READING INFORMATIONAL TRADEBOOKS ALOUD TO INNER CITY
INTERMEDIATE FOURTH AND SIXTH GRADE STUDENTS:
A COMPARISON OF TWO STYLES

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of
DOCTOR OF PHILOSOPHY

By

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This study measured the effects of reading aloud informational books to fourth and sixth grade students in the inner city. Two different styles of reading aloud were compared to a control group in a pretest posttest design. One hundred three students from three intact science classes at each grade level were the subjects for the study. Both interventions took place for a period of ten full weeks with a duration of fifteen minutes daily. Students in Intervention I listened to the teacher read aloud an informational trade book for ten minutes and then interacted with the class for the remainder of the block. Students in Intervention II listened to the teacher read aloud the same informational trade book for a period of fifteen minutes daily with discussion and interaction occurring throughout.

Data from two assessments were analyzed for effects. The Diagnostic Skill Profile (DSP) and the Elementary Reading Attitude Survey (ERAS) were administered just before and after the ten-week intervention.

Analysis of variance was used to compare the effects of the interventions on the entire group, and regression was used to study the growth rates of individual students.

Data analysis yielded main effects for group, grade, and gender. Though the read aloud with discussion group had the highest mean score, followed by the control group,
the mean differences between these two groups for reading achievement were not significant. Differences between the read aloud with discussion and the read aloud only group were significant at the 95% level of confidence. There were no significant effects for reading attitudes, though the total difference in reading attitude for both interventions was negative.

Preliminary additional findings revealed that females benefited more than males, low achieving students benefited more than higher achieving students, and fourth graders benefited more than sixth graders.

Implications for the classroom include daily strategic reading aloud practices, the use of informational trade books to teach skills, the incorporation of strategies to build positive attitudes toward reading, and a provision for children in the primary grades to interact with informational text.
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Pamela S. Dougherty
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CHAPTER I

THE PROBLEM

Background of the Problem

Throughout our large cities there are masses of youngsters who cannot or will not read. Whether through lack of interest, lack of opportunity to learn, or lack of appropriate instruction, they have failed to either master the skills or acquire the motivation for literacy. To compound the problem, beginning at about the fourth grade, students across the country experience a slump in achievement (Chall & Snow, 1982). Consequently, those students who have already fallen behind in reading have even less of a chance to catch up to their peers. Moreover, the focus of instruction at the intermediate level becomes one of reading to learn and gain information. Students are expected to pass tests of basic skills. In order to overcome low reading comprehension scores on these tests, administrators and teachers have relied on test taking strategies and an overemphasis on teaching the specific objectives of the test, thus limiting the scope of the curriculum. As a result of this emphasis, content subjects, namely social studies and science, are often given low priority. Yet the skills necessary to pass the objectives of such tests, a wide vocabulary and well-rounded background, which are limited in inner city children, represent the academic strengths that content subjects expand and develop.
Reading aloud informational books to students in the intermediate grades, especially those lacking in background knowledge, could provide a connection to print that allows for the acquisition of the vocabulary and schema needed to comprehend text. Reading aloud to students has been suggested as the “single most important activity for building the knowledge required for eventual success in reading” (p. 23), by the Commission on Reading in *Becoming A Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985). Support for the positive effects of reading aloud abounds in the literature (Huck, Hepler, & Hickman, 1997), yet only recent studies have begun to document its effectiveness (Tunnell & Jacobs, 1989; Galda & Cullinan, 1990). Research shows that the emphasis of reading aloud has had both high and low priorities. In the late 1970's, studies focused primarily on infant and preschool children’s oral development. With the publication of Jim Trelease’s *Read Aloud Handbook* in 1982 (rev. ed., 1995) and the impact made by statements about reading aloud in *Becoming a Nation of Readers* (Anderson et al., 1985) a new interest in read aloud research arose. More recent studies have attempted to analyze the read aloud event itself and the factors that cause it to be, or not to be, effective.

Research on reading aloud has generally used narrative formats or a combination of genres. Little has been done with programs that have isolated the reading aloud of nonfiction trade books or informational books, the content of which could provide a schema upon which students could build new knowledge, learn about the patterns and
structure of expository text, add new words to their listening vocabulary, and gain knowledge of the syntax of language by listening to a model reader.

Purpose of the Study

This study was designed to measure the consequences of listening to a teacher read aloud informational trade books on the reading comprehension and attitudes of intermediate students in an inner city school. The effects of two styles of reading aloud, with and without instructional conversations, were compared to a control group. The two styles of reading aloud took place during the course of a unit of study in science. The effects on reading comprehension of the two interventions were compared using the results from the Diagnostic Skill Profile (DSP), which is a diagnostic test similar to a state mandated assessment of basic skills. The effects on reading attitude were assessed using pre and post test scores from the Elementary Reading Attitude Survey (ERAS) designed by McKenna & Kear (1990).

Statement of the Problem

The purpose of this study was to compare the effects on comprehension and attitude scores, of reading aloud informational trade books to fourth and sixth grade inner city students, using two different styles of presentation, one with and one without discussion.

Major Research Questions

The study was designed to provide data on whether there are significant differences in the attitudes and reading comprehension scores between students who are
exposed to the oral reading of informational trade books, with and without discussion, and those students who are not. This study addressed the following questions:

1.) Will reading informational trade books aloud as part of a unit in science, improve the reading comprehension scores of fourth and sixth grade students on the DSP?

The DSP, an instrument designed to serve as a diagnostic tool was utilized to compare results in a pretest/posttest design. Items for each test were selected from a bank of items specifically designed to assess the ability of students on the specific objectives of the state mandated test of basic skills called the Texas Assessment of Academic Skills (TAAS). Though the DSP was not intended to be used as a pre and post test, items were selected from the same bank of questions for each administration of the test. In this way, two forms of the same test were developed. Students took the assessment once in the fall of the school year and once again at the close of the semester in January. Scores of the three groups of students were compared on six objectives for reading which include determining word meaning, identifying supporting ideas, summarizing written texts, identifying relationships and outcomes, making inferences and generalizations, and recognizing points of view, facts and non-facts.

