify a further event in the story, then encourage the child to start to tell the story from that point, and continue on).

AFTER THE STORY:
"Good for you. You did a really great job.
Now, I’m going to ask you a few questions about the story, just like we did last day."
1) If I were to ask you who the main characters were in this story, who would you tell me?

2) What was the setting of the story? (Where does the story take place?)

3) What would you say the main problem in the story was?

4) What was the solution to the problem in the story?

5) If you were to tell me just 3 events, one at the beginning, the middle, and the ending of the story, what would you tell me?

Is there anything else about the story that you would like to add? Anything else you remembered?
Thank you. You did a wonderful job.

Delayed Comprehension Test Four: In-Class Session

(The same administration format as previous delayed comprehension tests).
STORY-FRAME (STRATEGIC INSTRUCTION) GROUP:

Initial Session: Modelling the Strategic Tools

Today, we’re going to be doing some reading and writing activities together. Today, we will be watching a video of a teacher reading a story to a class.

The story we’re going to be looking at today is called, “Blue Moose” (read story title, and show cover of story to the students).

At the end of the story, I’m going to ask you some questions about the story. It’s important to do your best to remember the story, in order that you will be able to answer the questions.

One way that we can help ourselves to remember a story is to start thinking about it even BEFORE we read or listen to the story. We can do this by making predictions about the story, or by making good guesses about what the story is going to be about.

On the board, I have a big, piece of paper that is called a “story-frame”. I’m going to show you how we can use the story-frame to help us to understand and remember a story. Today, I’m going to model how we can use the story-frame by using this story-frame up here, so that everyone can see. Next day, you’ll be given your own story-frames, and you will be writing down the information by yourself. We can use a story-frame every time we read a story to help us remember and understand it better.

We can see that around the outside of the story-frame, there is a shaded region, and this is where we are going to make our predictions about the story. Let’s look at the different types of predictions we will be making. This first section says “characters”. Who can tell me that means? When we’re talking about a story, what are the characters? (Encourage children to define ‘characters’ as the creatures (people or animals) who are in a story; the people (or animals) who are engaged in certain actions in the story, about which the story is about. Ask students, “If we were talking about the story of the three little pigs, who would the characters be? (The three little pigs, and the big bad wolf). (Go through the story-frame, encouraging students in discussing and defining the story elements, and giving examples for each one.

For example:

PROBLEM: “The problem in the Three Little Pigs is that the wolf is trying to eat the pigs for supper! We can say that the problem is the critical event in the story. Usually, the characters in the story try to work out a solution to the problem”

SOLUTION: “The solution is the answer to the main problem or critical event in the story. The solution in the Three Little Pigs is that the third pig builds a big fire under the chimney, and when the wolf comes down the chimney, he falls into the fire. That is the end of the wolf, and the end of the little pigs’ problems.”

SETTING: “The setting in a story means where the story takes place. It could be in the country, or in a city, on a farm, or in outer space. In the three little pigs, we could say that
the setting was the country, or in the woods where the three little pigs built their homes.”

EVENTS: “There are usually three main events in the story, or the beginning, middle and end to the story. In the three little pigs, we could say that the first event is when the three little pigs decide to build their own houses out of straw, sticks, and bricks. The second event is when the wolf comes and blows the first and second house down. The last event is when the wolf comes down the chimney of the brick house, and falls into the fire. This is the beginning, middle, and end of the story.”

First, let’s look at the section that says “characters”. By looking at the title and the cover of the book, I can make some predictions about what characters might be in the story. Since the title of this story is “Blue Moose”, I think that there is going to be a Blue Moose as one of the characters in it, so I will write that down. I can also see a picture of an old man in the picture. I don’t know his name yet, but I’ll put down “old man” and that will help me remember to look out for his name as I read the story. There may be more characters in the story, but I will have a chance to fill in more characters once we start to read the story, so I’ll just leave ‘blue moose’ and ‘old man’ there for now. (Continue to give verbal ‘think-alouds’ to make predictions about the story’s setting – forest, cottage; problem – moose is sad; and possible solution – old man makes him happy. Write all predictions in the appropriate spaces around the margins of the story-frame. When the prediction areas are complete, begin the video).

BEGIN THE VIDEO

PAUSE halfway through the video.

Now I have a little bit of information about the story, so I can stop and think about the story so far, and I can look at the predictions I’ve made. I need to ask myself if there is anything else I want to add to my predictions, or anything I need to change? I think I will add to the characters, because I predicted that the story would be about a Blue Moose and an ‘old man’. Now I know that the old man is the restaurant owner, Mr. Breton, so I can add that to my predictions. Any changes we make to our ‘story-frame’ are going to be made in this next section (demonstrate on the story-frame). This way, we can see our first predictions about the story around the outside, and we can see our predictions change as we learn more about the story. If our predictions haven’t changed, then we can just draw an arrow through the section. For example, we put down the blue moose as a character, and that prediction was correct, so we can just draw an arrow into the next ‘character’ box. We don’t need to write his name again. I also know that there are some townspople now, who come to Mr. Breton’s restaurant. There may be more characters that come into the story, but that is all I know so far. Now, let’s look at my predictions about the setting. I thought that the story would take place in the forest and in a cottage, but it really takes place in a restaurant. So I will cross out the word ‘cottage’ and write ‘restaurant’ in the middle section of the story-frame. I know that the problem is that Mr. Breton wants to know that people like his cooking, but none of his customers ever compliment him on his cooking. I’m still not sure if the customers will tell Mr. Breton that his food is good, but that would be a good solution to the problem. Maybe they hear
the moose complimenting the food, and then they think it is good as well. I’ll write that down.

