This report describes a program for introducing students to strategies for improving their comprehension of non-fiction materials. The targeted population consisted of students of one third grade class in a small, middle class suburb, northwest of a large, midwestern city. Difficulty reading and comprehending non-fiction material was documented through data gathered on classroom assessments and teacher observation. Analysis of probable cause data revealed that students spent significantly less time interacting with non-fiction texts than with fiction texts and had fewer non-fiction materials available to them. The researchers noted that non-fiction is often perceived as being more difficult for elementary students to comprehend, and that strategies for reading and comprehending non-fiction materials are not consistently taught. Review of current literature supported these observations and pointed out that primary students have limited experience with expository texts. A review of solution strategies suggested by researchers, combined with an analysis of the problem setting, resulted in the selection of five interventions: more time spent with non-fiction, paired reading of fiction and non-fiction texts, graphic organizers to help students organize and synthesize information from the text, direct instruction of Collaborative Reading Strategies (CSR), and literature discussions using cooperative groups. A comparison of the results of both pretests to their corresponding posttests showed a marked improvement in student scores. Observations in the researchers' journals indicated a change in the way that the students approached non-fiction. The researchers concluded that the interventions did result in a positive change in students' comprehension of non-fiction. Appendixes contain a rubric for scoring open-ended items on holistic assessment, a consent letter, "clunk" cards, question "stems," and a description for cooperative group roles for CSR. (Contains 34 references and 6 figures of data.) (Author/RS)
STRATEGIES FOR IMPROVING NON-FICTION READING COMPREHENSION

Karen Bell
Amy Caspari

An Action Research Project Submitted to the Graduate Faculty of the School of Education in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Teaching and Leadership

Saint Xavier University & Skylight Professional Development Field-Based Masters Program
Chicago, Illinoios
May 2002
ABSTRACT

This report describes a program for introducing students to strategies for improving their comprehension of non-fiction materials. The targeted population consisted of students of one third grade class in a small, middle class suburb, northwest of a large, midwestern city. Difficulty reading and comprehending non-fiction material was documented through data gathered on classroom assessments and teacher observation.

Analysis of probable cause data revealed that students spent significantly less time interacting with non-fiction texts than with fiction texts and had fewer non-fiction materials available to them. The researchers noted that non-fiction is often perceived as being more difficult for elementary students to comprehend, and that strategies for reading and comprehending non-fiction materials are not consistently taught. Review of current literature supported these observations and pointed out that primary students have limited experience with expository texts.

A review of solution strategies suggested by researchers, combined with an analysis of the problem setting, resulted in the selection of five interventions: more time spent with non-fiction, paired reading of fiction and non-fiction texts, graphic organizers to help students organize and synthesize information from the text, direct instruction of Collaborative Reading Strategies (CSR), and literature discussions using cooperative groups.

A comparison of the results of both pretests to their corresponding posttests showed a marked improvement in student scores. Observations in the researchers' journals indicated a change in the way that the students approached non-fiction. The researchers concluded that the interventions did result in a positive change in students' comprehension of non-fiction.
This project was approved by

[Signatures]

Dean, School of Education
This project is dedicated to our families for their support,
and to the colleagues and students who helped us complete our study.
TABLE OF CONTENTS

CHAPTER 1 - PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem
Local or School Context
Community Context
Regional and National Context

CHAPTER 2 - PROBLEM DOCUMENTATION

Problem Evidence
Probable Causes

CHAPTER 3 - THE SOLUTION STRATEGY

Literature Review
Project Objectives and Processes
Project Action Plan
Methods of Assessment

CHAPTER 4 - PROJECT RESULTS

Historical Description of the Intervention
Presentation and Analysis of Results
Conclusions and Recommendations

REFERENCES

APPENDICES

Appendix A - Rubric for scoring open-ended items on holistic assessment
Appendix B - Consent letter
Appendix C - Clunk cards
Appendix D - Question stems for “Wrap Up”
Appendix E - Cooperative group roles for CSR
CHAPTER ONE
PROBLEM STATEMENT AND CONTEXT

General Statement of Problem

The students of one third grade class have difficulty independently reading and comprehending non-fiction material. Evidence of this problem is demonstrated on classroom assessments and through teacher observations.

Local or School Context

School A

School A is an elementary building which includes grades three to five. School A currently has five to six sections per grade level. School A houses two intermediate self-contained learning disability/behavior disorder (ld/bd) classrooms.

School A, as it is structured today, began in 1959, and has undergone several renovations. Included in these renovations were a new learning resource center and computer lab with thirty Macintosh computers. School A also has twelve iBooks available for student use, a minimum of two computers per classroom, and is completely Internet accessible.

District

School A is located in an elementary district with grades K-8 in attendance. There are a total of 1,623 students: 84% White, 1.4% Black, 6.8% Hispanic, 0.1% Native American, and 7.8% Asian/Pacific Islander enrolled in the district. Low income students make up 4% of the district population, and 7.7% have limited English proficiency. The district has a 95.8% attendance rate and no chronic truancy rate. There is a 7.7% rate of mobility (School Report Card, 2001).

There are 117 teachers in the district, including classroom teachers and specialty personnel. Ninety-nine and one tenth percent of the faculty are White, 0% are Black, Hispanic, or Native American, and 0.9% are Asian/Pacific Islander. Female
teachers make up 85.5% of the faculty, and male teachers make up 14.5%. The average teaching experience is 14 years. Thirty-four and one tenth percent of the teachers have Bachelor's degrees and 65.9% have Master's degrees or beyond. The average teacher salary is $49,464, while the average administrator salary is $99,590.