2.) Will reading informational trade books aloud as part of a unit in science, followed by a period of discussion, further improve the reading comprehension scores of fourth and sixth grade students?
The scores from the pre and post DSP of students who listened to informational trade books and took part in a discussion, were compared to the scores of the students who listened to the informational books but did not participate in discussion. These two sets of scores were also compared to those of the students who did not participate in any read aloud group. These comparisons provided the data to evaluate the effectiveness of the two interventions.

3.) Will reading informational trade books aloud influence the attitudes of fourth and sixth grade students toward reading?

Students' attitudes toward reading were assessed using the ERAS (McKenna & Kear, 1990) before the initiation of the treatments and again following the interventions. A comparison of the scores from the students in each of the three groups determined the effectiveness of the treatments. The assessment, developed by McKenna and Kear (1990), measures both recreational and academic attitude toward reading. Students respond to the question by selecting one of four Garfield poses that have varying degrees of expression. Each student receives a recreational score, an academic score, and a total reading attitude score. These scores are then assigned a percentile rank based on a norming group that included a national sample of eighteen thousand students.

General Hypotheses

The design of this study was based on the following general hypotheses. These hypotheses will be restated in testable form in chapter three.
It was hypothesized that reading informational trade books aloud to fourth and sixth grade inner city students would have a positive effect on reading achievement and on attitude toward reading.

It was hypothesized that reading aloud informational trade books in combination with discussion would have an even greater positive effect on the reading achievement and attitude toward reading of fourth and sixth grade inner city students.

Significance of the Study

There is a great deal of concern for growing populations of children at risk of failure in public education. It is increasingly said that we are failing to educate urban, minority disadvantaged children. Many of these children are black. Lomotey emphasized this failure in 1989. “The underachievement of African American students has been persistent, pervasive, and disproportionate” (1989, p. 81). According to the Digest of Education Statistics 1995 (Snyder, Hoffman, Riley, Robinson & Griffith), results of the National Assessment of Educational Progress (NAEP) show a gap between African American and white students tested in grades four, eight and twelve. Though this gap has narrowed in recent tests, there is still a wide variation between the two groups of students. In addition, the dropout rate for African Americans in urban schools is almost 50% (Snyder et al., 1995). Another problem which was addressed by Haberman in 1991, is the cycle of failure created by both the teachers and students in inner city schools which he calls the “pedagogy of poverty” (1991). It is clear that the needs of African American students are still one of education’s major challenges.
To compound this problem, it has long been accepted that upon entering fourth grade, many students experience a downward thrust in academic achievement. Chall & Snow (1982) noted that educators are confronted with a major problem with the decline of growth in literacy that begins just after the fourth grade, and that this decline is more prominent among low socio-economic populations. The decline continues, resulting in middle and high school students who cannot read to learn in their content subjects (Snyder et al., 1995).

With the whole language movement, there has been an increasing call for the use of literature in the classroom. Teachers and students are reading, sharing, and writing about good books. Viewed as an emergent or primary level activity, reading aloud from trade books has become a common practice in these grades. Teachers of middle grades have yet to totally accept the value of reading aloud but are slowly discovering its merit. Though results are mixed, researchers in the field are adding to the body of research that supports the positive affects of reading aloud to intermediate students (Briechle, 1984; Cosgrove, 1987; Fearn, 1971; Porter, 1971; Wright, 1992).

The value of including nonfiction in read aloud programs has recently been promoted. Advocates of reading nonfiction trade books aloud as part of units of study in social studies and science (Armbruster, 1993; Carter & Abrahamson, 1991; Doiron, 1994; Vardell & Copeland, 1992) argue for what Kobrin (1988) calls a Total Literature Connection. Nonfiction as well as fiction should be given equal time across the curriculum. Children can respond emotionally to nonfiction read alouds just as they do to
fiction read alouds. Incorporating nonfiction into read aloud programs allows children the opportunity to experience what Crook and Lehman (1991) call “two ways of knowing” (p. 35). Teale (1984) adds that if we believe that read aloud strengthens language development and awareness of the structure of story, then it would seem logical that reading aloud nonfiction books would do likewise for nonfiction text. He calls for a “balance of opportunities” (p. 112) for students to engage in both the efferent and aesthetic reading of texts. Depriving children the opportunity to have access to the balance of literature and the two ways of knowing, is to deprive them of complete literacy. Barbara Moss (1995) says that children should experience the “magic of the real world”, that...

Exposure to nonfiction read-alouds has the everwidening effect of a pebble thrown into a pond. First, it expands children’s knowledge, thereby contributing to schema development, a critical factor in comprehension. . . . It teaches children concepts and terms associated with a variety of topics and people, places, and things they may never encounter in real life (Moss, 1995, p.122).

Supporters for using trade books in content subjects cite the poor construction of content textbooks as a primary factor in students’ inability to learn beyond the fourth grade. The content of textbooks is very often written above the instructional level of the student. Textbooks include tremendous amounts of technical vocabulary, very often abstract in meaning. Since textbooks are adopted only every seven to ten years, they are outdated, and pictures and graphics are old-fashioned or uninteresting. In order to cover a wide curriculum, textbooks are crammed with information. Because of this, the writing
is frequently poor, words are often left out to meet readability formulas, and explanations are limited. Consequently, students are unable to make connections between their own schema and the new information in the text (Olson & Gee, 1991; Moss, 1991; Moss, 1995).

A primary problem in learning from textbooks is the organization that is typically used in them. As have others, Beck and McKeown (1991) attribute the fourth grade slump (Chall & Snow, 1982) to the difficulty students have with their first in-depth encounters with textbooks. They claim that students have trouble because they are unfamiliar with the structure of the texts. Expository text has no common structure; it takes the form of whatever combination of formats that best relays the information. The structure may or may not take the form of cause and effect, comparison/contrast, problem/solution, and description. The format has no predictable framework through which students can relate new meaning (Beck & McKeown, 1991). In addition, children very often lack sufficient background knowledge to cope with the new information.