Okay, now I’ve thought a little bit about the story, and checked my predictions, and made some changes. It always helps us to understand stories better when we pause and think a little bit about what we are reading. Now I think I’m ready to go on to the rest of the story.

AFTER THE VIDEO:

Now, we get to look at the story-frame and see how close our predictions were to the real story. We’re going to summarize what happened in the centre part of the story-frame. Let’s start with characters. We thought that there would be a blue moose, Mr. Breton, the restaurant owner, and townspeople in the story. What did we find out by listening to the whole story? Were we right? Do we have to add any characters or delete any characters? (In the non-shaded section, record the characters who actually appeared in the story. Follow the same format of evaluating your predictions, and summarizing the elements of the story in the appropriate sections for setting, problem, and solution).

Characters - blue moose, Mr. Breton, townspeople
Setting - woods, restaurant
Problem - Mr. Breton wants to know that people like his cooking, but no one ever tells him that they like it.
Solution - The Blue Moose gets people to tell him that they think Mr. Breton’s food is wonderful.

In the centre of the story-frame, we can summarize the three main events in the story, or the beginning, middle, and end of the story. What should I put beside number 1?

1) Mr. Breton wishes someone would say something about his good cooking.
2) The moose works for Mr. Breton and gets the customers to tell Mr. Bretons that they like his cooking. Lots of people come.
3) Moose leaves to see his uncle, but he says he will be back in a week.

I think we’re all ready to answer some questions about the story now, because we’ve listened to the story, and I’ve made some good notes on my story-frame that will help me remember the story. Story-frames are good tools that we can use when we read a story to help us remember the important elements of the story, like the characters, setting, problem, solution, and the main events. I will be able to think about all the information I wrote down as I’m answering the questions. I’m going to put my story-frame away now.

I’m going to hand out the questions, and I’m going to read the questions aloud, just so everyone is clear about what they say. Some of the questions are multiple-choice. You can answer them by making a mark in the bubble beside the answer you think is best. Some questions need you to write down your answer. I’ll give you a few minutes after I read out all the questions, so that you can think about your answers and write down everything you need to. I want you to do the best you can to answer the questions.
Spelling and grammar don’t count, it’s your ideas that are important. If you just can’t remember some parts of the story, or can’t answer some of the questions, just go on to the next question. Have you got any questions before we start?

(Read the questions aloud to the class, and invite the student answer the questions to the best of their ability. The teacher and the researcher will circulate through the room, ensuring that students are on-task and re-reading questions to students, if necessary. No assistance will be provided for answering any questions, students will simply be encouraged to “do their best”.)

(When students complete the questions, they can put the paper upside down on their desk and read a book or do some other quiet, individual activity, until everyone has finished the questions).

Thank you for your work today. Remember that everything we do together is helping us find out how students learn about and remember stories. It’s a very important question, and I’m really glad that you are helping us to answer it. I’m going to see you again tomorrow, and you’ll be watching a different story on video, and answering some questions about that story as well. Do you have any questions?

Second Group Session: Guided Practice

Today, we’re going to be doing some more reading and writing activities. Today, we’re going to watch a video where a teacher will be reading a story called “Snowshoe Trek to Otter River” (show student the cover of the story, and read the title).

At the end of the story, I’m going to ask you some questions about the story, just like we did last day. It’s important to do your best to remember the story, in order that you will be able to answer the questions.

Remember that last day, I had a large piece of paper on the board that I called a ‘story-frame’, and I used it to write down some information about the story. Today, I’m going to give each of you your own story-frame, so that you will be able to follow along and record information about this new story on your own piece of paper. Remember that any time you read a story, you can use a story-frame to help you to understand what is happening in the story, and to help you remember all of the important elements in the story. Doing this will help you to remember the story we are going to look at today.

We said before that one way we can help ourselves to remember a story is to start thinking about is even BEFORE we read or listen to the story. We can do this by making predictions about the story, or by making good guesses about what the story is going to be about.

Where should we start to put our predictions about the story. (Accept students’
responses, and restate that the outermost shaded region is where initial predictions about
the story should be recorded. We have four major sections where we can record our
predictions about characters, the setting, the problem, and possible solutions to the
problem in the story.

Let’s see what predictions we can make first. Where do I get ideas to start to make
predictions? (From the cover and title of the book).

Where should we start to make our predictions about the story? (Accept students’
responses). Okay, first, let’s look at the section that says “characters”. By looking at the
title and the cover of the book, I can make some predictions about what characters might
be in the story. (Accept some students’ predictions, and record these in the appropriate
section. Continue to prompt students to give verbal responses to make predictions about
the story’s setting, problem, and possible solution. Write all predictions in the
appropriate spaces around the margins of the story-frame. Ensure that students are
recording the information in their own story-frames, by circulating through the classroom.
When the prediction areas are complete, begin the video).

BEGIN THE VIDEO
PAUSE halfway through the video.