There are four schools within the district. The average class size is 21.8 students. There are four buildings: School A, a K-2 building, a K-5 building, and a middle school which houses grades 6-8. Based on the data in the 2001 Illinois School Report Card, the average instructional expenditure per pupil is $4706. This is $281 more than the state average.

Various educational services and programs are currently being used in School A. Curriculum committees comprised of teachers and administrators work to align the curriculum to state and national standards. Curriculum materials are evaluated regularly and kept current. Students at all grade levels participate in character education. In order to help students apply what they have learned, incentives and consequences are set up to support the program. A peer mediation program is also used to assist students in making appropriate behavior choices.

The district literacy committee recently adopted the Harcourt literacy program (Farr & Strickland, 1999), which is used throughout the district. This program is comprised of a basal reader, as well as a grammar and language component, and is supported by a variety of trade books. The Accelerated Reader program (Advantage Learning Systems, Inc., 2000) is used in grades three through eight to enhance independent reading. Regular library classes are scheduled so all children have access to the materials in the learning resource center. In 1997, in response to parent concern about poor spelling performance, the district adopted the Scholastic spelling program (Moats & Foorman, 1998). It involves weekly spelling pretest and posttests and workbook practice. Each week the lessons follow grammatical or phonetic
patterns. Science and social studies are also both recently adopted programs which were selected based on state and national standards. The Harcourt Brace social studies program (Boehm et al., 1997) is text-based. The Harcourt science program (Frank et al., 2000) involves hands-on investigations which are supported by text. Both are vocabulary intensive.

There are several programs in place in the district to assist students with special needs. Title I services are available to students in kindergarten through third grade who are significantly below grade level in reading. Ld/bd resource teachers are employed full time at each school in the district to service students who qualify for special education services. Each building has a full-time speech and language teacher to assist students with an identified speech or language issue. The Transitional Program of Instruction (TPI) is available for students for whom English is the second language. TPI teachers are employed at each building to work with students individually, in small groups, or in the classroom as needed, as well as to assist teachers in modifying the curriculum.

A part-time reading coordinator and a full-time reading specialist provide additional reading support for at-risk students across the district who do not qualify for Title I, Ld/bd, speech and language, or TPI services, as well as enrichment for gifted students. The reading coordinator and reading specialist also serve as resources to classroom teachers in the area of literacy. Title I, Ld/bd resource, TPI, reading support, and speech services are delivered both in the classroom and on a pullout basis.

One gifted education coordinator leads a team of teacher specialists in reading, math, science, and technology. They join classroom teachers to work with students who have been identified through standardized testing and teacher recommendations as being eligible for gifted services. This service provides gifted students with enriched activities to extend their learning in the regular classroom.
Community Context

Located in a middle class suburb northwest of a large midwestern city, the small residential community has a population of 15,239. Students from portions of three other surrounding suburbs also attend school in the district. The average income per household in the school district is approximately $41,500 (Pat a Glance, 2000). The district is located in an area which has a very low tax base due to lack of industry. It is mainly a residential community. Due to this financial dilemma and a recent tax cap, an attempt at a referendum was made a year ago and failed. Another attempt at passing a referendum is currently in progress. The success of this referendum could significantly impact the financial future of the district.

Regional and National Context

It is widely known that by age nine, school children are asked to read and derive meaning from more content area material than in previous years (Spor & Schneider, 1999). The emphasis shifts in third grade from learning to read to reading to learn. Instruction based on textbooks goes on the assumption that students can comprehend non-fiction material (Bryant, Ugel, & Thompson, 1999). If students are going to be successful in the Information Age, they need greater familiarity with non-fiction materials. While teachers are using trade books more frequently, the literature of choice is still most often storybooks (Moss, Leone, & Dipillo, 1997). As a result, students have more exposure to, and practice with, fiction materials than they have with non-fiction materials. This is particularly true in the early grades, where the emphasis is almost exclusively on story, giving students limited exposure with other text forms (Pappas, 1991).

Reading non-fiction passages is very different than reading fiction. According to Yopp and Yopp (2000), narrative reading involves the understanding of a basic story format: setting, characters, and plot. In contrast, non-fiction reading makes use of many
different text structures including: compare/contrast, problem/solution, main idea/supporting detail, cause/effect, classification, persuasion/argument, sequence, and description (Sinatra, 1992). Based on considerable research in non-fiction reading, in order for children to succeed in comprehending this material, organizational strategies must be incorporated into instruction. Researchers have been successful in implementing a variety of strategies. Pre-reading activities, such as K-W-L (what I know, what I want to learn, and what I learned) (Ogle, 1986), access previous knowledge, set purposes for reading, and provide a source of motivation. During reading, activities such as the use of a contrast chart (Yopp & Yopp, 2000) are used to increase comprehension, focus students' attention, and encourage efferent or aesthetic responses to the text. Post-reading activities, such as having the students develop an alphabet book on the topic, allow students to reflect upon what they learned from the text and to make connections with their previous experiences, which help facilitate understanding.

Despite research findings supporting the success of taught strategies for non-fiction reading comprehension, there is an ongoing concern about the lack of time spent on direct instruction in non-fiction. Today's students need to be prepared for success in a society where information is changing rapidly. It is the job of educators to equip students with strategies to access and synthesize that information.
CHAPTER TWO

PROBLEM DOCUMENTATION

Problem Evidence

In order to document the extent of third grade students' difficulty comprehending non-fiction material, performance on end-of-selection quizzes and holistic assessments from the Harcourt Brace Signatures literacy series (Farr & Strickland, 1999) adopted by the district were used. In September, students were given an end-of-selection quiz on a non-fiction selection studied in class, as well as a holistic assessment on a non-fiction passage not previously studied in class. A rubric was developed to analyze students' open-ended written responses on the holistic assessment (Appendix A). A summary of students' scores on these pretests is presented in Figures 1, 2, and 3. This established a baseline of their ability to read and comprehend non-fiction text at the beginning of third grade.