Because texts are so inadequate, teachers need to take an active part in assisting students in learning content. In order to help build the background that is necessary for students to interact with textbooks, many educators suggest the use of trade books. Trade books offer a broad range of reading levels, are highly appealing both visually and in content, and are current. Trade books provide in-depth information about a topic which is explained so that a child can understand the content (Holmes & Ammon, 1995; Moss, 1991). The use of trade books allows for children to be exposed to literature and authors
they might not normally choose on their own (Vardell & Copeland, 1992), which "whets their appetites for information" (Moss, 1995, p. 123). Beck and McKeown (1991) also support the use of trade books in content subjects. "What seems clear to us is that students cannot think critically--cannot do much of anything with information--unless they have a sufficient quantity and quality of information to allow critical consideration" (p. 489).

Another reason students are unprepared for learning from textbooks is what Pappas (1991) calls the "primacy of narrative." Educators have assumed that children must be taught using narrative texts before they can understand informational text; that children relate only to story in a meaningful way. Even though whole language and literature based approaches are common in many classrooms, it seems that the only "real books" that are used in the early grades, are stories (Beck & McKeown, 1991). In addition, advocates for read aloud programs, up until recently, have suggested only narrative titles. Results of surveys conducted to determine the titles of books that teachers read in their read aloud programs support this tendency. Only narrative titles and some poetry selections are listed as books that were read aloud (Hoffman, Roser & Battle, 1993; Abrahamson, Carter, & McLaurin, 1990). According to Doiron, we seem to be giving the message that reading is fun in the early grades when children listen to stories, but reading is no longer fun in the upper grades. Children do reports and create projects; reading becomes work (1994).
In summary, this study was significant for many reasons. First, the effects of using a read aloud program with inner city black children can contribute significantly to the effective strategies research with this population. The challenges for these children are great. Not only do they enter school with limited vocabulary development and knowledge about the world, they come to a place where the style of language is often different than their own (Tharp, 1996). There have been studies that have quantified the effects of using a literature based program with this population. These studies have usually been done using trade books with a highly emotional appeal. The books were either read aloud or used as part of a sustained silent reading program (Cohen, 1968; Cullinan, Jaggar & Strickland, 1974). None of the studies have specifically incorporated nonfiction trade books for the precise purpose of increasing the background knowledge and technical vocabulary. The results of this study should enlighten teachers and administrators of this population as to the effectiveness not only of reading aloud, but of instructional conversations as well.

Using reading aloud as a strategy is not common in many intermediate classrooms, particularly those driven by state mandated tests. This study compared the results of two styles of reading aloud to a control group on a pre and post diagnostic test that is very similar to a state mandated assessment of basic skills. The findings of the effectiveness of using one or both approaches will assist teachers in making decisions in regard to choosing reading aloud as a strategy with intermediate students.
Third, the literature reveals that isolating informational trade books as the only genre to be included in a read aloud program has not been attempted. Studying the effects of reading aloud informational trade books alone will provide insight as to the merits of including this genre in a literature program.

Finally, there have been several qualitative studies recently done (Harrington, 1995; Beloin, 1995; Maxwell, 1993) investigating the strategies used by effective teachers during the read aloud event. The studies have documented what teachers do to engage students in meaningful responses to literature during the listening session. One strategy gaining in popularity is the use of instructional discussions or dialogues, also known as instructional conversations or strategic discussions. Students are actively engaged in conversations that are strategically planned and facilitated by the teacher. Comparing the effects of the use of these instructional conversations before, during, and after the read aloud event on a reading comprehension test had not been done. This study adds to a deeper understanding about instructional conversations as a tool to learn information.

Definition of terms

For purposes of clarity and consistency, the following definitions are provided:

Read aloud event—discussions, strategies or writing activities that occur before, during, or after the reading aloud of a book, magazine, article, or passage.
**Content reading**--reading usually considered as pertaining to a subject that is not reading or language arts, such as social studies, science, math, history, geography, fine arts.

**Informational trade book**--a trade book that contains factual information and uses an expository structure. Though some informational books are in a narrative format, for the purposes of this study, only expository structure were used.

**Trade book**--any book published by a publishing house that is not considered a text book.

**Genre**--type of literature that has similar characteristics in style of writing, form of literature, or structure. Common genres include biography, poetry, folktales, historical fiction, mystery.

**Instructional conversation**--planned and structured design for developing interactive discussion and conversation before, during, and after an instructional activity.

**Lower achieving**--students reading at two or more instructional grade levels below their peers.

**Higher achieving**--students reading at two or more instructional grade levels above their peers.

The present study was based on but not limited to the instructional conversations described by Goldenberg and Gallimore (1991; Goldenberg & Patthey-Chavez, 1995) in his Ten Principles of Instructional Conversations. The conversations involve a connected discussion that builds on the interactions and comments of everyone participating.
Assumptions

It was assumed that sufficient numbers of trade books appropriate to the grade level, theme, and content were able to be located in order to create the read aloud event. It was also assumed that both assessment instruments—the DSP, and the attitude survey, were valid and measure what is intended. It was assumed that all subjects were fairly equally distributed in sex and ability.

Summary

Chapter 1 included an introduction to the purpose and significance of reading informational trade books aloud to inner city intermediate students. Questions were presented, terms used in the study were defined, and general hypotheses were stated.
Chapter II

REVIEW OF THE RELATED LITERATURE

Introduction

Prior to the last decade, most of the information we had on read aloud programs and their effects was acquired from research based predominately on preschool and early childhood studies. Even though there is a growing research base using primary and intermediate children and a few studies with middle school students, the long range effects have not been clearly ascertained, or have not been sufficiently documented. This study is also based on the accumulation of data on reading strategies found to be most beneficial to students and the developing research about effective read aloud strategies. The body of research on interactive discussion is growing and the studies are mostly of a qualitative nature. A limited number of studies were found which related specifically to reading expository text aloud. This chapter presents a summary of the research findings relevant to the present study.