Now what should we do when we have a chance to pause in our reading of the story?
(Ask students for suggestions). Yes, we should check our predictions, and add to them, if
possible, by thinking about what we have learned in the first part of the story. Remember
that if we pause and think about the story, and look at how our correct our predictions are
so far, it will help us to remember information in the story when it comes time to answer
the questions.

Let’s look at the predictions we’ve made so far. Is there anything we should change
about our predictions? Is there anything we want to add to our predictions? (Accept
students’ responses, and model both changing (crossing out), adding, and keeping
(following through with an arrow) predictions using the middle section of the story-
frame. (Encourage students to make changes on their own story-frames.) Remind
students, “We still don’t know if all of our predictions are correct or not, so we’ll have to
wait until the ending of the story to find out.”

Okay, now we’ve thought a little bit about the story, and checked our predictions, and
made some changes. These are all things that good readers do, and things that can help us
remember the story better. It always helps us to understand stories better when we pause
and think a little bit about what we are reading. Now I think we’re ready to go on to the
rest of the story.

AFTER THE VIDEO:

Now, we get to look at the story-frame and see how close our predictions were to the real
story. We’re going to summarize what happened in the centre part of the story-frame. Where should we start? (Accept and follow through on students’ suggestions, e.g., “Okay, let’s start with characters. We thought that there would be a _________ (name the predicted character) in the story. What did we find out by listening to the whole story? Were we right? Do we have to add any characters or delete any characters?”) (In the centre of the story-frame, record the characters who actually appeared in the story. Prompt students to follow the same format of evaluating the predictions, and summarizing the elements of the story in the appropriate sections for setting, problem, and solution).

What do the numbers stand for in the centre of the story-frame? (In the centre of the story-frame, we can summarize the three main events in the story, or the beginning, middle, and end of the story.) What should I put beside number 1? (Prompt and guide students to provide the critical information to complete the story-frame).

I think we’re all ready to answer some questions about the story now, because we’ve listened to the story, and we’ve completed our story-frame. We made predictions about the story before we read, while we were reading (when we paused the video), and then we summarized the story, and checked our predictions at the end of the story. Using the story-frame will help us remember the story. You will be able to think about all the information you wrote down as you are answering the questions. Make sure your name is on the story-frame, and I’m going to collect it, and I’m going to put mine away too.

I’m going to hand out the questions, and I’m going to read the questions aloud, just so everyone is clear about what they say. Some of the questions are multiple-choice. You can answer them by making a mark in the bubble beside the answer you think is best. Some questions need you to write down your answer. I’ll give you a few minutes after I read out all the questions, so that you can think about your answers and write down everything you need to. I want you to do the best you can to answer the questions. Spelling and grammar don’t count, it’s your ideas that are important. If you just can’t remember some parts of the story, or can’t answer some of the questions, just go on to the next question. Have you got any questions before we start?

(Read the questions aloud to the class, and invite the student answer the questions to the best of their ability. The teacher and the researcher will circulate through the room, ensuring that students are on-task and re-reading questions to students, if necessary. No assistance will be provided for answering any questions, students will simply be encouraged to “do their best”.)

(When students complete the questions, they can put the paper upside down on their desk and read a book or do some other quiet, individual activity, until everyone has finished the questions).

Thank you for your work today. Remember that everything we do together is helping us find out how students learn about and remember stories. It’s very important research that
you are participating in, and I’m really glad that you’re all a part of it. I’m going to see you again tomorrow, and you’ll be watching a different story on video, and using the story-frame by yourself to help you remember the story. Do you have any questions?

**Group Session Three: Independent Practice**

Today, we’re going to be doing some more reading and writing activities. Do you remember what we used last day to help us remember the story? (If necessary, prompt the child to remember making predictions, using the story-frame, and summarizing the story afterward, again using the story-frame).

Today, we’re going to watch a video where a teacher will be reading a story called “Fanny Flora’s Kittens” (show student the cover of the story, and read the title).

At the end of the story, I’m going to ask you some questions about the story, just like we did last day. It’s important to do your best to remember the story, in order that you will be able to answer the questions.

We just said that one way that we can help ourselves to remember a story is to start thinking about it even BEFORE we read or listen to the story. We can do this by making predictions about the story, or by making good guesses about what the story is going to be about.

Remember the last two days, we have been using our ‘story-frames’ to record our information about the story. Today, I’m going to give each of you a story-frame, just like the one we used last day. Last day, I wrote down the information on the story-frame on the board to show you how it was used. Today, it’s going to be your job to record information on the story-frame. I want to see how well you can use your story-frame to record your information about the story.

Do you remember what we do first? (Prompt the children, if necessary, to remember that around the outside of the story-frame, there is a shaded region, and that is where we make our predictions about the story).

I am going to give you five minutes to complete the first layer of the story-frame. (Show the students the cover and title of the book. The teacher and researcher will circulate around the classroom to ensure that students are on-task, and to ensure that all of the predictions are being placed in the appropriate spaces around the margins of the story-frame. When the students have completed all the prediction areas, or after approximately 5 minutes, begin the video).

**BEGIN THE VIDEO**

**PAUSE** halfway through the video.
Now I’m going to pause the video for two minutes, and you can work on your own story-frames. Remember to look at the predictions you made, and use the centre portion of the story-frame to record any new predictions, or to make changes to predictions that you already made. Remember that working on these story-frames will help you to be thinking about the story, and will help you to better remember the information in the story.

