DOCUMENT RESUME

ED 478 769 CS 512 314

AUTHOR Langford, Patricia A.; Rizzo, Sandra K.; Roth, Jean M.

TITLE Improving Student Comprehension in Content Areas through the Use of Reading Strategies.

PUB DATE 2003-05-00

NOTE 59p.; Master of Arts Action Research Project, Saint Xavier University and SkyLight Professional Development Field-Based Master's Program.

PUB TYPE Dissertations/Theses (040) -- Reports - Research (143) -- Tests/Questionnaires (160)

EDRS PRICE EDRS Price MF01/PC03 Plus Postage.

DESCRIPTORS *Academic Achievement; Action Research; *Advance Organizers; Family Characteristics; Graphic Organizers; Phonemic Awareness; Primary Education; Prior Learning; *Reading Comprehension; *Reading Improvement; *Reading Strategies; *Self Evaluation (Individuals); Vocabulary Skills

ABSTRACT

This study was an action research project designed to improve students' reading comprehension. Students in the targeted kindergarten, second, and third grade classes exhibited a lack of reading comprehension, which interfered with their academic achievement. Data was collected by student and parent surveys, observations, and document analysis. Among factors influencing students' reading comprehension were an inability to access prior knowledge, limited vocabulary, lack of phonemic awareness, and family characteristics. According to the literature, advance organizers enabled students to remember important information, and shared knowledge and social interaction aided in students' ability to construct knowledge. For this reason, the implementation of reading strategies that focuses on advance organizers and self-assessment were selected as intervention strategies. Various graphic organizers, an observation checklist, and a document analysis were incorporated into the daily curriculum in the targeted classrooms. Post-intervention data indicated an improvement in accessing prior knowledge, organizing ideas, and strengthening connections to understanding. Appendixes contain a parent survey; a student survey; an observation checklist; and a document analysis. (Contains 29 references, 3 tables, and 5 figures.) (Author/PM)

IMPROVING STUDENT COMPREHENSION IN CONTENT AREAS THROUGH THE USE OF READING STRATEGIES

Patricia A. Langford
Sandra K. Rizzo
Jean M. Roth

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

Chicago, Illinois

May 2003

ABSTRACT

This study was an action research project designed to improve students' reading comprehension. Students in the targeted kindergarten, second, and third grade classes exhibited a lack of reading comprehension, which interfered with their academic achievement. The study was conducted during September through December 2002 in one elementary school located in the Midwest and involved 160 participants (80 students, 80 adults). Data were collected by student and parent surveys, observations, and document analysis.

Among factors influencing students' reading comprehension were an inability to access prior knowledge (Bryant, Ugel & Thompson, 1999; Glazer, 2002), limited vocabulary (Bryant, Ugel & Thompson, 1999), lack of phonemic awareness (Molfese, Molfese & Modgline, 2001; Pressley & Wharton-McDonald, 1997), and family characteristics (Molfese, Molfese & Modgline, 2001). According to Bryant (1999), advanced organizers enabled students to remember important information. Maloch (2002) also observed that shared knowledge and social interaction aided in students' ability to construct knowledge. For this reason, the implementation of reading strategies that focused on advanced organizers and self-assessment were selected as intervention strategies.

A review of solution strategies discussed in the literature combined with an analysis of the problem setting resulted in the development of an action plan designed to improve reading comprehension skills. Various graphic organizers, an observation checklist (SHARP Method), and a document analysis were incorporated into the daily curriculum in the targeted classrooms.

Post intervention data indicated an improvement in accessing prior knowledge, organizing ideas, and strengthening connections to understanding through the use of graphic organizers and the SHARP method. In addition, the post intervention data indicated an increase in reading comprehension based on self-report to higher order questioning by incorporating Bloom's Taxonomy.

SIGNATURE PAGE

This project was approved by

Sheila Wright, Ph.D.

Advisor

John B. Davis

Advisor

Beverly Gulley

Dean, School of Education

ACKNOWLEDGEMENT

In our pursuit to achieve our goal of obtaining a masters degree in education, it is with great pride that we extend our sincere and heartfelt gratitude to each other, our families, and our program facilitators. We thank each other for perseverance, dedication, and laughter, all of which carried us through this remarkable endeavor. This accomplishment was truly a "combined effort." We also thank our families for their love, support, and patience throughout this amazing experience. Finally, we thank our program facilitators for their guidance and professionalism in aiding us through this journey.

TABLE OF CONTENTS

CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of Problem

The students of the targeted second and third grade classes exhibit a lack of reading comprehension, which interferes with their academic achievement. The existence of the problem includes a document analysis of class assignments and assessments, observations of students' verbal response to questions posed during class, and students' self-report of their confidence in performing tasks assigned.

Immediate Problem Context

School A strives to ensure that each student acquires the skills and knowledge necessary to succeed in becoming a productive and responsible citizen. School A is one of five elementary schools and one junior high school in a suburban community. The school is approximately a fifty-one year old structure that was remodeled and updated for technology. There are twenty classrooms, five resource rooms, and two small instructional rooms. In addition, there is a library, a computer room, a music room, an art room, and a gymnasium. According to the 2001 Illinois School Report Card, School A has a student enrollment of 449 students. The student population consists of 96% White, 0% Black, 3.3% Hispanic, 0.7% Asian/Pacific Islander, and 0.0% Native American. The percentage of low-income families is 3.1%. There is no chronic

truancy, and none of the students are limited English proficient. School A's attendance rate is 96.1% with the mobility rate at 4.8%.

The staff at School A includes one school administrator, one secretary, one office assistant, one nurse on a part-time basis, three custodial staff members, one instructional assistant, and one substitute teacher, who works full time. The faculty consists of 33 women with the average teaching experience of 13.2 years. Fifty-eight percent of the teachers hold a bachelor's degree and have completed additional studies at the graduate level, and 42% have a master's degree.

The curriculum at School A consists of reading, writing, language arts, math, social studies, and science. Each week the students have two gym classes for 40 minutes, two music classes (30 minutes), one computer class (35 minutes), one library class (60 minutes), and one art class (60 minutes). In addition, there are special services available to students in band, foreign language, and speech. Teachers are available to provide services for students in need of learning/emotionally disabled resources, as well as students in need of social work services. Furthermore, classes are available to students needing additional reading support. A gifted program is available for students exceeding grade level expectations.

School A has an active Parent Teacher Association (PTA). The organization is responsible for providing the student body with funds and programs, including informative assemblies, a First Aid program, a Book Fair, cultural art presentations, a Read Aloud program, and family nights. The PTA is a highly commendable organization and an asset to School A.

The Surrounding Community

School A is situated in a suburban community within minutes from a major metropolitan

center. The community has a mayor-village manager form of government that includes six trustees. The total population is 56,830 residents. There are 2,742 students in the school district, which is composed of 89.5% White, 1.2% Black, 7.3% Hispanic, 1.8% Asian/Pacific Islander, and 0.2% Native American. The percentage of the population classified as low income is 4.9%, and 2.1% of the students have limited English proficiency. The district has a 1.0% chronic truancy rate, an 8.3% mobility rate, and a 95.5% attendance rate. The instructional expenditure per pupil is $3,696, and the operating expenditure per pupil is $6,568.

According to the 2000 Census, the demographic characteristics of the village are as follows: The median family income is $59,676, and the median home value is $151,836.