The literature reviewed in this chapter involving reading aloud is related to three areas of research. The studies about the effects of reading aloud on the development of language skills, specifically oral development and vocabulary acquisition, are described in the first section of this chapter. The studies dealing with the effects of reading aloud on listening and reading comprehension are described in the second section along with
the additional studies that pertain to attitudes toward reading. The theory from which the research and practice of reading aloud is based is included in the last section of the chapter along with the research on effective read aloud strategies and the few studies using informational trade books.

Reading Aloud and the Development of Language Skills

There have been several studies that have shown the benefits of reading aloud to both oral development and vocabulary acquisition (Fox, 1976). Oral language development has been linked to reading achievement (Loban, 1966; Chomsky, 1972). Researchers have found that the children who demonstrate a high level of language development also demonstrate a high level of reading achievement. In 1972, Chomsky studied the stages of language development with thirty-six children six to ten years old. She found that the amount of exposure to reading or listening to literature correlated to five stages of linguistic development. She concluded that “the child who reads (or listens to) a variety of rich and complex materials benefits from a range of linguistic inputs that is unavailable to the non-literary child” (Chomsky, 1972, p.23). Several other studies with very young children have documented the development of language skills that directly related to the experience of the parent reading aloud to the child (Fodor, 1966; Burroughs, 1972; Irwin, 1960; Clark, 1976). Among these is an important study by Durkin (1963). She found that children who read before they entered school all listened to their parents or older siblings read aloud from a variety of books.
Along this line, Cullinan, Jagger, and Strickland (1974) studied the language expansion of black disadvantaged children using trade books that were read aloud and followed by interactive oral activities. They studied two hundred and forty predominately black children in four Title I schools in the New York City area. The intent of the study was to assess the effectiveness of a literature program designed to improve the standard English of the subjects. Kindergarten through third grade teachers were given fifty books from which to read aloud thirty minutes a day for the entire school year. Teachers of the experimental group used creative activities, creative dramatics, puppetry, discussion, and story telling after the story was read. Teachers in the control group were not given specific oral language activities. Instead, they used enrichment activities such as art, music, rhythm, and films. Findings of the study supported the use of the oral activities in conjunction with the read aloud for the improvement of standard English, particularly at the Kindergarten level.

Several studies using read aloud have utilized activities that allow students to learn vocabulary. Cohen (1968) studied the effects of daily reading aloud to twenty classes of minority, inner city, second graders who were grouped homogeneously by reading levels. The books that were read aloud were specifically selected for the population with consideration for the natural flow of language and strong emotional appeal. Students were tested in October and June for vocabulary and reading comprehension on the Metropolitan Reading Achievement Test and the Free Association Vocabulary test at the beginning and the end of the school year. Findings showed that
students in the experimental groups scored higher in word knowledge than those children in the control group who had not heard the books read aloud. Noteworthy was the finding that the children who had shown the most growth in vocabulary and reading comprehension were in the lowest groups. Cohen made a concluding statement, "The slower the children are in academic progress, the more difficult it is for them to deal with words in isolation, unrelated to a totally meaningful experience" (1968, p. 213). The stories with their highly emotional appeal, provided a context with which the children could relate.

Stahl, Richek, and Vandevier (1991) studied the effects of reading aloud on vocabulary learning with sixth graders in an urban setting. The students were predominantly from middle-SES homes. Students not only learned a significant amount of vocabulary, but the lowest achieving students learned as much, if not more, than their higher achieving classmates. The researchers noted that if we assume that readers learn new words from reading, poor readers are at a distinct disadvantage. First of all poor readers do less reading than their better reading counterparts, and secondly they read material that is usually less complex, and contains easier vocabulary. So that while the better readers are learning more words, the less able readers are learning far less. The researchers agreed with Cohen, that "learning word meanings from listening may be more important for the child with reading problems, who is cut off from a significant source of vocabulary growth, that of written text" (Stahl et. al, 1991, p. 191).
There have been some studies that have incorporated other vocabulary strategies in combination with the read aloud program. The results are informative. Elley (1989) found that children in a second grade class learned about 15% of the unknown words without any teacher explanation following a read aloud event, while about 40% of the words were learned with teacher explanation in conjunction with the read aloud program. Follow-up exams indicated that low performing students gained as much in word knowledge as high performing students.

Maher (1991) compared vocabulary test scores of fifth grade students when they were divided into two groups. The control group read a story and wrote definitions of key vocabulary, while the experimental group heard the story read aloud by the teacher and discussed the meanings of the words. After an eight week treatment period, results from weekly vocabulary test scores showed that while the control group retained 50% of the words, the experimental group retained more than 90% of them.

In a study with low achieving fifth graders, Phillips (1900) found significant gains in vocabulary when the scores of students tested from spring to spring on the Iowa Test of Basic Skills, were compared. After hearing books read aloud, lists of words for vocabulary and spelling were generated and used for additional activities.

The results of these studies indicate that oral language and vocabulary acquisition can be improved through read aloud experiences. Fox (1976) supports the use of reading aloud. “If the premise that growth in oral language will produce growth in reading achievement is accepted, then the process of language acquisition becomes highly
significant. Reading aloud daily gives a rich language environment from which children may process language and form generalizations” (p. 670). Chomsky’s (1972) study provides a basis for the need to expose children to a wide variety of literature which probably should include informational text. Though none of the studies described in the literature about reading aloud in relation to language acquisition specifically included informational text, it would seem that their use would further broaden the language development of those students who listen to them, by adding different and more complex structures of syntax and text.