(After two minutes) Okay, now I think we’re ready to watch the rest of this story.

AFTER THE VIDEO:

Now, we’ve finished the story. It’s time to think about what we did the last two days when we’ve finished the story. In order to help us remember the story, there are some more things that we can do. Do you remember what we should do next? (Prompt children if necessary). That’s right, we get to look at the story-frame and see how close our predictions were to the real story. We’re going to summarize what happened in the centre part of the story-frame. You have five minutes now to work on your story-frame. This is quiet time to work by yourself, and think about the story that we just finished. After five minutes, I’m going to be collecting your story-frames, and handing out the questions to answer about this story.

I’m going to collect your story-frames now. Please make sure your names are on them.

I’m going to hand out the questions, and I’m going to read the questions aloud, just so everyone is clear about what they say. Some of the questions are multiple-choice. You can answer them by making a mark in the bubble beside the answer you think is best. Some questions need you to write down your answer. I’ll give you a few minutes after I read out all the questions, so that you can think about your answers and write down everything you need to. I want you to do the best you can to answer the questions. Spelling and grammar don’t count, it’s your ideas that are important. If you just can’t remember some parts of the story, or can’t answer some of the questions, just go on to the next question. Have you got any questions before we start?

(Read the questions aloud to the class, and invite the student answer the questions to the best of their ability. The teacher and the researcher will circulate through the room, ensuring that students are on-task and re-reading questions to students, if necessary. No assistance will be provided for answering any questions, students will simply be encouraged to “do their best”.)

(When students complete the questions, they can put the paper upside down on their desk and read a book or do some other quiet, independent activity, until everyone has finished the questions).

Thank you for your work today. Remember that everything we do together is helping us find out how students learn about and remember stories. It’s very important research that you are participating in, and I’m really glad that you’re all a part of it.
Next week, I'm going to be visiting with each of you individually, and I'll be asking you some questions about the story you saw today. Do you have any questions?

**Individual Follow-Up Session One: Oral Retelling**  
(Same format for students in both conditions. See previous instructions for Individual Follow-Up Session One).

**Delayed Comprehension Test One (In-Class)**

(Same as previous instructions stated for the Notepad Condition).

**Individual Follow-Up Session Two: Oral Retelling**  
(See previous instructions for Individual Follow-Up Session One).

**Delayed Comprehension Test Two (In-Class)**

(Same as previous instructions stated for the Notepad Condition).

**Individual Follow-Up Session Three: Oral Retelling**
(See previous instructions for Individual Follow-Up Session One).

Delayed Comprehension Test Three (In-Class)

(Same as previous instructions stated for the Notepad Condition).

**WHOLE-CLASS SESSION: Independent Reading**

(As previously explained in this Appendix D, students receive instruction as a whole group for this session).

**Individual Follow-Up Session Four: Oral Retelling**

(See previous instructions for Individual Follow-Up Session Four)

Delayed Comprehension Test Four (In-Class)

(Same as previous instructions stated for the Notepad Condition)
Reading:

OVERALL EXPECTATIONS:
By the end of Grade 4, students will:

- read a variety of fiction materials for different purposes
- read independently, using a variety of reading strategies
- state their interpretation of a written work, using evidence from the work and from their own knowledge and experience
- use conventions of written materials to help them understand and use the materials

Specific Expectations:
By the end of Grade 4, students will:

Reasoning and Critical Thinking:
- identify the main idea in a piece of writing, and provide supporting details
- identify and describe elements of stories (e.g., plot, central idea, characters, setting)
- make predictions while reading a narrative piece on the basis of evidence

Understanding of Form and Style
- identify various forms of writing and describe their main characteristics
- use their knowledge of the organization and characteristics of different forms of writing to understand and use content

Oral and Visual Communication: Grade 4

OVERALL EXPECTATIONS:
By the end of Grade 4, students will:

- communicate a main idea about a topic and describe a short sequence of events
- demonstrate the ability to concentrate by identifying main points and staying on topic
Appendix F

Key Points Protocol: Marking Guideline for Oral Retellings

Story One: “Blue Moose”

- Mr. Breton had a restaurant
- Everyday people came to eat his clam chowder
- Mr. Breton wished they would say that his food was delicious/tell him that he was a good cook
- One day, Mr. Breton saw a blue moose in the yard
- The moose asked to come in and get warm
- Mr. Breton gave him many bowls of clam chowder
- The moose said it was the best clam chowder he had ever had
- Mr. Breton blushed (he was very happy to hear that it was the best chowder the moose ever had)
- People from the town came and were surprised to see the moose
- The moose took them to a table and served them clam chowder
- The people told the moose the food was the best they’d ever eaten
- The moose told Mr. Breton
- Mr. Breton rushed outside on the porch to ask them himself
- The people said they had always thought he was the best cook in the world
- In town, everyone was talking about the moose
- Lots of people came to Mr. Breton’s restaurant just to see the moose
- Mr. Breton was very busy, but very happy
- In the spring, the moose was moody
- Moose announced he would be leaving
- Mr. Breton said he would miss the moose
- Mr. Breton said he was the best friend he had
- The moose said he was visiting his uncle
- He would be back at the end of the week
- He wasn’t leaving because he didn’t like the cold or the food in the wild