National Context of the Problem

Reading comprehension in content areas has not only generated concern at the local level, but also at the state and national levels. Over the past 20 years, extensive research has been conducted in the area of content reading, examining strategies used by readers to comprehend expository and narrative text (Howe, Grierson, & Richmond, 1995). Through a close investigation of reading in content areas, findings indicated that one of the primary instructional concepts incorporated in classrooms is based on the schema-interactive theory. Howe, et al. refers to schema as how information stored in the mind can be integrated into knowledge with repeated use. Combining the syntactic and semantic knowledge the reader possesses with the ability to predict and confirm a hypothesis during the reading process, suffices as a definition of comprehension.

Nationwide, educators continue to search for effective reading strategies to improve comprehension. Reading proficiency increases when teachers view "content reading as 'content

communication' focusing on good teaching practices, which are designed to teach...the essential concepts of subject matter areas" (Howe, Grierson, & Richmond, 1995, p.4). It is vital that classroom teachers acquaint themselves with reading strategies, their functions, and their uses in order to enhance content literacy. "What a teacher believes about reading and learning can be translated into instructional practice which will in turn influence the way we teach children to read" (Grierson & Daniel, 1995, p. 4).

Studies indicated that primary grade teachers are implementing reading strategies. Teachers who have five years of experience or less and teachers who had enrolled in graduate course work were found to be more familiar with specific reading strategies. Reading strategies most often incorporated are questioning techniques, phonics, guided reading, journal writing, enrichment activities, and making predictions (Howe, Grierson, and & Richmond, 1995). These findings indicated that educators need to teach multiple reading strategies in all content areas beyond the general scope of strategies already practiced. "Every teacher is a teacher of reading and reading instruction must be incorporated n all subject areas" (Grierson & Daniel, 1995, p.28).

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

In order to document the existence of a weakness in reading comprehension which interfered with the students' academic growth, parents and students were surveyed, a document analysis was conducted, and anecdotal records were maintained.

In the targeted kindergarten, grade 2, and grade 3 classrooms, surveys were administered to parents and students (See Appendix A1, A2, B1, and B2) in order to gain their perceptions regarding the students' reading comprehension ability (Table 2.1). The following information resulted:

Table 2.1

Percentage and Level of Agreement Among Parents' Perceptions of Child's Reading Comprehension in Kindergarten

Areas Assessed	Agree	Disagree
Reads to daily	.79	.21
Retells, beginning, middle, and end	.86	.14
Makes connections with the text	.86	.14

(N=38)

The majority of the participants indicated that they were confident about their child's progress regarding reading comprehension skills. The majority of parents read to their child daily, believed their child was able to retell the beginning, middle, and end of a story, and that their child was capable of making meaningful connections with the text.

Table 2.2

Percentage and Level of Agreement Among Parents' Responses to Providing Support for Students' Reading Skills for Grades 2 and 3

Areas Assessed	Agree	Disagree
Reads on a daily basis	.72	.28
Identifies with the characters	.74	.26
Asks for help when confused	.84	.16

(N=38)

The responses from the targeted grades 2 and 3 parents surveyed indicated that the majority of the parents were confident that their child developed reading comprehension skills. The majority of parents surveyed agreed that their child read on a daily basis, was able to make connections with the characters of the story, and asked for help when they did not understand the story. The researchers discovered that even though the parents were certain that their child actively participated in reading activities, it appeared that the parents were not using probing strategies to check for a richer understanding of the printed material. The researchers felt that the parents were basing their child's comprehension abilities on how fluent their child read orally and how

engaged they were when being read to. However, the researchers questioned the depth of comprehension accomplished at home. Helping the child connect to prior knowledge and probing for higher level thinking contribute to a fuller richer understanding of the text.

Students from kindergarten, grade 2, and grade 3 were surveyed by their respective teachers (Appendix B1 and Appendix B2). The researchers verbally administered the surveys to the students. The students were surveyed in order for the researchers to gain insights into the students' perceptions of their reading comprehension abilities. The results, listed below indicated students' perception of reading.

Table 2.3

Percentage and Level of Kindergarten Students' Self Report to Salient Questions on Reading Comprehension Survey

Areas Assessed	Yes	No
Can visualize the story	.83	.17
Connects prior knowledge	.83	.17
Retells the story	.66	.34

(N=12)

The response from the targeted kindergarten students survey revealed that students were able to picture the story in their minds, connect to prior experiences, and students had the ability to retell the story. Based on the results of this survey, the researchers were optimistic that children at the kindergarten level were cognitively

prepared to discuss and respond to various literal reading comprehension activities as well as higher order questioning.

In contrast, an overwhelming majority (71%) of the second and third grade students reported they preferred to read silently (See Figure 2.1). A small percentage of students (18%) enjoyed reading aloud and fewer students (11%) preferred being read to by parents and teachers.

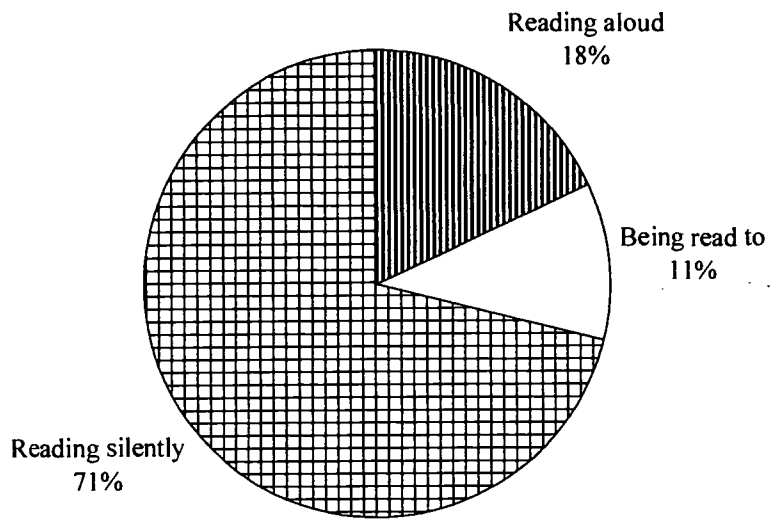

Figure 2.1 Reading preference of students in targeted grades 2 and 3 (N=38)

As noted in Figure 2.2, survey results further demonstrated that one-fifth of the students (19%) were confident in their ability to retell the plot. One-quarter of the students (26%) believed they could retell the story most of the time. However, the majority of the targeted second and third students (55%) reported a lack of confidence in retelling the story.

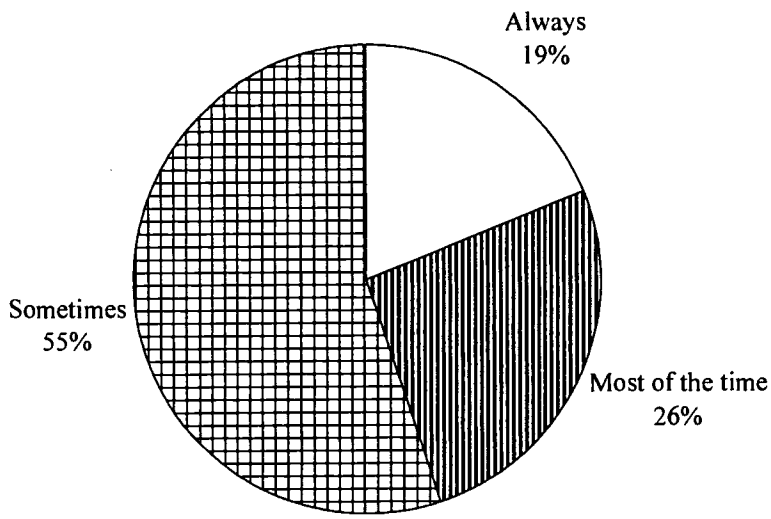

Figure 2.2 Frequency to retell plot of students in targeted grades 2 and 3 (N=38)

According to the results of the self-evaluation portion of the survey (See Figure 2.3), students responded to the appraisal of their own reading abilities. A third of the students (32%) described themselves as very good, proficient readers. Over one-half of

the students (58%) claimed to be good readers, whereas, one-tenth (10%) of the students admitted to having difficulty as a reader.