Further, the studies on vocabulary acquisition clearly show the importance of reading aloud to increasing vocabulary (Cohen, 1968; Elley, 1989; Stahl et al., 1991). Exposure to the technical vocabulary found in trade books about science-related topics would add significantly to the number of word meanings students acquire or at least with which they become familiar. Two important findings directly relate to the present study. First of all, the research shows that the use of oral development activities such as dramatic interpretations, retellings, discussion, and the use of teacher explanation about word meanings heightened the acquisition of word knowledge. The study by Cullinan, Jagger, and Strickland (1974) was a forerunner for the use of highly interactive oral activities. This finding supports the use of discussion and interaction during a read aloud event and provides a basis for the present study. Another important finding for the purposes of this study is the benefit that read aloud programs have in vocabulary acquisition for the less able reader.
Effects of Reading Aloud on Comprehension and Attitude Toward Reading

There are a growing number of experimental studies that support the benefits of reading aloud to reading comprehension (McCormick, 1977; Jolly, 1980; Butler, 1980) many of which were done with kindergarten and first grade students (Feitelson, Kita & Goldstein, 1986; Meyer, Stahl, & Wardrop, 1994; Dickinson & Smith, 1994). In addition, there are studies that support the benefits of reading aloud to listening comprehension (Devine, 1978).

Cohen’s study, mentioned above, documented not only gains in vocabulary scores, but in reading comprehension scores as well. As with the vocabulary, the students who gained the most were the lowest achievers.

Raftery (1974) replicated Cohen’s treatment and findings with second graders in heterogeneous classrooms attending twelve private schools in New York City. College students majoring in elementary education read aloud three times a week to the experimental classes. A portion of the study focused on the quality of literature used for the read aloud. Raftery found that the quality of the material was not a factor in reading achievement.

One researcher working with second grade students in Utah (Steffensen, 1988), did not find reading aloud to be an effective activity for improving the scores of students on the reading, vocabulary and listening subtests of the Stanford Achievement Test. One difference in her study was the use of volunteers to read aloud. Adult volunteers and
sixth grade substitute volunteers read aloud, asked questions and lead discussions in small
groups of students every day for twenty to twenty-five minutes.

In another study done with disadvantaged Hispanic students, Roser, Hoffman, and
Farest (1990) compared scores on the California Test of Basic Skills of one second grade
cohort to the previous year's cohort in six different schools. The students in the
experimental group were exposed to a year long project called Language to Literacy in
which books, the topics of which were organized around themes, were read aloud and
discussed extensively. The first year's results showed a 14.0 percentile score increase in
reading for the schools participating in the Language to Literacy program compared to a
3.0 percentile score increase for the comparison schools that did not participate in the
program. Similarly, for language arts there was a 10.5 percentile score increase for the
schools participating in the project and only a 6.3 percentile score increase for those
schools that did not. Five out of six of the schools increased their scores significantly on
a state mandated test of basic skills (TEAMS).

In 1985, Beck investigated the effect of a training program in listening with
second and third graders attending school in a suburb of Philadelphia. She found that
their scores on the California Achievement Test and Cooperative Primary Test -
Listening, did not reflect a significant difference in reading or listening comprehension
after a ten week treatment. The students listened to a teacher read aloud literature from
recommended readings in the curriculum, after which five questions based on a model of
the levels of listening comprehension were discussed.
In 1986, Lopez compared the effects of three treatments in combination with reading aloud on listening skills, vocabulary, and attitude toward reading. He studied third graders in three metropolitan areas and used the Iowa Test of Basic Skills as well as the Estes Attitudinal Scale to pre and post test. The three treatments consisted of reading aloud recommended literature in combination with a direct teaching method, reading aloud recommended literature, and a non-specified read aloud program. There were no statistically significant differences in attitude or ITBS mean scores among the three treatment groups. There were, however, significant vocabulary differences in the scores from the students who participated in the direct teaching method.

A growing number of these studies on reading comprehension have been done with intermediate age children. Fearn (1971) studied the effects on fourth grade students of listening to stories on tape. In this twelve week study, he found that fourth grade children who initially had lower reading achievement scores made more gains in reading achievement than children who started out at a higher level of reading.

In another study with intermediate students, Porter (1971) studied the effects of high school students reading to fourth, fifth and sixth graders two times a week for thirty minutes. In the twenty week study, she found that the students in the fourth grade made more gains than the students in the fifth and sixth grades. Porter concluded that reading aloud may help younger students more than older students. She also found that reading aloud to students positively affected their interest in reading.
In 1976, Weidner investigated the effects of reading aloud for varied amounts of time on reading and listening comprehension. Fourth grade students in four classrooms set in a small town in an economically depressed area of the northeast participated in the study. Each classroom was assigned one of four treatments that was carried out by the teacher. These treatments included reading aloud for ten minutes once a week, reading aloud for twenty minutes once a week, reading aloud for ten minutes five times a week, and reading aloud for twenty minutes five times a week. The literature used for the study consisted of fifty books selected for quality, reading level, and interest. Two of the books were nonfiction. The researcher found that the amount and frequency of the read aloud event made a difference on the listening, vocabulary, and reading paragraph comprehension of the Durrell Listening-Reading Series. The group that had been read to five times a week for ten minutes made significant gains in five of six areas. In a descriptive substudy, Weidner also investigated whether the students' attitudes toward reading would effect their comprehension or listening score. She found that the students who made the most gains had been on grade level or below before the treatment began, that there were no differences whether or not the student was male or female, and that they were in the group that had been read to ten minutes five times a week.

In two studies the effects of reading aloud were studied with suburban intermediate grade students. Briechle (1984) divided a class of twenty-five sixth grade students into a control and an experimental group and read aloud to the experimental group three times a week for twenty-five minutes for an eight week period. When tested
on the Gates-MacGinitie Reading Test, the experimental group had significant gains. In another study with fourth graders, Wright (1992) compared a teacher read aloud program with a parent read aloud program. The researcher read to seventeen students in a before school program, while the parents of fourteen students read aloud to them at home. The study continued for a nine week period, twenty minutes four times a week. Wright found that the school experimental group had higher scores than the control group on tests for reading vocabulary and reading total on the Science Research Associates Test.