Story Two: “Snowshoe Trek to Otter River”

- In the early morning, Daniel checks his supplies and packs himself a lunch
- He put on warm layers of clothes because it was very cold
- He set out for a day of snow-shoeing
- It was very quiet
- Daniel saw a lot of animals (deer, rabbit tracks, birds)
- He came to Otter River and looked for a good place to cross
- He took off his snowshoes
- He tested the ice by jumping on it
- When he was almost at the far shore, he heard a loud crack
He began to sink into the water
Each time he reached for the ice it broke away
He grabbed his axe out of the sack and chopped his way through the ice to shore
His clothes froze when he got out of the water
He broke some dead branches off a tree and started a fire
He took off all his clothes and hung them over the fire
He wanted to cry. He wanted to go home. He was too cold.
He went in his sleeping bag and fell asleep
When he woke up, his clothes were dry and he got dressed
He made his lunch (cooked his eggs and bacon, ate his bread and butter)
He headed for home
He crossed the river very carefully this time
It was getting dark and he had to travel quickly
He saw the light up ahead and knew he was home

Story Three: "Fanny Flora's Kitten"

Fanny Flora Floogle wanted a kitten
They wrote a letter to Grandmother to ask for a kitten
Grandmother said the kitten would arrive by train the next day
Mr. Floogle had to meet the train anyway to get a tiger for the zoo
Mr. Floogle got equipment (whip, gun, chair) to take to meet the tiger
Mr. Floogle waited at the train station
Mr. Floogle and the baggageman got two crates off the train
Mr. Floogle looked into the first crate and saw a striped kitten
He did not look into the crate that had the tiger
Mr. Floogle drove home and delivered the kitten
They opened the crate and out came the large kitten with black stripes and green eyes
The dog, Snitkin, hid under the table
The whole family went to deliver the tiger to the zoo
They opened the crate and out came a tiny kitten
The Floogle's kitten was very hungry
The kitten growled
The zooman came to the door
Mr. Floogle said he hadn't read the tags on the crates because he didn't have his glasses
They packed the tiger away in a crate for the zooman to take. The zooman brought the kitten out of his coat pocked. (They traded kittens)
The zooman promised not to tell the neighbours about their 'large kitten' that had stayed with them.
Story Four: “The Shape in the Harbor”

- It was an early morning in July
- Art Hatch was working on his boat in the harbor
- He saw a seagull scream and fly away, but he didn’t see the shape in the water
- Toni went to ask her cousin Cal to go for a swim
- Cal didn’t know if they should go swimming, because the Coast Guard had posted shark warnings the day before
- Toni said they could swim in the harbor at the diving board beach
- They rode their bikes to the beach
- Part way there, Toni stopped because she saw something big and grey in the water
- Neither Toni nor Cal could see anything, so they kept going
- No one was there except Art Hatch and his friend (Time Carter) on the boat
- Cal got on the diving board
- Toni saw a crab in the water and followed it out on the dock
- She saw a shadow in the water
- Cal dove into the water
- Toni saw a fin and yelled to Cal, “It’s a shark!”
- Cal couldn’t hear above the noise of the boat
- The shark was attracted by the splashing. It turned and swam towards Cal.
- Toni ran to the diving board and screamed and waved and pointed
- Finally, Toni saw the shark
- He saw the diving board not far in front of him
- He kicked as hard as he could out of the water and hung onto the diving board
- The shark swam underneath
- Toni threw stones at the shark but it wouldn’t leave
- She called to Mr. Hatch to help
- Art Hatch (the man) jumped into his dinghy at the back of his boat and rowed towards them
- He lost an oar
- Art hit the water with the oar to get the shark’s attention
- He told Cal to let go of the diving board and swim to the ladder fast
- Cal got out of the water and Art got back to the boat
- They both stood looking at the water for a long time
Appendix G

Blank Story-Frame

Title: ____________________________

Author: ____________________________

Events

1. __________

2. __________

3. __________

Solution

Setting

Problem

Problem

Character

Character

Character

Character

Solution

Setting

Solution

Setting
Appendix I

Observer’s Checklist

Session One: Modelling the Strategic Tool

<table>
<thead>
<tr>
<th>INTRO</th>
</tr>
</thead>
<tbody>
<tr>
<td>We’re going to be doing some reading and writing activities together</td>
</tr>
<tr>
<td>The story we’re going to be looking at today is a Grade 4 story,</td>
</tr>
<tr>
<td>called “Blue Moose” (show picture and title of story)</td>
</tr>
<tr>
<td>At the end of the story, you will be answering some questions</td>
</tr>
<tr>
<td>It’s important you do your best to remember as much as possible, so</td>
</tr>
<tr>
<td>that you can answer some of the questions</td>
</tr>
<tr>
<td>On the board, I have a piece of paper called the notepad/story-frame</td>
</tr>
<tr>
<td>I’m going to show you how we can use the notepad/story-frame to help</td>
</tr>
<tr>
<td>understand and remember stories we read.</td>
</tr>
<tr>
<td>I’m going to be modelling how we can use the notepad/story-frame.</td>
</tr>
<tr>
<td>Today, I don’t need people to answer the questions I’m going to asking</td>
</tr>
<tr>
<td>myself.</td>
</tr>
<tr>
<td>I’m doing a “think-aloud” to show you what you should be thinking about when you use a notepad/story-frame.</td>
</tr>
<tr>
<td>Next day (Tomorrow), you will have your own notpads/story-frames.</td>
</tr>
<tr>
<td>Even before we read a story, we can do some thinking about the story that will help us to understand and remember it better</td>
</tr>
<tr>
<td>(Notes around outside edge of story-frame/notepad)</td>
</tr>
<tr>
<td><strong>AFTER THE VIDEO IS PAUSED:</strong></td>
</tr>
<tr>
<td>Now I have a little bit of information about the story, so we can look at the notes/predictions we have made on our notepad/story-frame, and see if we need to make any changes, or if we can add anything.</td>
</tr>
<tr>
<td>It helps us to understand stories better when we pause and think about what we are reading.</td>
</tr>
<tr>
<td><strong>AFTER THE VIDEO:</strong></td>
</tr>
<tr>
<td>We’re going to make some (final notes/summarize) in the centre of our</td>
</tr>
</tbody>
</table>
(notepad/story-frame)