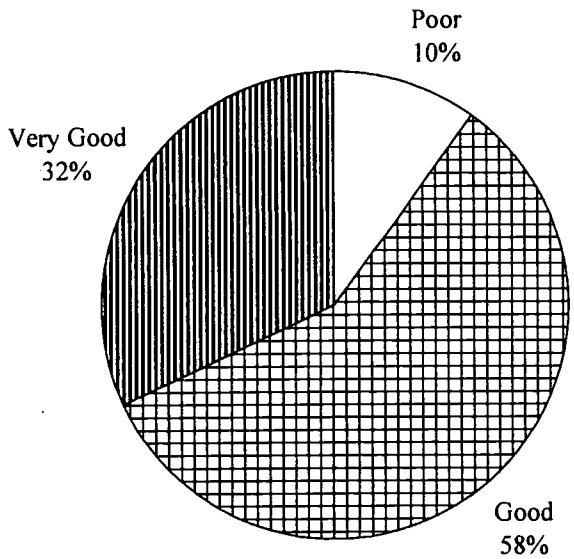

Figure 2.3 Self-evaluation as a reader of students in targeted grades 2 and 3 (N=38)

The final portion of the student survey (See Figure 2.4), questioned the students to reflect on areas of reading they found difficult and impeded with comprehension of the text. Slightly less than one-third of the students (32%) believed their reading rate is too fast and admitted that even though they can decode the words, little understanding occurs. Equal percentages of students (16%) reported having difficulty with reading too slow or with decoding written text. On the other hand, slightly over one-third of the

students (36%) admitted that when engaged in reading text, they gained little to no understanding of the material.

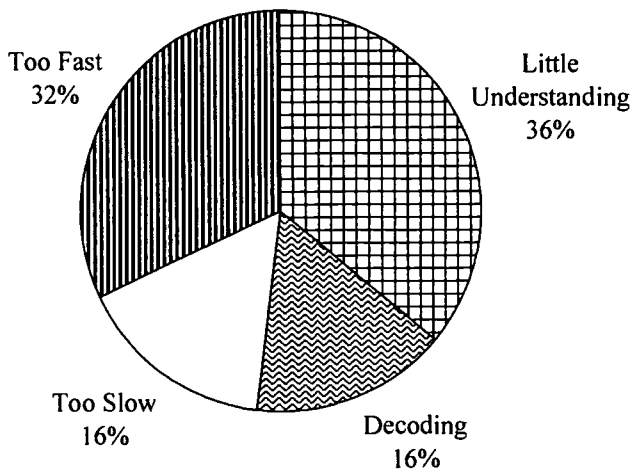

Figure 2.4 Most challenging problem of students in targeted grades 2 and 3 (N=38)

The responses from the targeted kindergarten, grade 2 and grade 3 students indicated that students had a positive perception of reading comprehension. However, the researchers questioned the results based upon observations, reading assessments, and anecdotal records. Despite the questionable results, the researchers felt encouraged that the youngsters loved reading and being read to. Therefore, the researchers deemed it crucial that educators facilitate the learning process by helping the children make

connections and stimulate higher order thinking skills. It is imperative that children be exposed to activities that will help build comprehension as well as encourage interaction with the text. These comprehension activities can promote higher level thinking skills, help students organize their ideas and information, and add joy and pleasure to the reading experience.

Probable Causes

The goal of successful reading comprehension is to facilitate the development of a variety of skills and strategies among children to improve their understanding and memory of text passages. Ensuring reading success is one of the most critical issues facing educators today. The researchers suggested several underlying causes for the lack of reading comprehension. Inability to access prior knowledge, limited vocabulary, a lack of phonemic awareness and family characteristics are four contributing factors of the inability to comprehend text.

Inability to Access Prior Knowledge

According to Bryant (1999), reading comprehension refers to the act of thinking and constructing meaning before, during and after reading by integrating information from the author with the reader's background knowledge. Students bring to the task of reading a range of experiences and prior knowledge about content-area topics. Each reader interacts with the text in different ways because of different degrees of knowledge, attitude, experience and interest. Students' ability to activate prior knowledge regarding content-area topics depend on word knowledge and experience with a wide variety of reading materials.

Pressley, Wharton-McDonald (1997) and Glazer (2000) agreed that the fewer connections to text children can make, the poorer the comprehension. If there is little connection to prior knowledge and the text, then there is risk that comprehension will be low. The more connections students can make to the topic, the more excited they will become and thus greater comprehension will take place. Hurst (2001) noted that learning is more meaningful when students are active participants. We all remember best that in which we take an active part.

Conversations help each of us find something in memory that relates to the topic. Once ideas are discovered, children are able to connect and comprehend (Glazer, 2000).

Limited Vocabulary

Limited vocabulary contributes to the lack of reading comprehension. Vocabulary knowledge is vital to comprehending text. Bryant (1999) pointed out that there are three levels of processing vocabulary knowledge. The first level is called association processing in which students link their understanding to synonymous words. The second level is called comprehension processing where students apply associative knowledge of the word. Generation processing, the third level, involves the students using their knowledge to create a novel understanding of the new word. Students who interact with words and make words their own in the comprehension and generation processing levels improve their understanding of text containing those words. To improve comprehension, students need to realize an understanding of how words can be used across different content areas and be able to understand the meaning of words quickly while reading.

Lack of Phonemic Awareness

The level of students' phonemic awareness is a contributing factor to poor reading comprehension. According to Molfese, Molfese, and Modgline (2001) phonological processing refers to the ability to discriminate phonetic contrasts and includes discrimination of speech sounds, categorical perception and the ability to segment and manipulate phonemes. Some phonological skills that are important for analyzing the sound patterns in spoken words are present at or near birth, and others develop in infancy. Children learn to segment polysyllabic words into syllables as they approach kindergarten age and monosyllabic words into phonemes around first grade. Phonological processing skills are imperative to language development and to subsequent reading abilities. Bryant (1999) agrees that the ability to identify or decode unknown words rapidly and accurately is an important prerequisite for reading fluency and comprehension. In the early grades, good readers learn the relationship between phonemes and graphemes and the orthographic patterns in words. Spontaneous word recognition along with decoding skills enables students to focus on reading for meaning.

Family Characteristics

Family characteristics also contribute to poor reading comprehension. According to Molfese et.al (2001), family characteristics and the environment appear to interact with the development of cognitive skills to influence the development of reading abilities. Reading achievement and oral language abilities in kindergarten children were influenced by educational activities in the home environment. Language experiences such as rhyming sound game activities and reading interactions play an integral role in reading development. Homes characterized by activities related to books and reading, language

learning, and the development of communication skills are characteristic of children with better language and reading abilities. It was these activities more than socioeconomic status that influenced reading and oral language abilities. Family demographic characteristics and measures of home environment have also been identified as consistently related to other more general cognitive abilities.