Figure 1: Performance on end-of-selection pretest
Figure 2: Performance on holistic assessment pretest

Figure 3: Performance on open-ended question pretest
Of the 16 students involved in the study, half scored 80% or below on the end-of-selection pretest. The students scored an average of 86.25% overall. On the holistic assessment, 12 scored 80% or below. The student average on the holistic assessment was 68.125% overall. Finally, on the open-ended question on the holistic assessment, one student scored a zero points, six students scored one point, and nine students scored two points according to the rubric (Appendix A).

This data is particularly significant because the end-of-selection quiz followed a week's study on the non-fiction passage. Together the class read the selection aloud, received vocabulary instruction, and participated in comprehension activities. In contrast, the non-fiction passage in the holistic assessment was read independently by each student with no direct instruction or follow-up prior to the test. This brings to light the researchers' concern that children in the middle elementary grades have difficulty independently reading and comprehending non-fiction material.

Probable Causes

Literature-Based

The literature suggests several probable causes for student difficulty comprehending non-fiction material. According to Duke (2000), the amount of time children in the primary grades spend interacting with non-fiction material is significantly less than the time they spend with fiction. In this study, a mean of 3.6 minutes a day was spent on informational reading in twenty selected first grade classrooms. The importance of sharing informational texts with young children on a regular basis was cited by Yopp and Yopp (2000), and it was also noted by these researchers that "Children need greater familiarity with non-fiction if they are going to be successful in the Information Age" (p. 410). The need for specific taught strategies for comprehending non-fiction material was cited by Spor and Schneider (1999). They stated, "In addition to knowledge of text and text features, students need to learn an
array of processes and strategies for comprehending and producing texts" (p. 222). They further went on to define strategies as practiced, but flexible, ways of responding to texts. In addition, Vacca and Vacca, Richardson and Morgan, and Alverman and Phelps (as cited in Spor & Schneider, 1999), emphasize that reading for content knowledge requires different strategies than reading narrative text.

Site-Based

Interviews with classroom teachers and itinerant school personnel conducted the year prior to this study supported the evidence of the problem with non-fiction reading comprehension. The researchers found that adults who work closely with third grade students on a daily basis observed that the students have more difficulty reading and understanding non-fiction passages. The researchers also noted that there was significantly less non-fiction material than fiction material available to students in classrooms and in libraries, and that the majority of books selected for teacher read-alouds were fiction.

Based on student surveys administered the year prior to this study, third grade students indicated a preference for books that told a story as opposed to books that gave information. They also reported that they most often visited the fiction section when in the library. When students were asked to name their favorite book, the majority named a fictional title. It was also noted by the researchers that students indicated that they found non-fiction more challenging to comprehend.

It was noted by the district reading coordinator (based on Illinois Standards Achievement Test scores) that students in the district demonstrated difficulty responding to open-ended questions, particularly when the selection was an informational passage. This was true for responses to non-fiction reading passages as well as responses to open-ended questions in the math test. It was her observation that students had trouble picking out key information necessary to answer these types
of questions.

The researchers also concluded, based on these interviews and on their observations, that there were no comprehension strategies being directly taught on a consistent basis. This was of particular interest to the researchers because of the overwhelming correlation cited in the literature they studied between direct instruction of specific taught strategies and improvement in reading comprehension of non-fiction material.
CHAPTER THREE
THE SOLUTION STRATEGY

Literature Review

A review of literature reveals that much attention has been given to students' ability to read and comprehend non-fiction reading materials. The importance of this skill becomes particularly evident once students reach third grade. At this stage of their education, the transition is made from learning how to read to reading to learn or to gather information. It is vital that teachers are prepared to give students the necessary support to ensure their success as independent learners. Teacher awareness and training are essential pieces of the solution. Pre-service as well as in-service training must provide teachers with the strategies they need to effectively teach students how to read and comprehend textbooks and other non-fiction materials (Masten, Stacks, & Priest, 1999).

The literature shows that part of the solution lies in early intervention, beginning in the primary grades. Several studies document that very young students are curious about the world and interested in learning facts (Yopp & Yopp, 2000). Yopp and Yopp indicate that their research shows that this early ability to learn and understand non-fiction material will fade if teachers and parents provide young children only with stories. They advocate the classroom use of non-fiction materials as read-alouds, as companions to a narrative story on a related topic, as supplemental material to content area textbook reading, as the basis for reading instruction, and as available materials for independent reading periods.

Duke (2000), in examining the nature and degree of experiences with non-fiction text provided to students at the first grade level, found that "...a stronger, more comprehensive approach to increasing attention to informational text in the early grades is needed" (p. 221). Duke recommends that non-fiction text be more
prominently displayed and more readily available in the primary classroom, and that significant time should be allotted toward reading and writing in this genre. Specifically, Duke concludes that teachers should be trained in successfully incorporating non-fiction into their classrooms at all levels, parents should be encouraged to provide non-fiction materials to their children, local school districts should be directed through curricular mandates to adopt reading series which incorporate a substantial amount of non-fiction text, and budgets for non-fiction reading materials should be increased to make them more readily available in schools.

Kays and Duke (1998) suggest several strategies for involving younger students in reading non-fiction materials. In addition to reading non-fiction to students and having an abundant supply of non-fiction materials readily available for students to read independently, they advocate using informational materials in the following ways: on tape at listening centers, in home reading programs, as part of learning centers, as models during writer's workshops, as the subject of author studies, and as part of theme- or project-based learning.