I think we are ready to answer some questions about the story now.

I will be able to think about all the information I wrote down (on my notepad/story-frame) as I’m answering the questions

Instructions for questions

Session Two: Guided Practice

INTRO

We’re going to be doing some reading and writing activities together

At the end of the story, you’ll be answering some questions

What is this piece of paper on the board called? (story-frame/notepad)

Anytime we read a story, we can use the (notepad/story-frame) to help us understand and remember the story

We can think about the story even BEFORE we read it/listen to it

Where should I look for ideas? (Title/picture)

AFTER THE VIDEO IS PAUSED:

What should we do when we have a chance to pause?
(look at our notepad/story-frame and see if there is anything we need to change or add)

Thinking about the story (and checking our predictions/adding information to our story-frame/notepad will help us to remember the story better.

AFTER THE VIDEO:

We’re going to make some (final notes/summarize) in the centre of our (notepad/story-frame)

You will be able to think about the information on your sheet (notepad/story-frame) as you answer the questions

1 minute to look over your paper

Instructions for questions
Appendix J

Marking Schemes for Description of Tool Use and Tool Elements

Description of Tool Use & Sequence of Use

3 = complete and accurate description
-describes using three different sections, filling in some of the tool before, during and after the story
(making changes to ideas, adding new ideas as you get more information)

includes idea of:
1. making predictions or guesses as to what the story will be about
2. listening to the story (until about halfway, until the pause)
3. writing down some more information about the story
4. listening until the end of the story
5. completing the centre section

2 = partial and accurate description
-shows recall of having different sections to complete
OR
-idea of filling in information before, during and after story

e.g., “I made predictions at the beginning, during the story at the middle, and then at the end. We wrote all the events that happened at the end.”
(idea of three sections, but not a clear description of when to fill them in)

1 = undetailed partial and accurate description
-only one aspect of tool use may be accurately recalled
(e.g., “We guessed what the story was about” = 1 mark)

0 = inaccurate description or no description of how to use the tool

Description of Tool Elements

3 = complete and accurate description
Requires four of the five following elements:

<table>
<thead>
<tr>
<th>STORY-FRAME</th>
<th>NOTEPAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. characters</td>
<td>1. title</td>
</tr>
<tr>
<td>2. setting</td>
<td>2. what the story would be about</td>
</tr>
<tr>
<td>3. problem</td>
<td>3. whether I’ll like the story or not</td>
</tr>
<tr>
<td>4. solution</td>
<td>4. the type of story it is (e.g., adventure story)</td>
</tr>
<tr>
<td>5. events</td>
<td>5. what makes us think about the story (e.g., ‘thought-bubbles’, drawing pictures)</td>
</tr>
</tbody>
</table>
2 = partial and accurate description
   - two or more of the above elements
1 = undetailed partial and accurate description
   - only mentions one of the above elements
0 = inaccurate and/or incomplete description
   - identifies no correct elements or elements which were not examined
Appendix K

Cued Recall Rubric Marking Scheme

Session One: Modelling the Strategic Tools
"Blue Moose"

Characters
Excellent - 3 marks
- Blue Moose, Mr. Breton, the customers
  (Correct names, all mentioned)

Good - 2 marks
- Blue Moose, Mr. (Idea of the old man, chef, man who owns the restaurant)
  but incorrect name
  the customers

Poor - 1 mark
- 1 or more characters missing (the moose/the chef/the customers)
- one or more not mentioned at all. (And at least one character correctly mentioned)

Very Poor - 0 marks
- no characters mentioned or only ones who were not in the story

Setting
Excellent - 3 marks
ALL 3 of:
- in the restaurant
- in the woods
- wintertime/snow mentioned (i.e., snowshoeing mentioned is acceptable)

Good - 2 marks
- 2 of the above mentioned

Poor - 1 mark
- at least one of the above mentioned, may identify restaurant as “the man’s house”

Very Poor - 0 marks
- no setting mentioned or setting that was not true to the story

Problem
Excellent - 3 marks
- Mr. Breton was unhappy no one complimented his cooking.
  (E.g., No one ever said that his clam chowder was good)

Good - 2 marks
- no one ever commented on Mr. Breton’s cooking (missing idea of how Mr. Breton felt -
  he was unhappy or he wished that people would say something about his cooking)

Poor - 1 mark
- only refers to secondary problems (e.g., Mr. Breton was lonely, the moose was cold)
Very Poor - 0 marks
-no problem identified, problem that is unrelated to the story
(E.g., “The moose couldn’t fit in the door of the cabin so Mr. Breton had to renovate”)

Solution
Excellent - 3 marks
The moose loved Mr. Breton’s cooking, (or one of #2 answers below)
AND he got the townspeople to tell Mr. Breton they loved it too.