Although one of these factors alone cannot be targeted as the sole reason for a lack of reading comprehension in the modern day student, it is indicated that any combination could contribute to the problem.

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

Reading comprehension and effective strategies to improve students' skills in this area are primary concerns for many researchers. Among the factors influencing students' success in this area include an inability to access prior knowledge, limited vocabulary, lack of phonemic awareness and family characteristics. Just as there are multiple causes, there are a variety of possible solutions.

Graphic Organizers

One possible solution is the use of graphic organizers. Even though graphic organizers have been used in the classroom for many years, the theory of graphic organizers dates back to the 17th century. Johannes Amos Comenius,(as cited in Egan, 1999) wrote, "It will be clear, and by that firm and solid, if whatever is taught and learned, be not obscure, or confused, but apparent, distinct, and articulate as the fingers on the hand" (p. 641). According to Dye (2000), graphic organizers are "visual displays teachers use to organize information in a manner that makes the information easier to understand and learn" (p. 72).

The graphic organizer can be used to stimulate memory recall and enable the learner to make connections. The graphic organizer can be described as the representation of the thought process of the mind. Bankowski (1999) agreed that graphic organizers concretely represent abstract or implicit information, show relationships, help to organize ideas, help to relate new information with prior knowledge, and assist in the storage and retrieval of information. Robinson (1998) concurred that a graphic organizer is an abstract statement written in inclusive

terms, presented to the student prior to reading the text, with the purpose of building a bridge between a student's prior knowledge and the new information to be learned in the text.

Students who have difficulty comprehending text need to be taught explicitly how to carry out appropriate strategies so that their reading comprehension improves. Swanson (1998) found that even when students are able to decode words correctly, they typically do not attend to the meaning of the passage, relate what is being read to their previous knowledge, or monitor their own comprehension (p. 209). Kirylo and Millet (2000) stated that, "It is best to preteach the overarching concepts and terms that provide the mental framework for building new knowledge structures" (p. 181). The construction of graphic organizers is prereading activities that are designed to activate prior knowledge and to demonstrate the connection that exists among the concepts and terms to be studied (Bellanca & Fogarty, 1991).

Marchand-Martella, Miller & MacQueen (1998) agreed that graphic organizers visually depict key facts, concepts and important relationships. There are four types to choose from, depending on the lesson content and instructional objectives:

- hierarchical organizers, which present main ideas and supporting details
- comparative organizers, which depict similarities and differences among key concepts
- sequential organizers, which illustrate a series of steps or events
- diagrams, which depict actual objects and systems in the real worlds of science and social studies

Graphic organizers are constructed in various formats. They serve as retrieval cues and facilitate higher level thinking.

- Know-Want to Know-What I Learned – designed to activate prior knowledge, stimulate further questioning, and includes an opportunity to summarize what was learned
- Venn diagram – compares and contrasts two or more ideas or things
- Story Map – logs sequence of events
- T-chart – provides greater understanding of items listed

- Tree diagram – represents the hierarchical relationships among concepts in relation to other concepts
- Web- analyzes attributes

According to Bellanca and Fogarty (1991), these visual tools are also referred to as cognitive maps, visual displays and advance organizers. There is a saying that "thinking is invisible talk" (p. 314). These cognitive tools can be used to see what students are thinking and how they are thinking. The cognitive organizers provide visual representations that make the invisible talk visible. They help students organize, reorganize, revise and modify connections they are making as they process information. Using graphic organizers, students learn how the concepts fit with their prior knowledge or background experience and how they will be used, applied and transferred in novel situations. DiCecco, V. and Gleason, M. (2002) found that it is not enough for students to acquire factual knowledge; they must also learn how concepts are connected or related to each other.

Graphic organizers allow teachers to omit extraneous information while emphasizing important concepts and demonstrating their connection to each other. This visual representation of information is easier for students to remember than extended text. Most important, the use of graphic organizers allow students to be actively involved in the processes of listening, speaking, reading, writing, and thinking. Teachers can create graphic organizers and use them in a variety of ways (Luckner, Bowen & Carter, 2001).

The monumental strength of utilizing graphic organizers during reading instruction is that they foster a classroom community whereby students are authentically engaged in a meaningful discussion that makes connections from prior knowledge to new knowledge, leading to comprehension. If one assumes that students search their mental representation when attempting to answer questions about information presented in the text, the more likely the student will be able to retrieve the necessary information (Robinson, Katayama & DuBois, 1998). Utilizing graphic organizers as a tool assists in fostering the goal of reading instruction: for students to comprehend and become independent readers and learners (Kirylo & Millet, 2000).

Literary Reading Groups

Reading with a partner and participating in a literature discussion is an important component in an effective reading program. In the last several years, the power of students' abilities to construct their own meaning as they read has been the focal point of primary classrooms. Fowler and Newlon (2000) stated that the importance of sharing is valuable both for the listener and the student or group that is sharing. The student sharing activity helps to develop confidence and gain an awareness of audience expectation. The student also enjoys the attention of his peers that encourages the reader. The audience develops the ability to listen and becomes aware of others appreciation and interpretation of a piece of literature. Sharing develops a spirit of community cooperativeness.

Literature circles are becoming more widely developed and implemented. In the literature group scenario, the teacher assumes a leadership role by designing specific questions to promote a student-led discussion. Researchers who describe this framework suggest that by serving as discussion leaders, teachers are able to guide students toward better understanding of text and to draw attention to particularly salient themes and issues. Other researchers believe that teacher-led discussions may place students in a passive, less responsible role. Although some studies have shown that this teacher-directed pattern can be used effectively (particularly when teachers offer substantial feedback rather than simply evaluating student responses), in the end there is little time for student response and opportunity for students to engage in extended and connected interactions with others (Maloch, 2002).

According to Short (1999), learning through language highlights that reading is a way of learning about the world and oneself. Children comprehend the material when given opportunities to discuss and respond to the literature. Teachers act as facilitators in these discussions as the students share their own thoughts, questions, and personal connections. Brabham and Villaume (2000) coined the term grand conversations because participants are invited to develop and discuss their own questions and answers in ways that expand upon individual interpretations and elevate responses to reading.

Students need opportunities to learn language by reading extensively, to learn about language by reflecting on their reading strategies and literacy knowledge, and to learn through language by using literature to inquire about the world and their lives (Short, 1999). Children read to inquire about their world and their lives. Discussing and asking questions about the stories they read allows students to form views about the world around them. Therefore, with careful and planned prompting by the educator, an in-depth and meaningful discussion can occur. In order to make literature more meaningful, we need to know something about the topic. Guiding children to make connections is accomplished by using questions to probe. Probing spurs ideas that tap the memory. When ideas, points of view, and opinions are discussed, the level of students' comprehension increases (Glazer, 2000). In addition, Hollingsworth added by asking students to work in cooperative groups, the students' interpersonal skills developed as they exchanged ideas in book talks and created literature extensions together.