Noting that the majority of the previous studies had been done with urban students, Cosgrove (1987) studied the effects of reading aloud to fourth and sixth grade students on reading comprehension across three different socio-economic groups. Her study included two rural schools, two urban, and two schools of moderate income. The teachers who read aloud were trained in reading aloud techniques and asked to select reading materials that included narrative, nonfiction, and poetry from a list of recommended books. The teachers read three times a week for twenty minutes for a period of twelve weeks. Students in all groups, regardless of socio-economic status, scored positively in favor of the experimental group. Cosgrove also studied the effects that the read aloud program had on students' attitudes toward reading. The students in the study were pre and post tested using the Estes Scale to Measure Attitudes Toward Reading. Of the population studied, it was found that reading aloud significantly improved the attitudes toward reading.
Results were similar in a study with far fewer fourth grade students (Forte, 1995) using the Ginn Reading Test and an interest inventory. The researcher read for thirty minutes daily for an eight week period.

Though the results are mixed, it is clear that in most cases reading trade books aloud to students benefits the reading comprehension of students not only in the lower primary grades, but intermediate grades as well. Most of the results of the studies favor reading aloud as a strategy for lower achievers. The two studies by Wright (1992) and Steffenson (1988) suggest that the individual or the methods used during the reading aloud may have some impact on the effectiveness of the read aloud event. In both of the cases mentioned, parents, other adults and sixth grade students conducted the reading event.

The amount of time involved in the studies apparently was not a critical factor in the effectiveness of the read aloud programs. The studies just reviewed used a wide range of time frames, from the year long programs that Cullinan, Jaggar and Strickland (1974), Cohen (1968), and Roser, Hoffman, and Farest (1990), implemented, to interventions spanning as short of time as eight weeks (Maher, 1991; Forte, 1995). The allotted time for the read aloud event itself ranged from as little as ten minutes to thirty minutes per setting and from as little as ten minutes per week to as many as one hundred and fifty. The average weekly number of minutes was between sixty and seventy five minutes. Most of the studies used a twelve week time frame, and those that were shorter or used only a three or four day plan, often compensated with a longer daily intervention.
The year long studies showed, without question, the effectiveness of the intervention. Other studies, shorter in duration, had mixed results. Weidner's study (1976) clearly indicated a benefit in reading daily as opposed to once a week. It is important for the present study, that she found that reading aloud as little as ten minutes a day, significantly improved the reading comprehension and vocabulary scores of the children in her study.

Two studies indicated the use of nonfiction trade books. Cosgrove (1987) encouraged the teachers who participated in her study to use equal amounts of narrative, nonfiction, and poetry, but the readers did not document the books they used to read aloud, so it is unknown to what degree this directive was followed. Similarly, Roser, Hoffman, and Farest (1990) developed units consisting of ten books to be read aloud around a central theme. They developed some seventy units around themes such as friendship, author studies, concepts, and being different. Among the units there was certainly a need for nonfiction or informational trade books, but neither genre was isolated out. No study of experimental design was located that documented to a large degree the use of informational books in the read aloud programs. The study by Roser, Hoffman, and Farest is important for another reason. It, too, reflects the value of discussion surrounding a read aloud event. In addition, five of the six schools that participated in the Language to Literacy program had significant gains on a state mandated test, which was the forerunner of the present state test known as the TAAS. This finding holds predictive value for the present study.
Finally, six of the studies mentioned above also investigated the effects of reading aloud on reading interest or attitude. All but one of the studies produced a positive relationship between reading aloud and attitude toward reading. In yet another study, Bartlett (1980) investigated the effects of oral reading on the reading attitudes of fourth graders who attended school in a middle socio-economic urban district. The students listened to a story read aloud fifteen minutes daily for a period of twelve weeks. Books selected for the study were chosen on the basis of appropriateness for reading aloud and interest to fourth graders. Teachers involved in the reading were given a list of techniques to use during the read aloud event. Based on pre and posttest scores from A Scale to Measure Attitude Toward Reading (Estes, 1971), it was found that listening to a teacher read aloud did not make a difference in attitude toward reading. It was found however, that students in the experimental group did read a larger number of books than those students in the control groups.

It is noteworthy for the intent of the present study that none of the studies on reading attitude or interest focused only on informational text. It is also noteworthy that in the studies where no differences were found between scores after the treatment, either for comprehension or attitude toward reading, the studies were done with middle socio-economic students. If differences are found in the present study, there will be evidence for using reading aloud as a strategy with inner city populations.
Theory into Practice: Effective Read Aloud Strategies

Much of the current practice of reading aloud is based on the theories of Louise Rosenblatt (1978) and Lev Vygotsky (1962). Our understandings that reading is a transaction that is negotiated between the reader and the words in the text, come from Rosenblatt. Rosenblatt theorizes two primary ways of reading and reacting to text. One way is from an aesthetic or emotional point of view and the other from an efferent or information acquiring stance. From this light, Rosenblatt lends support to a balanced reading program that includes all genres. She proposes that children be made aware of how to approach different types of texts and know when it is appropriate to use primarily an aesthetic or efferent stance. She also says that we as readers may shift back and forth from one stance to another within the same piece of writing. “We read for information, but we are also conscious of emotions about it and feel pleasure when the words we call up arouse vivid images and are rhythmic to the inner ear” (Rosenblatt, 1991, p. 445).

Vygotsky’s sociocultural theory supports the use of engaging students in dialogue. According to Vygotsky (1962), dialogue with peers or teachers acts as a scaffold that supports the listener at the level where he or she is in order for new concepts or new words to be learned. Learning is social. During a read aloud event, the meaning of the story is developed through an interactive collaboration between the listeners and the adult reader. The understandings from the literature depend on these “negotiations” about the print that the listeners along with other adults reach together.
Much of the recent research on read aloud strategies has been descriptive in nature and has focused on the interaction between teacher and students. It is becoming increasingly clear that discussion plays a major role in the read aloud event. The importance of discussion or at least turn taking type dialogue has often been a focus of studies of young children and how they learn. It has been found that mothers engage in interactive strategies and patterns of turn taking with infants beginning at a very young age. (Ninio & Bruner, 1976; Snow, 1976; Flood, 1977). Ninio and Bruner (1976) studied mothers and infants during a picture book reading event, and found that dialogue appeared early on. Dialogue, not imitation, promoted the child's ability to label the pictures in the text.