Good - 2 marks
The Moose said Mr. Breton’s cooking was good and made Mr. Breton happy
The moose stayed because he loved Mr. Breton’s cooking

Poor - 1 mark
-only a solution to a secondary problem mentioned (e.g., the moose warmed up)
-correct to the story but vague (e.g., “The moose stayed” with no reason why)

Very Poor - 0 marks
-no solution to any problem identified

Events
Excellent - 3 marks
-clear progression of beginning, middle, end following story sequence
Beginning - One day, a blue moose comes to Mr. Breton’s.
Middle - Many townspeople come to see the moose, and they compliment Mr. Breton on his cooking.
Ending - The moose is leaving for a few days to visit his uncle, but he will be back to stay with Mr. Breton.

NOTE: All of the specific ideas in each of the above sections (beginning, middle, ending) are not needed to receive credit for understanding what happened in these sections of the story. We are not penalizing for missing words, etc. We are looking that they have three events that happened at the beginning, middle, and ending of the story and that they are in the correct sequence.

Good - 2 marks
-follows story sequence, but missing one of the three ‘key’ events above (e.g., at the beginning, the moose couldn’t fit inside the door) OR
-identifies the three key events, but not in the correct order

Poor - 1 mark
-missing at least one complete part of the story
(unable to identify one or more of the three key events)

Very Poor - 0 marks
-no clear pattern of beginning, middle, end
(Incorrect sequence)
Session Two: Guided Practice

"Snowshoe Trek to Otter River"

Characters
Excellent - 3 marks
- Daniel, his mother
  (Need with correct names, all mentioned)

Good - 2 marks
- the boy (idea of boy as main character, but incorrect name)
  AND – the boy’s mother

Poor - 1 mark
- 1 or more characters missing
- one or more not mentioned at all. (And at least one character correctly mentioned)
  e.g., “The boy...I can’t remember his name”

Very Poor - 0 marks
- no characters mentioned or only ones who were not in the story

Setting
Excellent - 3 marks
ALL 4 of:
- in the farmhouse (Daniel’s home)
- in the woods/swamp/fields
- wintertime/snow mentioned
- in or around Otter River (campground)

Good - 2 marks
- 2 or 3 of the above mentioned

Poor - 1 mark
- at least one of the above mentioned

Very Poor - 0 marks
- no setting mentioned or setting that was not true to the story

Problem
Excellent - 3 marks
- Daniel falls through the ice (on Otter River)
  AND
- he starts to freeze/his clothes are frozen (idea that he would die if he couldn’t get warm)

Good - 2 marks
- Daniel falls through the ice (on Otter River)
BUT missing idea of Daniel's life being in danger or of Daniel being very cold

**Poor - 1 mark**
- only refers to a secondary problem (e.g., on the way home, it was getting dark)

**Very Poor - 0 marks**
- no problem identified, problem that is unrelated to the story

**Solution**

**Excellent - 3 marks**
- he used his axe/hatchet to chop through the ice to get to shore
  AND
  - at least one idea of how he warmed up (e.g., building a fire, taking off his wet clothes)

**Good - 2 marks**
- he used his axe/hatchet ('tool' acceptable to chop through the ice to get to shore
  (No mention of warming up, preventing himself from freezing to death)

**Poor - 1 mark**
- only a solution to a secondary problem mentioned (e.g., he saw the light at the window and knew he was home)
  - correct to the story but vague (e.g., "He warmed up" – with no description of how)

**Very Poor - 0 marks**
- no solution to any problem identified

**Events**

**Excellent - 3 marks**
- clear progression of beginning, middle, end following story sequence
  **Beginning** – Daniel checks his gear and sets out for a day’s snowshoe trek
  **Middle** – the ice cracks, Daniel falls through the ice on Otter River
  **Ending** – Daniel finds his way home (e.g., sees the light in his window)

**Good - 2 marks**
- follows story sequence, but missing one of the three ‘key’ events above (may identify another part for the beginning, middle or end that is less central to the essential part of the story) OR
  - identifies the three key events, but not in the correct order

**Poor - 1 mark**
- missing at least one complete part of the story
  (unable to identify one or more of the three key events)

**Very Poor - 0 marks**
- no clear pattern of beginning, middle, end (incorrect sequence)
  - unable to correctly identify key components of the story
Session Three: Independent Practice
“Fanny Flora’s Kitten”

Characters
Excellent - 3 marks
-Fanny (Flora Floogle), Mr. Floogle, the zooman/zookeeper
(Need correct names, all mentioned)
AND at least one of:
-Mrs. Floogle, Amos (the brother), the tiger kitten, the kitten

Good - 2 marks
-Fanny, idea of dad/father (but incorrect name), the zooman/zookeeper
-may have one or more of: Mrs. Floogle, Amos, the tiger kitten, the kitten

Poor - 1 mark
-1 or more major characters missing (Fanny/Mr. Floogle/zooman)
-And at least one character correctly mentioned