To generate a productive literature circle, educators draw upon several strategies to promote understanding. It is important that educators interact with students to scaffold higher order thinking discussions. According to Foote (2001), higher order thinking based on Bloom's Taxonomy objectives, describe an increased level of cognitive demand required by a student to answer a question. A question that requires a student to think more elaborately is considered higher than a question in which a student simply relies on factual knowledge. Gauthier (2000) stated that the development of students' comprehension of text relies heavily upon the types of questions asked by the teacher. This is true for both reading as well as listening comprehension. The power of well-thought-out questioning techniques, especially the use of guided questions, can provide intellectual focus and coherence for an entire curriculum.

Despite the strong evidence supporting the positive effect of higher order questioning, three extensive reviews were examined by Foote. The first extensive review found no strong evidence for the effectiveness of teachers' use of higher order questioning. The second review demonstrated a large positive effect for teachers' use of higher order questioning on student comprehension. However, a third review found only a small positive effect of cognitive

questioning level on learning (Foote, 2001). Nonetheless, educators tend to support the theory that the more elaborate thought processing required by higher order teacher questioning improved student learning. The area of questioning, and the augmentation of questioning procedures in order to develop students' comprehension of text, doubtlessly play a significant role in the more encompassing pursuit of helping students to understand the use of language in the world around them (Gauthier, 2000).

Project Objectives and Processes

As a result of modifying the reading curriculum to include advance organizers and student self-assessment during the period of September through December 2002, students in the targeted kindergarten, second and third grade classes will increase their reading comprehension as measured by surveys, observations and document analysis.

In order to accomplish the project objective, the following processes are necessary:

1. Design curriculum and instructional strategies using graphic organizers (Bryant, Ugel & Thompson, 1999, Glazer, 2002).
2. Engage students in self-assessment activities (Maloch, 2002).

Action Plan

The following steps will be implemented by the researchers at Site A.

Week 1 (August 27-August 30, 2002)

A. Administer student survey

B. Conduct parent survey

Weeks 2-3 (September 3-September 13, 2002)

A. Tally results of student and parent surveys

B. Administer initial reading assessment

C. Introduce first story with use of graphic organizers

D. Model how to complete the SHARP chart

E. In heterogeneous groups (4), students discuss the story and respond to higher order thinking questions.

F. Write weekly entry in implementation journal

Weeks 4-5 (September 16-27)

A. Introduce the story with the use of graphic organizers

B. Students complete the SHARP chart in groups

C. In heterogeneous groups, students discuss the story and respond to higher order thinking questions

D. Write weekly entry in implementation journal

Weeks 6-7 District Achievement Testing

Weeks 8-9 (October 7- October 18, 2002)

A. Introduce the story with the use of graphic organizers

B. Students complete the SHARP chart in groups

C. In heterogeneous groups, students discuss the story and respond to higher order thinking questions

D. Write weekly entry in implementation journal

Weeks 10-11 (October 21-November 1, 2002)

A. Introduce the story with the use of graphic organizers

B. Students complete the SHARP chart in groups

C. In heterogeneous groups, students discuss the story and respond to higher order thinking questions

D. Write weekly entry in implementation journal

Weeks 12-13 (November 4-November 15, 2002)

A. Introduce the story with the use of graphic organizers

B. Students complete the SHARP chart in groups

C. In heterogeneous groups, students discuss the story and respond to higher order thinking questions

D. Write weekly entry in implementation journal

Weeks 14-15 (November 18-December 6, 2002)

A. Introduce the story with the use of graphic organizers

B. Students complete the SHARP chart in groups

C. In heterogeneous groups, students discuss the story and respond to higher order thinking questions

D. Write weekly entry in implementation journal

Weeks 16-17 (December 9- December 20, 2002)

A. Administer final reading assessment and data collection

B. Tabulate and interpret data

C. Write weekly entry in implementation journal

Methods of Assessment

The following interventions will be used for measuring increased levels of reading comprehension:

Surveys

Two surveys were developed and implemented by the researchers. The parent survey (See Appendices A1 and A2) included five questions each with four possible solutions regarding parents' perceptions of their child's reading comprehension. The student survey (See Appendices B1 and B2) was designed to gather data about students' reading comprehension in the targeted primary grades.

Reading assessments

The document analysis (See Appendices D1, D2, and D3) included a variety of classroom assessments that researchers administered to participants in order to analyze reading progress. The document analysis assisted the researchers with understanding students' progress in reading comprehension.

Observation checklists

The observation checklist (See Appendix C1) was utilized by researchers to assess growth in reading comprehension in the targeted primary grades. The checklist was designed to assist researchers with analyzing the growth in students' reading comprehension during intervention.

CHAPTER 4

PROJECT RESULTS

Historical Description of the Interventions

The objective of this project was to modify the reading curriculum to increase reading comprehension. The implementation of advance organizers and student self-assessment activities were chosen to affect the desired changes.

Researchers conducted the study and utilized various interventions from early September through the middle of December. At the onset of the project, parents and students were surveyed in order to gather their perspectives on reading comprehension. (A sample of the pre and post assessment tools can be found in Appendix D1 and D2.) In addition, researchers conducted a document analysis to review evidence of students' reading comprehension as a result of the interventions. Each member of the research team used a different assessment tool which was appropriate for their grade level.

To improve reading comprehension among the targeted kindergarten, second and third grade classes, researchers focused on and applied extensive use of graphic organizers in order to assess students' prior knowledge and enable them to visually organize information. Among the graphic organizers used were Venn diagrams, t-charts, character and story webs, K-W-L charts, and the tree diagram. By using graphic organizers, teachers had a clearer understanding of what they need to address to their

students. Graphic organizers also aided in retention of information gleaned from the story.

An observation checklist (Appendix C1), entitled the SHARP method developed by Paziotopolous and Kroll (2001) was used in all of the targeted classrooms. The checklist was implemented as a tool to monitor personal connections students made as each story was introduced. The acronym, SHARP, translates into sad, happy, anticipated, reminders of a personal experience, and the problem presented in the story. The checklist was integrated as a part of the written reading comprehension strategy and was used before and during instruction. In the targeted kindergarten class, the SHARP method was verbally integrated into instruction. In contrast, the targeted second and third grade students completed the SHARP method independently by locating the information in reference to each letter as they wrote their responses.

Through the use of literature circles, the researchers exposed students to higher order questioning and encouraged dialogue between students to enhance comprehension. According to Glazer (2000), conversations help each of us find something in memory that relates to the topic. Once ideas are discovered, children are able to connect and comprehend the content presented. SHARP was used as a means in this case to launch a discussion in small group settings. Acting as facilitators, the researchers monitored small group discussions of SHARP responses and worked to scaffold students' conversations about the literature. To enhance students' understanding of the story, the literature groups then responded to and discussed a set of higher order questions, prepared by the researchers, which were based on Bloom's taxonomy.

Presentation and Analysis of Results

In order to assess the impact of lessons on improving reading comprehension, the researchers utilized various graphic organizers, implemented an observation checklist, and immersed students in literature circles to encourage dialogue in order to respond to higher order questions. Throughout the study, researchers also provided a variety of graphic organizers when introducing new material. Graphic organizers also helped students access prior knowledge, and serve as a vehicle for scaffolding students' understanding of the written text. Researchers noted a positive impact on students' comprehension as a result of incorporating Venn diagrams, the KWL charts, character webs, story webs, t-charts, tree diagrams, and story frames.