Along this line, Cochran-Smith (1984), in her observational studies at Maple Nursery School, found that the stories shared at rugtime were extremely social. The meaning of the story was “negotiated” in a joint cooperation between the story reader and the children who were listening. The story reader influenced the listeners and the listeners’ responses influenced the story reader. Factors that influenced the interaction were the size of the group, the children’s familiarity with the book, the relationship of the listeners to each other and to the reader, the physical proximity of the listeners, and even the framework of the school.

Harrington found similar factors in a study of the read aloud event in 1995. She studied third grade responses to read aloud events in an observational study. She found that the reader’s style was significant, nonverbal behaviors were as important as verbal
behaviors, children’s attentiveness and responses were closely linked to the physical nearness of the reader, and finally that the rich discussion before, during and after the read aloud event promoted students’ higher level thinking.

Though most of the studies cited in this section of the literature review will describe studies using descriptive techniques, one empirical study done with kindergarten is of particular interest. Morrow (1984) conducted a study with lower middle to middle class kindergarten students in fifteen classrooms. There was a broad range of ability among the students who were placed in one of three treatment groups. The treatment groups consisted of the story structure treatment group, which received story structural questions and discussion; the traditional treatment group, which received traditional comprehension questions and discussion; the combined treatment group; and a control group. The students in the combined treatment group made the most gains, with the students in the traditional and structural groups showing gains in answering the type of question that they were taught. The students who made the most gains in this study were the high and middle achievers. Low achievers were not positively affected in this study. Storybooks chosen for the treatments were selected on the basis of a well developed story with well detailed characters, settings, themes, goals, plots and resolutions.

There are other studies that have documented the interactive nature of effective read aloud strategies that are descriptive in nature. Researchers have looked for teacher interactions that led to more in-depth processing on the part of the students or they looked
at what teachers did to engage children during the reading aloud of trade books. These
types of studies were done primarily in the lower grades.

Beidelman (1991) described the verbal and nonverbal interactions of at-risk
kindergarten students. She found that the structure of the text played a significant part in
the ability of the children to interact as did the amount of the teacher and students’
familiarity with the book.

In 1993, Burton studied the effects of coaching teachers in using before, during
and after strategies surrounding a read aloud event with first grade students. As the
teachers used the strategies, student verbal responses increased as did the level of
inferential and evaluative responses.

Beloin (1995) observed the effects of using interactive read alouds on students
with intellectual disabilities when they engaged in discussion with children in a general
education classroom. The students were able to participate in higher level dialogue and
make insightful contributions to the group discussions. The researcher noted that the peer
and teacher modeling and mediation helped the students to participate.

Echevaria (1993) conducted a study using instructional conversations with special
education students ranging in age from six to ten years old. She modified the technique
to meet the needs for the special population, using small groups of six students having a
wide range of reading ability. The teacher followed a typical instructional conversation
format by introducing a theme or idea relating to the text, relating the theme to the
students’ background, introducing the story and allowing students time to predict, reading
the text in chunks to allow for discussion, and finally going back to the theme and the students' background to talk about the text. She consciously utilized the maximum wait time, giving students ample time to respond to questions and often modeled a reading strategy. Echevaria (1993) found the conversation strategy effective in providing many opportunities for students to develop oral language, to increase reading comprehension, and to understand important concepts. An additional benefit was an increase in student motivation.

Finally, Maxwell (1993) read aloud daily to at-risk middle school students and observed their interactions during a class discussion. He found that daily journal writing was necessary to keep the discussion focused, that students' sharing in the discussion served as demonstrations to other students to follow, and that praise for using strategies was highly effective. He implied that students must have control and the responsibility for their own learning.

Three studies were located that were done with informational books alone. All were done with primary children.

Pappas (1991) analyzed a kindergartner's pretend readings of two nonfiction books. The data for the analysis was collected after the student (Jean) had participated in a shared book experience with a larger group of students. Three readings of two different types of books were analyzed. A narrative style informational book called The Owl and the Woodpecker (1971) and an expository style informational book called Squirrels (1974) by Brian Wildsmith were the two books used in the study. With each rereading of
the books, Jean included more details, more correct grammar elements, and more of the
text structure. Pappas concluded that Jean was very capable of understanding the
informational book structure when given the opportunity, and very eager to do so. The
researcher argues against what she terms the primacy of narrative and its apparently
exclusive use in the primary grades and states, “Exclusive use of stories, thus, may end up
being a barrier to full access to literacy” (Pappas, 1991, p. 461).

Along these same lines, Leal (1993) compared the listening comprehension scores
of third grade students after listening to two different styles of science informational
books. Ninety-six students in eight classrooms in a metropolitan area were arranged in
small groups. The experimental groups listened to an informational storybook while the
control groups listened to an informational book about the same topic. Students were
pretested, tested just after the reading, and then tested six weeks later. The students who
read the narrative informational book made more gains then did those students who
listened to the informational book. The researcher concluded that the style of writing in a
storybook may cause the information to be more memorable than information in
expository texts.

In a study using discussion as a strategy, Horowitz and Freeman (1995) compared
the preferences of kindergarten and second grade students for nonfiction books that were
read aloud, with and without discussion. Two books, very different in style, were used.
The first, Spaceship (Wildsmith, 1980), is a narrative style with very colorful pictures.
The second book, Get Ready for Robots (Lauber, 1987) is written in expository style with
simple line drawings. The read aloud event was controlled by tape recording the contents of the trade book prior to the listening session. Groups heard both books, some with and some without discussion questions. To the surprise of the researchers, the children preferred the informational style book, Get Ready for Robots, when discussion was part of the read aloud event, and Spaceship, when there was no discussion.

The qualitative research that has focused on effective strategies to use during a read aloud event has been very informative. The findings from the qualitative research reflect the impact of Vygotsky’s sociocultural theory and clearly document the power of social interaction to learn. More specifically, the studies describe the strategies that effective teachers use during a read aloud event. In summary, the most often mentioned term used in the observational studies to describe a read aloud event was discussion and the finding that good teachers promoted discussion in order to strengthen the connections between the print on the page and the new concepts learned. Also high among the descriptors of read aloud events was the development of higher levels of thinking, promoted not only by teacher questioning but through discussion of topics brought up by the listeners. Finally the use of teacher and peer modeling served as demonstrations during the discussions for other students to follow.