As students make the transition from reading a story to reading for information, McMackin (1998) recommends using narrative picture books as a basis for teaching expository text structure. The use of a more familiar narrative structure can ease the transition to understanding the informational text format. Continual pairing of fiction and non-fiction materials can contribute to students' interest and comprehension, as well as providing them with a broad knowledge base as they read (Camp, 2000). For example, if the students are reading the story, Stellaluna (Cannon, 1993), their enjoyment and overall depth of comprehension of this narrative text can be enhanced by reading a non-fiction selection about bats, and vice versa.
Before expecting students to independently read informational texts, teachers must provide the necessary support to allow them to be successful in this experience. Bryant, Ugel, and Thompson (1999) found that students "...need assistance in content-area reading to integrate new information with their prior knowledge, to remember what they have read, and to obtain important information from the text" (p. 300). They outline several strategies for direct instruction which implement teacher modeling and student application of skills in content area reading and focus on three important components: word identification, vocabulary, and comprehension.

Making students active participants in the text is another solution for the problem of comprehending non-fiction materials. Hurst (2001) defines basic elements of instruction that should be incorporated into each content area lesson plan in order to ensure attention, basics, and comprehension, "the ABC's of lesson planning," of the material (p. 692). Using these guidelines, teachers first get the students' attention by making connections to previous knowledge or directing students' thinking through the use of anticipation guides. Next, the teacher presents the basics through a mini-lesson which presents the idea, models it, provides practice for the students, and applies it in an authentic situation. The most important element of Hurst's "ABC's of lesson planning" is a culminating activity which enhances comprehension by actively engaging students with the content in order to secure in their minds what they have learned.

Short, Kane, and Peeling (2000) also advocate a revamping of the traditional reading lesson to include direct instruction in a small group setting. In their study, struggling third grade readers were successfully given small group reading instruction focusing on three components: re-reading familiar texts, shared and guided reading, and shared and guided writing. The researchers found this intervention to be successful as it allowed instructors to closely observe students and give them
instruction in specific strategies explicit to their individual needs.

Reading programs benefit from comprehension strategy instruction, which is currently infrequently provided. Experts suggest that students are most successful when taught a few reading comprehension strategies very well as opposed to being taught several different strategies (Vaughn & Klingner, 1999). Further benefit is achieved when the same strategies taught are implemented consistently from year to year.

Many researchers suggest the use of graphic organizers to help students synthesize information obtained from informational texts. Sinatra (2000) cites graphic organizers as an effective tool for mapping concepts before, during, and after reading. The purpose of the graphic organizers is to help readers of all levels transfer ideas they have read about into a visual display, aiding their comprehension and retention of the concepts and the structure of the informational text. Masten et al. (1999) also support the use of graphic organizers in inclusive classrooms as a textbook comprehension improvement strategy. Charts such as KWL and KWLQ (what I know, what I want to know, what I learned, and questions) are examples of how graphic organizers can be used to help students better manipulate content read in science texts, as well as in other content areas (Schmidt, 1999).

Another method for improving non-fiction reading comprehension is the use of literature discussions within small groups of students (Beck & McKeown, 1999). Jewell and Pratt (1999) describe how children can be taught to discuss the text on a thoughtful level, interacting with one another to share their insights and extend their individual understanding to incorporate the insights of their peers. Literature discussions can be initially facilitated by the teacher who models the process until the students are ready to lead the discussions on their own in cooperative groups (Vaughn & Klingner, 1999c).
Vaughn and Klingner (1999c) have developed a step by step process for improving non-fiction reading comprehension which incorporates many of the above interventions. Collaborative strategic reading (CSR) is an instructional approach specifically designed for use in content area reading which can be used with any type of informational text. CSR includes four reading comprehension strategies: (a) Preview (previewing and predicting); (b) Click and Clunk (self-monitoring for understanding and vocabulary knowledge); (c) Get the Gist (identifying main idea); and (d) Wrap-up (self-questioning and summarizing). CSR is first presented through direct instruction by the teacher, using modeling, role playing, and teacher think-alouds. Once the students are proficient with the strategies, the teacher facilitates CSR in heterogeneous cooperative groups, with the students performing specific roles. As the students collaborate through these four steps, they use CSR logs and graphic organizers to synthesize information and also participate in literature discussions.

CSR has been used successfully with students in both regular education and special education classrooms (Klingner & Vaughn, 1999a). These researchers have taught CSR to numerous teachers in the past several years. The teachers report that CSR provides a framework for direct instruction of a few important reading strategies, as well as the benefit of allowing the students to apply those strategies independently in cooperative groups once they have learned how to use them, freeing the teacher to monitor and facilitate individual and group progress. They value CSR as a tool for assisting students in self-monitoring their comprehension and improving their vocabulary, and report that CSR has had a positive impact on students' scores on achievement tests (Klingner & Vaughn, 1999b).

Project Objective and Processes

As a result of teaching strategies to improve comprehension of non-fiction reading materials, during the period of September, 2001 to December, 2001, students
in the targeted third grade class will demonstrate improvement in comprehension of non-fiction passages as measured by end-of-selection tests and holistic assessments.

In order to accomplish the project objective, the following processes are necessary and will be incorporated into literacy, science, and social studies instruction:

1. Exposure of students to non-fiction material will be increased.
2. Reading of fiction texts will be paired with reading of related non-fiction texts.
3. Graphic organizers will be used to help students synthesize and organize information from non-fiction texts.
4. Direct instruction of strategies for comprehending non-fiction material, Collaborative Strategic Reading (CSR), will be provided to students.
5. Literature discussions will be modeled and facilitated among small groups of students.
6. As one of the researchers is a reading specialist, the students and the other researcher, who is a classroom teacher, will have the added support of a reading specialist to assist the classroom teacher in obtaining materials, in the direct instruction of CSR, and in the facilitation of cooperative groups.