At the kindergarten level, the implementation of graphic organizers was a novel experience for students. The researcher in this case found bewilderment on students' faces at the onset of the project, given that it was the first formal learning experience for many students. The Venn diagram was helpful, however, in students processing and retaining the information as presented in the lesson. The researcher at the kindergarten level relied heavily on pictures and written text to help students complete graphic organizers with the class. The researcher noted that many of the students did not possess an ability to understand written material only. As a result of introducing the Venn diagrams at the kindergarten level, students demonstrated a definite connection to the story discussed. Students also readily supplied ideas and facts to show their understanding. These ideas were useful in generating sentences composed by the whole group.

The use of a KWL chart at the kindergarten level ignited students' prior knowledge, as evidenced by students' oral responses. The KWL chart prompted brainstorming sessions, which allowed the researcher to tap into students' thoughts and helped them make the necessary connections for comprehension. Many connections were made before, during, and after the lesson. The KWL process also promoted dialogue between students, and assisted structure with key points, and students' increased retention of the material. In addition, the researcher at the kindergarten level discovered that KWL chart heightened students' awareness of their new knowledge.

In contrast, researchers at the second and third grade levels also found graphic organizers to be helpful with comprehension. In these situations graphic organizers were used to introduce lessons, access prior knowledge, compare and contrast characters, setting, genres, summarizing story elements, and historical events. Throughout the study, graphic organizers were used before, during, and after the lesson. Unlike students at the kindergarten level, the second and third graders were familiar with graphic organizers. Therefore, their readiness to engage in the activity as introduced was natural.

The use of various graphic organizers such as the Venn diagram, t-charts, the KWL chart, story maps, the tree diagram, and webs were among the literacy tools researchers found most beneficial. The organizers enabled students in the targeted classroom to connect new material to prior knowledge and build a better understanding of concepts presented. Also, the visual representation of concepts was helpful for students with a variety of learning differences.

The two graphic organizers deemed most advantageous by researchers were the Venn diagram and webs. The Venn diagram was useful in comparing and contrasting

characters, setting, genres, and historical events. The Venn diagram also provided a visual representation for students to compare and contrast ideas. The researcher used this graphic organizer to analyze characters, story versions, and fantasy versus reality. Students adapted easily and were readily engaged in this process. Researchers also found the webs to positively impact the students' learning by allowing students to brainstorm and expand their understanding of the given topic. Both graphic organizers were a segue to writing activities. The Venn diagram and the webs provided greater elaboration of students' ideas and a richer, developed written product.

In addition to graphic organizers researchers used the observation checklist previously mentioned and called the SHARP method. SHARP is an acronym for identifying the various components of a story. Students search for (S) something sad, (H) something happy in the story, (A) an event that is anticipated, (R) an event that reminds the reader of something, and (P) the problem of the story. The results of the implementation of the SHARP method appeared to have had a positive effect on reading comprehension of the targeted kindergarten, second and third grade students. At the onset of the study, researchers also carefully modeled the procedure for completing the checklist. The students at all targeted levels eagerly and confidently responded to the checklist. The researchers found a marked improvement in the student self-report on written comprehension assignments. In addition, the researchers noted an increase in the willingness to read for pleasure.

With the aid of the observation checklist, students worked cooperatively and zealously in small heterogeneous groups. Students began their discussion by sharing the results of the SHARP sheet. This led to further in depth responses to higher level

questions developed by researchers as well as the students. At the beginning of the study, the researchers acquainted students with the six levels of Bloom's taxonomy. Researchers also explained the importance of learning to think at higher levels in order to develop a deeper understanding of the material and promote the application of complex thinking tasks.

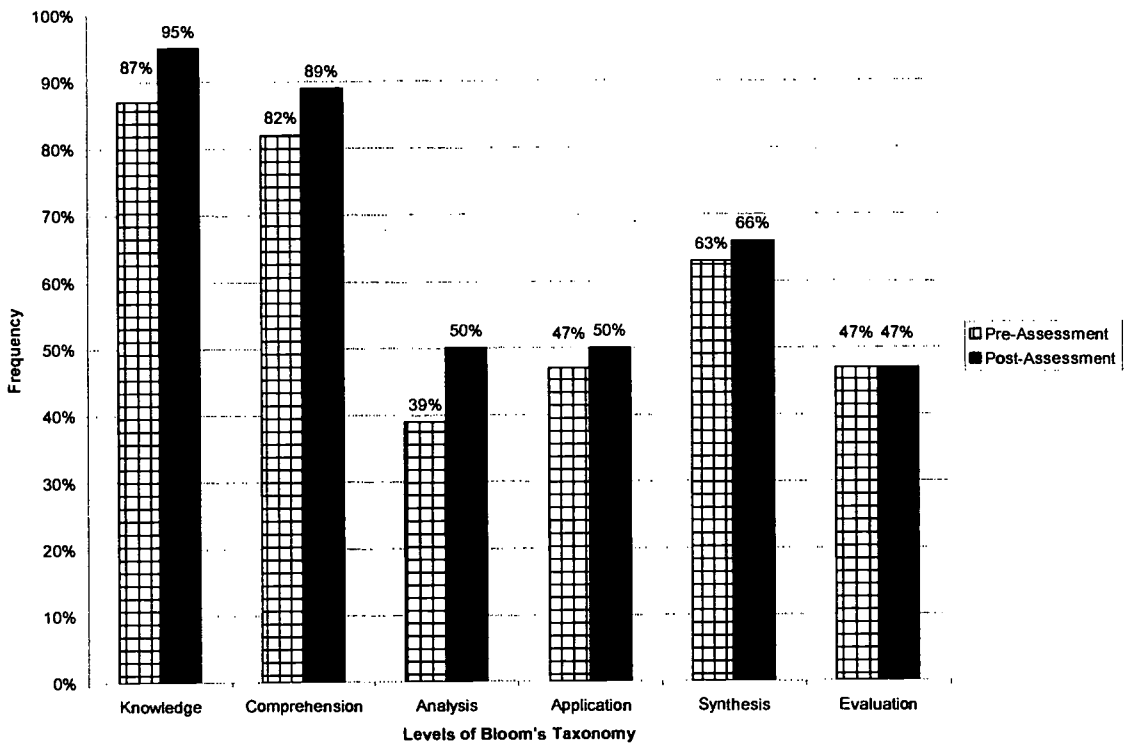

Figure 4.1 Results of Frequency and Levels of Pre and Post-Assessments Based on Students' Self-Report When Asked Higher Order Questions

As a result of the interventions used during the study and integrated into classes, students improved overall in their ability to answer questions at all levels of Bloom's taxonomy, except for the highest level, evaluation. At the evaluation level, students'

growth was not evident. However, an 11 % increase was noted at the analysis level as evidenced by the assessment. Likewise, an 8% increase was observed at the knowledge level, a 7% increase at the comprehension level, and a 3 % increase was noted at both the application and synthesis levels. It appeared to the researchers that students exposed to different strategies and actively involved in a small group discussion where the task is challenging, yet goals are attainable, students were able to demonstrate academic growth.

Conclusions and Recommendations

Based on the presentation and analysis of data, students demonstrated a marked improvement in reading comprehension. The use of graphic organizers was deemed beneficial for all targeted grade levels. Researchers believed that the graphic organizers procured a stimulating anticipatory set for the lesson at hand. The graphic organizers enabled all students to voice their thoughts, opinions and ideas. A visual representation of graphic organizers indicated that organizers help students build a bridge to understanding. Researchers observed an increase in student confidence and active participation in class discussions. Given this, researchers recommended that educators model and incorporate the use of various graphic organizers into their lessons in order to access students' prior knowledge, organize information, and scaffold students' understanding of the material.