Very Poor - 0 marks
-no characters mentioned or only ones who were not in the story

Setting
Excellent - 3 marks
ALL 3 of:
-in the (Floogle’s) house
-at the train station
-at the zoo

Good - 2 marks
-2 of the above mentioned

Poor - 1 mark
-one of the above mentioned

Very Poor - 0 marks
-no setting mentioned or setting that was not true to the story

Problem
Excellent - 3 marks
-Mr. Floogle brings home a tiger kitten (the Floogles get a tiger kitten)
AND
-the real tiger is taken to the zoo (the zookeeper has the kitten)

Good - 2 marks
-idea of the mix-up, but all characters/places are not mentioned
(e.g., “Mr. Floogle switched the cat tiger and the cat around.”)

Poor - 1 mark
-one of the two main ideas needed for an ‘excellent’ answer, OR
-just refers to a secondary problem (e.g., that the kitten ate so much)
Very Poor - 0 marks
- no problem identified, problem that is unrelated to the story

Solution

Excellent - 3 marks
- the zooman brings the Floogles their kitten
  AND
- the zooman takes away the read tiger to the zoo
  (idea of mutual exchange)

Good - 2 marks
- idea of the exchange, without the characters/places begin mentioned
  (e.g., “They switched the cat and tiger around”)

Poor - 1 mark
- only a solution to a secondary problem mentioned
  (e.g., Mr. Floogle read in the kitchen when he couldn’t read on his chair), OR
- correct to the story but vague (e.g., “They unswitch the cats”)

Very Poor - 0 marks
- no solution to any problem identified

Events

Excellent - 3 marks
- clear progression of beginning, middle, end following story sequence
  Beginning – Fanny wants a kitten; the Floogles write to Grandmother Floogle to ask her to send a kitten
  Middle – The new kitten is acting very strange (he growls, eats a lot)
  Ending – The zooman brings the Floogles their kitten and takes away the tiger kitten

Good - 2 marks
- follows story sequence, but missing one of the three ‘key’ events above (may identify another part for the beginning, middle or end that is less central to the essential part of the story) OR
- identifies the three key events, but not in the correct order

Poor - 1 mark
- missing at least one complete part of the story
  (unable to identify one or more of the three key events)

Very Poor - 0 marks
- no clear pattern of beginning, middle, end (incorrect sequence)
- unable to correctly identify key components of the story
Session Four: Independent Reading

“The Shape in the Harbour”

CHARACTERS
Excellent - 3 marks
- Cal, Toni, Art Hatch (Correct names, all mentioned)
  may/may not have idea of Tim Carter

Good - 2 marks
- Cal, Toni (idea of a boy and a girl acceptable)
  - idea of two men in the boat (Art Hatch and Tim Carter)
    but incorrect name

Poor - 1 mark
- 1 or more characters missing - one or more not
  (And at least one character correctly mentioned)

Very Poor - 0 marks
- no characters mentioned or only ones who were not in the story

SETTING
Excellent - 3 marks
ALL 3 of:
- in the harbour/beach (“on/around the diving board” acceptable)
- in the summer (July) and/or in the morning
  - on a boat
  - at Cal’s house

Good - 2 marks
- two of the above mentioned

Poor - 1 mark
- one of the above mentioned

Very Poor - 0 marks
- no setting mentioned or setting that was not true to the story

PROBLEM
Excellent - 3 marks
- a shark is in the harbour where Cal is swimming
  AND
  - Cal couldn’t get out of the water at the shore/ladder
    (i.e., the shark was underneath the diving board where Cal was hanging)

Good - 2 marks
- a shark is in the harbour where Cal is swimming
  OR
  - a shark was coming after Cal in the harbour/water (was under the diving board)
Poor - 1 mark
- just refers to a secondary problem (i.e., Art didn’t see the shark in the water) or only vaguely related e.g., “the shark was there”

Very Poor - 0 marks
- no problem identified, problem that is unrelated to the story

SOLUTION
Excellent - 3 marks
- Art Hatch (the man from the boat) distracts the shark’s attention from Cal (by hitting the water with his oar).
  AND
- Cal is able to swim to the shore/to the ladder

Good - 2 marks
- 1 of the above ideas

Poor - 1 mark
- only a solution to a secondary problem mentioned (e.g., Art heard Toni yell)
  - or correct to story but vague (e.g., “he got out of the water”)

Very Poor - 0 marks
- no solution to any problem identified

EVENTS
Excellent - 3 marks
- clear progression of beginning, middle, end following story sequence
  Beginning - Art is on his boat, and does not notice the shark in the water.
    Toni got Cal to go to the beach. (They rode their bikes to the beach)
  Middle - Toni sees the shark in the water and yells at Cal.
  Ending - Art attracts the shark’s attention and Cal is able to swim to safety.
    They all stare at the water.

Good - 2 marks
- follows story sequence, but missing one of the three ‘key’ events above (may identify another part for the beginning, middle or end that is less central to the essential part of the story) OR
- identifies the three key events, but not in the correct order

Poor - 1 mark
- missing at least one complete part of the story
  (unable to identify one or more of the three key events)

Very Poor - 0 marks
- no clear pattern of beginning, middle, end (incorrect sequence)
  - unable to correctly identify key components of the story