Project Action Plan

The overall environment in the classroom will play a large part in the action plan. The teachers' goal will be to prominently display and have a wide variety of non-fiction materials available to students. In addition to having more non-fiction materials available, the teacher will regularly include non-fiction selections for read-alouds, as well as pair fictional literature with related non-fiction. The teacher will also work with the learning center director and reading specialist to have non-fiction materials displayed and regularly introduced during weekly library class.
Another component of the action plan will be direct instruction in the classroom by the teacher and the reading specialist using Collaborative Strategic Reading (CSR) (Vaughn & Klingner, 1999). This is a systematic approach that incorporates four research-supported reading comprehension strategies that are designed to be used effectively with expository texts. The four steps are: (a) Preview--motivating interest, activating prior knowledge, generating predictions; (b) Click and Clunk--self-monitoring comprehension, reflecting; (c) Get the Gist--identifying main idea, summarizing; (d) Wrap-up--recalling, reviewing and discussing what you learned.

**Week of August 27**

Objective: Obtain parental consent to use student data for research

Procedures:
- Hand out consent forms (Appendix B)

**Week of September 5**

Objective: Obtain baseline data on children's comprehension of non-fiction

Procedures:
- Give holistic pretest, "Shoo, Sheep" (Farr & Strickland, 1999)

**Week of September 10 (Three 45 minute literacy classes)**

Objective: Obtain baseline data on children's comprehension of non-fiction

Procedures:
- Read the non-fiction selection, "Wolves" (Farr & Strickland, 1999)
- Discuss and do related activities
- Give "Wolves" end-of-selection pretest
- Consent forms due September 10 (Appendix B)

**Week of September 17 (Three 45 minute literacy classes)**

Objective: Introduce Preview
Procedures:
° Have students use their reading log to brainstorm and write everything you know about living things you would find in your backyard
° Share ideas
° Look at titles, pictures, and headings in the story and think about what we might learn
° Write or draw your ideas in your reading log
° Read the selection, "Nature's Great Balancing Act: In Our Own Backyard" (Farr & Strickland, 1999)

Week of September 24 (Three 45 minute literacy classes)
Objective: Introduce Click and Clunk (monitoring for understanding and vocabulary knowledge)

Procedures:
° Review Preview using "All Eyes on the Pond" (Farr & Strickland, 1999)
° Introduce meaning of Click and Clunk
° Model writing clunks on chart paper as you begin reading "All Eyes on the Pond"
° Continue reading as a group
° Stop periodically and ask students to record any clunks in their reading log
° Have students share their clunks and discuss meanings

Week of October 1 (One 45 minute read aloud session)
Objective: Review of Preview and Click and Clunk

Procedures:
° Read aloud All About Alligators (Arnosky, 1994)
° Practice using taught strategies as a group, with students recording predictions and clunks in their reading logs.
Week of October 8 (Three 45 minute literacy classes)

Objective: Introduce *de-clunking* strategies

Procedures:
- Review *Preview* using *Koko's Kitten* (Patterson, 1985)
- Introduce some sample methods for *de-clunking* (Appendix C)
- Begin reading *Koko's Kitten* and stop periodically to record and discuss *clunks*
- Have students choose two *de-clunking* methods and try them with a partner

Week of October 15 (Two 50 minute science classes)

Objective: Introduce *Get the Gist* (main idea) and use of web on Inspiration software (Inspiration Software, Inc., 1988-99)

Procedures:
- Continue using *Preview* and *Click and Clunk*
- Review science lesson (Frank et al., 2000) using *Preview* and *Click and Clunk*
- Introduce *Get the Gist* as a whole group activity using Inspiration software

Week of October 22 (Two 50 minute science classes)

Objective: Introduce *Wrap-up* (self-questioning/literature discussions)

Procedures:
- Continue using previously taught steps of CSR from science unit and have students complete *Get the Gist* on Inspiration software (Inspiration Software, Inc., 1988-99) with a partner
- Use stems (Appendix D) to model questioning process for *Wrap-up*

Week of October 29 (Two 50 minute science classes)

Objective: Teacher-facilitated practice with all four steps of CSR

Procedures:
- Read non-fiction trade book *Dolphin Adventure: A True Story* (Grover, 1990)
• Review all four steps

Week of November 5 (Two 45 minute literacy classes)

Objective: Teacher facilitated practice with CSR

Procedures:
• Practice CSR strategies using newspaper articles involving current events

Week of November 12 (Three 45 minute literacy classes)

Objective: CSR in cooperative groups

Procedures:
• Introduce roles for CSR cooperative groups (Appendix E)
• Facilitate cooperative groups as they work through the CSR process using the literacy selection, “Sleeping and Dreaming” (Farr & Strickland, 1999)

Week of November 19 (Two 50 minute social studies classes)

Objective: CSR in cooperative groups

Procedures:
• Unit review using CSR in cooperative groups to jigsaw social studies unit on communities (Boehm et al., 1997)

Week of November 26 (Three 45 minute literacy classes)

Objective: CSR in cooperative groups

Procedures:
• Continued social studies unit review in cooperative groups.