In addition, the observation checklist, referred to as the SHARP method, reaped the most positive and enthusiastic responses from all researchers and student participants. Researchers were impressed with the way students delved into the story and located key points while communicating their findings with each other. Students in all of the targeted grade levels enjoyed the challenge of searching for events in the story that they could

identify with in their own lives. The researchers were confident in this case that the SHARP activity enhanced students' reading comprehension and understanding of new material. Researchers further believed that the SHARP method impacted students in a positive manner, as they witnessed students independently seeking out books and other materials to read strictly for pleasure and enjoyment, while still using the SHARP method.

Lastly, researchers found that literature circles contributed to the enhancement and development of reading comprehension. As a result of working together, students improved in answering higher order questions. The interaction between the students greatly influenced the quality of their answers. Students' responses also began to show depth and breadth. Overall, researchers observed a marked improvement in the students' abilities to write a developed, complete sentence. In addition to academic achievement, social skills were noticeably improved.

In conclusion, the researchers firmly believed that the interventions incorporated into the classroom setting had a profound impact on the targeted kindergarten, second and third grade students. The researchers plan to continue the interventions implemented throughout the study because of the positive results and significant gains that the students exhibited.

References

Banikowski, A., Mehring, T. (1999). Strategies to enhance memory based on brain research. [Electronic Version]. *Focus on Exceptional Children*, 32:2, 1-16 Retrieved July 30, 2002 from FirstSearch database.

Bellanca, J. & Fogarty, R. (1991). Blueprints for thinking in the cooperative classroom. Brabham, E. & Villaume, S. (2000). Continuing conversations about literature circles. [Electronic Version]. *The Reading Teacher*, 54, 278-280. Retrieved September 20, 2002 from FirstSearch database.

Bryant, D.P., Ugel, M., Thompson, S. (1999). Instructional strategies for content area reading instruction. [Electronic Version]. *Intervention in School and Clinic*, 34, 293-302. Retrieved February 10, 2002 from FirstSearch database.

DiCecco, V. & Gleason, M. (2002). Using graphic organizers to attain relational knowledge from expository text. [Electronic Version]. *Journal of Learning Disabilities*, 35, 306-320. Retrieved September 20, 2002 from FirstSearch database.

Dye, G. (2000). Graphic organizers to the rescue! Helping students link—and remember—Information. [Electronic Version]. *Teaching exceptional children*, 32, 72-76. Retrieved September 20, 2002 from FirstSearch database.

Egan, M. (1999). Graphic methods: Teaching methodology. [Electronic Version]. Journal of Adolescent and Adult Literacy. 42;8, 641-646. Retrieved July 30, 2002 from FirstSearch database.

Foote, C. (2001). Student-generated higher order questioning as a study strategy. *The Journal of Educational Research*. 92:2, 107-113.

Fowler, J. & Newlon, S. (2000). Claremont Reading Conference. P. 70-8. [Electronic Version]. Retrieved Septermber 20, 2002 from FirstSearch database.

Gauthier, L.R. (2002). The role of questioning: Beyond comprehension's front door. [Electronic Version]. *Reading Horizons*, 239-52. Retrieved February 10, 2002 from FirstSearch database.

Glazer, S. M. (2000, January). Making connections. *Teaching K-8*, 101-103.

Glazer, S. M. (2002). Comprehension: what is it? [Electronic Version]. *Teaching PreK-8*, 102. Retrieved February 10, 2002 from FirstSearch database.

Grierson, S. & Daniel, L. (1995, November). Understanding Attitudes of Educators toward Content Area Reading in the Early Elementary Grades. Paper presented at the meeting of the Mid-South Educational Research Association, Biloxi, MS.

Hollingsworth, L. (1998). Literature circles spark interest. [Electronic Version]. *Schools in the Middle,* 8, 30-33. Retrieved September 20, 2002 from FirstSearch database.

Howe, M., Grierson, S. & Richmond, M. (1995, November). A Comparison of Teachers' Knowledge and Use of Content Reading Strategies in the Primary Grades. Paper presented at the Twenty-Fourth Annual Conference of the Mid-South Education Research Association, Biloxi, MS.

Hurst, B. (2001). ABCs of content and lesson planning: attention, basics, and comprehension. [Electronic Version]. *Journal of Adolescent and Adult Literacy*, 692-693. Retrieved February 10, 2002 from FirstSearch database.

Kirylo, J., Millet, C. (2002). Graphic organizers: An integral component to facilitate comprehension during basal reading instruction. *Reading Improvement*, 37, 179-183.

Kroll, M. & Paziotopoulos, A. (2001). Literature circles. Palos Heights, IL. School District 118.

Luckner, J., Bowen, S., & Carter, K. (2001). Visual teaching strategies. [ElectronicVersion]. *Teaching Exceptional Children*, 33, 38-44. Retrieved September 20, 2002 from FirstSearch database.

Maloch, B. (2002). Scaffolding student talk: One teacher's role in literature discussion groups. *Reading Research Quarterly*, 37:1, 94-110.

Marchand-Martella, N., Miller, T., & MacQueen, C. (1998). Graphic organizers. [Electronic Version]. *Teaching PreK-8.* 28-46-48. Retrieved September 20, 2002 from FirstSearch database.

Molfese, V., Molfese, D., Modgline, A. (2001). Newborn and preschool predictors of second grade reading scores: An evaluation of categorical and continuous scores. Retrieved March 23, 2002 from http://www.proedine.com

Most, B. (1978). *If the dinosaurs came back.* Harcourt, Brace, Jovanovich Publishers. San Diego.

Pressley, M., Wharton-McDonald, R. (1997). Skilled comprehension and its development through instruction. [Electronic Version]. School Psychology Review, 448-467. Retrieved April 3, 2002 from http//echostvgw12.epnet.com/delivery.asp

Robinson, D. (1998). Graphic organizers as aids to text learning. [Electronic Version]. *Reading Research and Instruction*, 37, 85-105. Retrieved September 20, 2002 from First Search database.

Robinson, D., Katayama, A., & DuBois, N. (1998). Interactive effects of graphic organizers and
and delayed review on concept application. [Electronic Version]. *Journal of Experimental Education,* 67, 17-23. Retrieved September 20, 2002 from FirstSearch database.

Short, K. (1999). The search for "balance" in a literature-rich curriculum. [Electronic Version]. Theory into Practice. 38:3, 130-137. Retrieved on July 30, 2002 from FirstSearch database.

Spectrum reading grade 2 (1998). McGraw-Hill. Columbus OH.

Spectrum reading grade 3 (1998). McGraw Hill. Columbus OH.

Swanson, P. & De La Paz, S. (1998). Teaching effective comprehension strategies to students with learning and reading disabilities. [Electronic Version]. Intervention in School and Clinic, 33, 209-218. Retrieved September 20, 2002 from FirstSearch database.