Week of December 3 (Three 45 minute literacy classes)

Objective: To gather data to determine success of interventions on children’s comprehension of non-fiction

Procedures:
• Read the selection, “Jerry Pinkney, Achiever of Dreams” (Farr & Strickland, 1999)
Give “Jerry Pinkney, Achiever of Dreams” end-of-selection posttest

Week of December 10 (One 45 minute literacy class)

Objective: To gather data to determine success of interventions on children’s comprehension of non-fiction

Procedures:

- Give “Whiskers at Work” holistic posttest (Farr & Strickland, 1999)

Methods of Assessment

In order to assess the effects of the intervention, the researchers will use appropriate end-of-selection quizzes and holistic assessments published by Harcourt Brace in their Signatures reading series (Farr & Strickland, 1999). An end-of-selection quiz given in September will be compared with a similar end-of-selection quiz given in December following the interventions. The same process will be followed to compare a non-fiction holistic assessment given in September to a similar holistic assessment given in December. These assessments will be used as pretests and posttests in this study. In addition, journals of the researchers’ observations of the students’ progress will be kept throughout the intervention period.
CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

The objective of this project was to improve comprehension of non-fiction reading in a targeted third grade classroom, taught by one of the researchers. In order to accomplish this goal, the researchers increased the students' exposure to non-fiction and implemented a direct teaching strategy, Collaborative Strategic Reading (CSR) (Vaughn & Klingner, 1999).

Exposure to non-fiction reading was increased by making more non-fiction books available, displaying them prominently in the classroom, using more non-fiction books as read alouds, and pairing fiction with related non-fiction. In addition to these changes in the classroom environment, the librarian was asked to introduce and promote non-fiction books. These interventions in the classroom environment and the library increased the time students spent interacting with non-fiction throughout the research period.

CSR was initially taught directly by the other researcher, who is a reading specialist in the district. Each of the four specific steps was taught as a separate lesson. The classroom teacher then used it as a regular part of literacy instruction and in the content areas. The terminology used in the CSR strategies became familiar to the students and was heard regularly in the classroom.

Due to scheduling and curriculum, some minor changes were made in the original action plan. Because it was more relevant to the curriculum, the researchers substituted an article about George Washington Carver for an activity using newspaper articles. Originally, more time was scheduled for direct instruction with CSR in content area textbooks. The researchers observed students using the taught
strategies on their own, and did not see the need for further direct instruction.

When reflecting upon the direct instruction of reading strategies, the researchers found that the students responded well to the structure of CSR and readily applied it to their daily non-fiction reading. Phrases such as "I've got a Clunk" or "Should we Preview before we begin reading?" were heard frequently in the classroom. The Get the Gist stage was easily understood by students using organizational tools such as webbing and the Inspiration software.

The Wrap-up stage was the one that the researchers found to be the most thought-provoking to the third graders. This stage focused on skills such as having students respond to questions that require higher level thinking skills. This skill was reinforced by asking the students to generate similar questions. The researchers found that these types of activities got the students involved with the text in a more meaningful way.

Teaching the students to reflect on a personal level was an element of this intervention that the researchers did not originally anticipate. Students had to be taught to make personal connections to the text. This was done by first using teacher-created reflection stems, with the researchers modeling possible responses. After several exposures to this process, the students were better able to respond reflectively. Their ability to reflect was also demonstrated in their daily writing journals. The following is an example from one student's journal: "If I were the baby dolphin in Dolphin Adventure, I would be thinking...I would feel mad, I want to get the hook out right now, I can’t wait, I wish this never happened and I just want to go home."

The researchers found this intervention to be very age appropriate to third grade. CSR provided a framework for comprehending textbook material, which is introduced for the first time in third grade. The classroom teacher found that CSR lent itself well to introducing, teaching, and reviewing, all steps necessary in learning new
concepts and vocabulary in the content areas. Limiting the strategies to four steps made CSR manageable.

The researchers observed that CSR was the most effective when each step was taught separately, carefully modeled, and reinforced. This observation was made when one of the researchers prepared a Powerpoint presentation to introduce CSR to other third, fourth, and fifth grade classes. These presentations were made in one hour sessions. Each classroom teacher was then responsible for implementing the CSR strategies into his or her regular instruction. Teacher feedback indicated that there was a distinct advantage to extending the time spent introducing and securing each stage.

Presentation and Analysis of Results

In order to assess the effects of direct instruction and increased exposure to non-fiction material on students’ comprehension, two pretests and two posttests were given. The tests that were used to measure students’ comprehension were components of the district adopted literacy series (Farr, 1999). A comparison of the students’ performance on the pretests and posttests is presented in Figures 4, 5, and 6.

![Comparison of performance on end-of-selection pretest and posttest](image)

Figure 4: Comparison of performance on end-of-selection pretest and posttest
Figure 5: Comparison of performance on holistic assessment pretest and posttest

Figure 6: Performance on comparison of performance on open-ended question pretest and posttest
The intervention appears to have had a positive effect on students' comprehension of non-fiction. A comparison of the results of both pretests to their corresponding posttests shows an increase in student scores.

On the end-of-selection posttest, 4 of the 16 students scored 80% or below. This was an increase over the pretest, on which 12 students scored 80% or below. There was also improvement noted on the overall average percent correct. On the posttest, students averaged 91.25% as compared to the pretest average of 86.25%.

The students' results on the holistic assessment also indicated growth in their comprehension. On the holistic assessment posttest, 10 students scored 80% or below. This showed improvement over the pretest, on which 12 scored 80% or below. On the posttest, students averaged 82.5% as compared to the pretest average of 68.125%. No students scored below 60% on the posttest, whereas 4 students scored below 60% on the pretest.

The open-ended portion of the holistic assessment posttest showed the least amount of improvement from the pretest. On the posttest, 11 students scored 2 points, 4 students scored 1 point, and 1 student scored 0 points. On the pretest, 9 students scored 2 points, 6 students scored 1 point, and 1 student scored 0 points. These data represent a slight improvement in students' responses. The researchers observed that CSR was most effective on improving comprehension of factual information and that responding to open-ended questions required additional direct instruction.

During the analysis of the pretest and posttest scores presented in Figures 4, 5, and 6, the researchers made additional observations about the success of CSR as an intervention. When evaluating how CSR is taught most effectively in the classroom, the researchers found that reading activities that included material being read aloud and discussed with students following the CSR steps resulted in greater comprehension. This was reflected in the increased posttest scores for the end-of-selection tests, which
were used to assess students’ comprehension of material that was read and analyzed as a group.

The researchers noted that third grade was the first time that students were asked to read and respond to non-fiction independently. Independent reading and comprehension of non-fiction was a skill that was not fully developed in third grade. The interventions in this study did bring about some encouraging positive results, as was shown in the increase in students’ scores on the holistic assessment posttest. The researchers predict that the students will continue to improve in their comprehension of non-fiction as they are given more experiences in the upper grades which require independent reading.

Conclusions and Recommendations

Based on the presentation and analysis of the data on the effect of the direct reading strategy, CSR, on students’ comprehension of non-fiction, the students showed a marked improvement.

The end of selection posttest demonstrated significant improvement. The researchers concluded that this was because the material on which the students were tested was that which was read as a class or listened to on tape. Considerable class time was also spent with these non-fiction selections, going through each stage of CSR and analyzing the story. During the course of the study, students in the targeted third grade class began to use CSR on their own.

Based on the students’ scores on the holistic assessment posttest, the researchers concluded that the direct instruction of CSR improved independent comprehension of non-fiction. The researchers observed the students using the taught steps of CSR independently as they read. When the students were taking the holistic assessment posttest, it was noted that they skimmed the text, (Preview), highlighted unfamiliar words (Click and Clunk) and were better able to respond to the question,
"This passage is mostly about..." (Get the Gist).

Performance on the open ended question posttest demonstrated the least significant improvement. The researchers found that responding to a passage in a written format, where the answers are not presented in a multiple choice format, was a skill that required additional direct instruction.

The researchers concluded that increased exposure to non-fiction and the direct instruction of the strategies in CSR did result in a positive change in students' comprehension of non-fiction. Observations in the researchers' journals indicated a change in the way that the students approached non-fiction. It was observed that students were more comfortable with non-fiction and more readily chose non-fiction books for recreational reading.

Both researchers stated that they will continue to use CSR in the classroom. The value of focusing on a few strategies (in the case of CSR, four specific strategies) proved to be effective for third graders. The recommendation of the researchers is that CSR be taught one stage at a time with ample time allotted to practice each stage before introducing the next.

Based on the successful implementation of CSR in the targeted classroom, the researchers plan to expand its use to other third grade classrooms in the school district. This will be accomplished by the reading specialist scheduling four to five instructional sessions in the classrooms of interested colleagues. During these sessions, the reading specialist will gradually introduce CSR as recommended, reinforcing the use of each step before moving on to the next. In order for CSR to be most successful in other classrooms, the researchers believe it will be necessary to provide inservice to classroom teachers.

State reading assessments are given in the spring of third grade. The researchers plan to analyze students' scores on non-fiction passages, comparing the
scores of the students in the targeted class to other third grade students in the district. This information should assist the researchers in determining how much of the students’ growth was developmental and how much was due to the interventions in this study.

In addition to recommending CSR to third grade teachers, the researchers also recommend that primary teachers give their students more exposure to non-fiction materials. This should be carried through in the intermediate grades as well. The researchers have written a summer work proposal to assist their colleagues in this process. This will include the development of a list of read alouds which pair fiction and non-fiction books, as well as the development of a list of non-fiction books at varying reading levels that correlate to the district curriculum. Upon completion, these lists will be made available to the teachers in the district.

Finally, the researchers came upon an additional instructional need as a result of their observations. A plan has been made to address the need for direct instruction on how to write extended responses to open-ended questions. This plan includes the use of a student friendly rubric to assist students in responding appropriately to these types of questions using information from the text and connecting it to their own prior knowledge.
References


APPENDICES
# Appendix A

RUBRIC FOR SCORING OPEN-ENDED ITEMS ON HOLISTIC ASSESSMENT

<table>
<thead>
<tr>
<th>Name</th>
<th>Score</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>&quot;Correct Answer&quot;</th>
<th>&quot;Partially Correct Answer&quot;</th>
<th>&quot;Incorrect Answer&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2 points</strong></td>
<td><strong>1 point</strong></td>
<td><strong>0 points</strong></td>
</tr>
<tr>
<td>◦ Answer is correct.</td>
<td>◦ Answer is partly correct.</td>
<td>◦ Answer is incorrect.</td>
</tr>
<tr>
<td>◦ Complete information from the passage is given.</td>
<td>◦ Some information from the passage is given.</td>
<td>◦ Information doesn’t relate to passage.</td>
</tr>
<tr>
<td>◦ Answer is clear.</td>
<td>◦ Answer is mostly clear.</td>
<td>◦ Answer is unclear.</td>
</tr>
<tr>
<td>◦ All parts of the question are fully answered.</td>
<td>◦ Some parts of the question are answered.</td>
<td>◦ The question is not answered.</td>
</tr>
</tbody>
</table>
Appendix B

CONSENT LETTER

Tuesday, September 4, 2001

Dear Parent or Guardian,

We are currently enrolled in a master's degree program at Saint Xavier University. This program requires us to design and implement a project on an issue that directly affects our instruction. Because content area reading becomes such an integral part of instruction in the intermediate grades, we have chosen to examine strategies that would improve students' comprehension of non-fiction material.