Appendix A

Parent Survey

The Parent Survey (Appendix A1 and Appendix A2) included five questions each with four possible solutions regarding parents' perceptions of their child's reading comprehension. The surveys were administered by the researchers during the month of September to 82 parents for the targeted grade levels. The survey was forwarded to parents by student participants in a home/school folder. Parents were instructed to complete the survey and return the results in a sealed envelope provided for this purpose. Student participants placed the return envelopes in a data collection box located in the researcher's classroom. To protect confidentiality, parent participants were instructed to omit any reference to names. In addition, researchers collected the surveys daily and stored results in a locked file cabinet also located in the researchers' classroom. The survey was designed to assist researchers with analyzing the parental perceptions of their child's reading comprehension prior to interventions.

Appendix A1

PARENT SURVEY

Circle one response for each of the following five items.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I read to my child every day.	1	2	3	4
2. My child is attentive to the whole story when being read to	1	2	3	4
3. My child loves being read to.	1	2	3	4
4. My child can retell the beginning, middle and end of a story after hearing it.	1	2	3	4
5. My child makes connections between stories and things we do together.	1	2	3	4

Appendix A2

PARENT SURVEY

Circle one response for each of the following five items.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. My child reads on a daily basis.	1	2	3	4
2. My child understands a story when he/she reads it.	1	2	3	4
3. My child can retell a story in sequential order.	1	2	3	4
4. My child can easily identify with the characters in the story.	1	2	3	4
5. My child asks for help when he/she does not understand the story.	1	2	3	4

Appendix B

Student Survey

The Student Survey (Appendix B1 and Appendix B2) was designed to gather data about students' reading comprehension in the targeted elementary school. The survey was administered by the researchers to a total of 80 participants during the month of September. Form A consisted of 10 questions each with four possible solutions that was administered orally by the researchers in the second (N=20) and third (N=20) grades. Form B was used by the researcher in two kindergarten classes (N=40). The researcher in the kindergarten class first observed students and selected 12 participants from extreme and typical cases to take the survey. The researcher read each item to participants and recorded their comments. To protect confidentiality, names of participants were omitted from the surveys. Researchers collected and stored the results in a locked file cabinet located in researcher's classroom. The survey was designed to assist researchers with analyzing each student's perception of their reading comprehension prior to the intervention.

Appendix B1

STUDENT SURVEY

Verbal Response

1. I enjoy when stories are read to me at home. _____

2. It is easy for me to picture a story in my head when I hear it. _____

3. I think of things I already know when I hear a story. _____

4. I am able to retell a story after hearing it. _____

5. I can tell you what happened at the beginning, middle and end of a story. _____

Appendix B2

Student Survey

1. Do you enjoy reading?

   yes no

2. What things do you like to read?

   chapter books school text books trade books

   magazines children's encyclopedias

3. How often do you read a day outside of school?

   15-30 minutes about one hour 1-2 hours

4. Which do you prefer?

   being read to reading aloud to someone reading silently

5. How often are you able to retell what you have read?

   sometimes most of the time always

6. How would you describe yourself as a reader?

   poor good very good

7. Do you visit the community library?

   yes no

8. What topics interest you the most?

make believe stories about a real person

history science animals sports

9. What do you find most difficult about reading?

- reading the words
-
- reading too slow
-
- reading too fast
-
- not always understanding what you read

10. What do you do if you don't understand what you are reading?

- quit reading
- keep reading
- ask for help

Appendix C

Observation Checklist

The Observation Checklist was be used by researchers to assess growth in reading comprehension for 80 participants beginning in September and ending in December. The checklist was utilized by the researchers in the targeted kindergarten, second and third grade classrooms. The observation checklist included five areas of assessment that was used by researchers to assess growth in reading comprehension. The checklist incorporated methods of observation currently being used in the classroom setting. Researchers recorded comments for each participant after reading a story. To protect confidentiality, researchers assigned a numerical code to identify participants and stored the checklists in a locked file cabinet located in their classrooms. The checklist was designed to assist researchers with analyzing the growth in students' reading comprehension during interventions.

Appendix C1

Observation Checklist

Title of Story:_____ Date: _____

Participants	S Makes me sad	H Makes me happy	A Anticipates something	R Reminds me of something	P Problems

Rating Scale: √ task achieved — task not achieved

Appendix D

Document Analysis

Researchers conducted a review of existing school records for 80 participants in targeted kindergarten, second and third grades during the months of September and December of the study. The document analysis included a variety of classroom assessments (Appendix D1, D2, and D3) that researchers administered to participants in order to analyze reading progress. Researchers in grades two and three used D1 and D2. The researcher in the kindergarten class used D3. To protect confidentiality, researchers in grades 2 and 3 assigned a numerical code to each student and requested participants to omit any reference to names. Researchers also instructed students to return completed assignments to the data collection box located in their classrooms. The researcher in the kindergarten class read items to students and record their responses. The researcher also assigned a numerical code and omitted any reference to students' actual names. All researchers stored the results in a locked file cabinet located in their classroom. The document analysis assisted researchers with understanding students' progress in reading comprehension.

Participant Code:_____ Date: _____

Appendix D1

A Dog for Marta

1. Why was Marta eating her breakfast slowly?

_____

2. Who did Marta's mom talk to on the telephone?

_____

_____

3. Explain why Marta was excited.

_____

_____

4. When was the last time you were excited about something like Marta was?

_____

_____

5. Why do you think Marta's aunt waited until Marta had a day off of school to call her?

6. List 3 things Marta did on her day off.

7. What happened at the beginning of the story?

8. Suppose Marta's aunt gave her a goldfish. Would Marta feel the same way?

9. If Marta's aunt did not call, how would Marta have spent the day?

10. Did you like or dislike the story? Explain why or why not.

Participant Code: _____ Date: _____

Appendix D2

Spring Concert

1. What were Elsa and Rick practicing to do?

_____

_____

2. Why didn't Rick want to sing in the concert?

_____

_____

3. Who was Mr. Barnes?

_____

_____

4. How do you think Rick felt about himself after he sang the song?

_____

_____

5. Do you think Rick will ever sing in a concert again?

6. Think about the characters Rick and Elsa. Tell one way they are alike and one way they are different.

7. What lesson did Rick learn from his experience?

8. Imagine how Rick felt on the day of the concert. Describe a time when you felt this way.

9. How would the story have been different if Mr. Barnes and Elsa didn't encourage Rick that he would do fine?

10. What is the importance of believing in yourself?

Appendix D3

If the Dinosaurs Came Back

By: Bernard Most

1. In the story, what did the dinosaurs do when they came back?

2. Did you ever wish for something like Glenn did? What did you wish for?

3. If you could choose one way for the dinosaurs to help you, what would you have them do?

4. Do you think it would be a good idea for the dinosaurs to come back? Why or why not?

5. What do you think would happen if the dinosaurs didn't get along with the animals on the Earth now?

6. Do you agree that it would be a good thing if the dinosaurs came back?

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

CS 512 314

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: IMPROVING STUDENT COMPREHENSION IN CONTENT AREAS THROUGH THE USE OF READING STRATEGIES

Author(s): Langford, Patricia A., Rizzo, Sandra K., Roth, Jean M.

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

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

[X]

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

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

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

[ ]

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

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

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

[ ]

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

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.

Sign here, please

Signature: Patricia A Langford, Sandra K. Rizzo, Jean M. Roth

Printed Name/Position/Title: Student/FBMP

Organization/Address: Saint Xavier University
3700 W. 103rd St. Chgo, IL

Telephone: 708-802-6219 FAX: 708-802-6208

E-Mail Address: crannell@sxu.edu Date: 4/9/03

William Crannell, Ed.D.

(over)

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