We should begin by introducing Mrs. Caspari. She is a former 3rd and 4th grade teacher who has taught at both Sullivan and Eisenhower. Mrs. Caspari is currently our Reading Specialist in District .

The purpose of this project is to give students strategies to help them organize and comprehend non-fiction materials. With the increased reading in science and social studies in grades three and beyond, these strategies will help your students read for information and improve independent study skills. We will also be encouraging an increase in non-fiction reading throughout the year.

We will be conducting our project from September 2001 to December 2001. The activities related to the project will be a part of our regular classroom learning activities. This study will in no way take time away from the district adopted reading curriculum. The assessments used are taken directly from the Harcourt Brace literacy series that District uses. The strategies we will be using with your children are strategies we have studied about in researching this topic.

In order to include your student in the reporting of information for our project, we need your signed permission. All information gathered will be kept completely confidential, and information included in the report will be stated so that no individual results can be identified. No names or school locations will be used. The gathering of information for our project during these activities offers no risks of any kind to your child. The report will be used to share what we have learned as a result of this project with other professionals in the field of education.
Appendix B continued

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about your student will not be included in the report.

If you have any questions or would like further information about our project, please contact Mrs. Bell at [contact information] or e-mail her at [e-mail address]. Mrs. Caspari may be reached at [contact information] or e-mail her at [e-mail address].

If you agree to have your student participate in the project, please sign the attached statement and return it to me. We will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Karen Bell and Amy Caspari

PLEASE RETURN THE ATTACHED STATEMENT TO US BY MONDAY, SEPTEMBER 10th.
Appendix C

CLUNK CARDS

CLUNK CARD #1
Reread the sentence without the word. Think about what would make sense.

CLUNK CARD #2
Reread the sentence with the clunk and the sentences before or after the clunk looking for clues.

CLUNK CARD #3
Look for a prefix or suffix in the word that might help.

CLUNK CARD #4
Break the word apart and look for smaller words that you know.
Appendix D

QUESTION STEMS FOR “WRAP-UP”

To facilitate students' ability to generate higher-level questions, you may provide question stems, such as the following:

- How were ___ and ___ the same? Different?
- What do you think would happen if ___?
- What do you think caused ____ to happen?
- What other solution can you think of for the problem of ____?
- What might have prevented the problem of ____ from happening?
- What are the strengths (or weaknesses) of ____?
- How would you interpret ____?
- Who could have made a difference in the ending? What would they have had to do?

Other question starters:

- Begin questions with the 5 Ws and an H: who, what, when, where, why, and how.
- Pretend you are the teacher and think of questions you would ask on a test to find out if students really understood what they read.
- Every question can be made into a better question by adding the phrase, “Why do you think that?”
- Ask questions at various levels of difficulty (assign each $ amount a different colored index card):
  - $10 questions are ones where the answer is right in the text and can be provided in one or two words.
  - $20 questions are ones where the answer is right in the text but requires more than a couple of words to give.
  - $30 questions are ones where the answer is in the text, but you have to have read the text and to compose the answer yourself based on what you've read.
  - $40 questions are ones where the individual has to use his or her own previous experiences and integrate them with what they have learned from the text.
Appendix E

COOPERATIVE GROUP ROLES FOR CSR

Guidelines

- CSR works best when all group members have been assigned a meaningful task.
- Roles should be rotated regularly so all members experience each one.
- Students can perform more than one role at a time, if necessary. (* = optional roles)

Roles

**Leader**
This student leads the group in the implementation of CSR by saying what to read next and what strategy to apply next. The leader follows a script. If the group needs assistance, the leader asks the teacher as needed. *If using a group report, records Preview.

**Clunk Expert**
This student uses *Clunk* Cards to remind the group of the steps to follow when trying to figure out a difficult word or concept. *If using a group report, records Clunks.

**Announcer**
This student calls on different group members to read or share an idea. He or she makes sure everyone participates and only one person talks at a time. *If using a group report, records Wrap-up.

**Encourager**
This student watches the group interact and gives feedback. He or she looks for behaviors to praise. The student encourages all group members to participate in the discussion and assist one another. He or she evaluates how well the group has worked together and gives suggestions for improvement. *If using a group report, records praise and suggestions.

*Reporter*
During the whole-class Wrap-up, this student reports to the class the main ideas the group learned and shares a favorite question the group has generated. *If using a group report, records Gists. (This role can also be performed by the Announcer.)

*Time Keeper*
This student sets the timer for each portion of CSR and lets the group know when it is time to move on. (The teacher might do this instead of students, or the Leader could include this in his or her responsibilities.)
I. DOCUMENT IDENTIFICATION:

Title: Strategies for Improving Non Fiction Reading Comprehension

Author(s): Bell, Karen and Caspari, Amy

Corporate Source: Saint Xavier University

Publication Date: ASAP

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, Resources in Education (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 1

[ ]

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 2A

[ ]

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 2B

[ ]

Documents will be processed as indicated provided reproduction quality permits.

If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Signature: Amy Caspari
Organizational Address: Saint Xavier University
3700 W. 103rd St. Chgo, IL
Phone: 708-802-6219
Fax: 708-802-6208
E-Mail Address: Crannell1@sxu.edu
Date: William Crannell, Ed.D.
III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:

Address:

Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:

Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse: ERIC/REC
2805 E. Tenth Street
Smith Research Center, 150
Indiana University
Bloomington, IN 47408

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: info@ericfac.piccard.csc.com
WWW: http://ericfacility.org