There was one factor of an effective read aloud event that may be a critical one for this study. It is the finding that the amount of familiarity with the text that was being read made a difference in the levels of discussion that were attained during and following the listening session. If Pappas’ argument about the “primacy of narrative” is correct, and
that familiarity with the text makes a difference in the quality of discussion, then children who have not been exposed to informational text may not be able to comprehend it readily.

Summary

This chapter has highlighted the research from the past four decades that has involved reading aloud. Early studies dealt primarily with oral development and its connection to reading achievement. Later studies focused on reading aloud in the primary grades and its effects on vocabulary as well as listening and reading comprehension. In the decade of the eighties, research concerning reading aloud focused on vocabulary acquisition in combination with reading comprehension and attitudes toward reading. Studies dealing with intermediate students became a focus. A new generation of studies followed, qualitative in nature, focusing on the read aloud strategies used in effective classrooms by effective teachers. Most recently, a new trend seems to be developing with an emphasis on the use of nonfiction or informational books in read aloud programs.
CHAPTER III

PROCEDURES AND METHODOLOGY OF THE INVESTIGATION

Overview

This study was designed to determine the effects of reading informational books aloud to inner city fourth and sixth grade students. Two different styles of reading aloud, one which includes student discussion, and one that does not, were compared. The scores from a diagnostic reading comprehension test and a reading attitudes survey were analyzed and evaluated to determine which style of reading aloud, if either, resulted in better comprehension and attitude toward reading.

This chapter describes the procedures used for implementing this study. The chapter includes a description of the community from which the population was drawn, the student population, and the procedure for selecting the two intervention groups. This chapter also includes a description of the treatments, the selection of the materials, and a description of the discussion techniques used in the study. Additionally, a statement about the design of the study is included along with the treatment of the data, and both the research and directional hypotheses. The chapter concludes with the limitations of the study and the summary.
Description of the Community

The school in which the study was undertaken is set in the middle of a federally subsidized housing project in a large city in the southwestern region of the United States. The school is one of four learning centers in an area that was specifically designed and established by the local school district to meet the needs of minority disadvantaged children. The learning center serves prekindergarten through sixth grade students with a total population of three hundred ninety-two children. Ninety-nine percent of the students who go to this school are considered economically disadvantaged, and thirty-five percent are considered to be at risk of failure according to the state's Department of Education. Eighty-seven percent of the student population is African American and twelve point five percent is Hispanic with the remainder of the population being white or Asian. Five percent of the students are considered to have limited English proficiency. One hundred percent of the school population qualifies to receive Title I funds according to the state’s 1996 Pupil Information Education Management System (PIEMS).

According to the 1994 census (CACI, 1994), the area in which the school is located has a predominately black population with a growing Hispanic population. Only twenty-five percent of the local population has graduated from high school. Statistically, this is the lowest rate of graduation in the entire urban area in which this school is located. Forty-nine percent of the population earns less than fifteen thousand dollars a year. Areas of the neighborhood are currently being redeveloped. Consequently, many of the apartment buildings have been torn down within the past three years. Families
have had to relocate, often moving out and then back into the neighborhood. This movement has caused disruptions in the cycle of education for many of the youngsters who attend schools in the area.

In addition, students from two nearby schools feed into the study school at the fourth grade level. This merging results in a fourth grade class that is academically more diverse than students at other grade levels in the building.

Description and Selection of the Population

Initially, sixty-seven fourth grade students and sixty-six sixth grade students were the subjects for this study. During the course of the ten week intervention, four fourth grade students and seven sixth grade students moved or transferred, and four fourth grade and two sixth grade students were placed in special education classes. Therefore these students were unable to participate throughout the remainder of the study. Five fourth grade students and one sixth grade student were not tested either in the fall or the spring, so their scores could not be used in the analysis. One sixth grade student, having recently moved from Bosnia, was unable to understand the reading and did not take the tests. Consequently, even though one hundred and fifteen students remained in the study; test results for only fifty-four fourth graders and fifty-five sixth graders were analyzed.

Three intact fourth grade science classes were included in the study, as well as three intact sixth grade science classes. These classes were small in number of students, ranging from fourteen to eighteen students in each classroom. In order to increase the number of students and likewise the power of the study for statistical purposes, two to
six additional students were pulled randomly from another self-contained classroom at each grade level to take part in the two treatments. At the commencement of the interventions, the adjusted class size of the three groups for both the fourth and sixth grades, ranged from twenty to twenty-three students. Due to student mortality or lack of test scores, each group consisted of eighteen to nineteen students at the end of the study.

The researcher conducted the two styles of reading aloud for all treatment groups. Since all fourth grade science classes were taught by the same teacher, and all sixth grade science classes were taught by the same teacher, these two teachers had indirect involvement in the study. Both veteran teachers and female, they had an average of twenty-nine years of teaching experience. The two teachers of the self-contained classrooms from which the additional students were being pulled were male. At the time of the study, one had taught for fifteen years, and the other was a new teacher with no previous teaching experience.

Research Instruments

Two assessment instruments were utilized in order to determine the effects of the two treatments in the study. One of the instruments was administered as part of the district-wide testing program prior to the study. Another instrument was administered just prior to the commencement of the interventions. Both assessments were administered a second time at the conclusion of the treatment period.

The Diagnostic Skill Profile (DSP) was selected to determine the effects on reading comprehension of both treatments and both questions one and two. Since this
assessment was already scheduled to be administered as part of a district-wide assessment program, it was used for the purposes of this study.

Question 1: Will reading informational trade books aloud improve the reading comprehension scores of fourth and sixth grade students on six subtests of a diagnostic reading test?

Question 2: Will reading informational trade books aloud in combination with a discussion about the contents of the book, further improve the scores of fourth and sixth grade students on six subtests of a diagnostic reading test?

The DSP was developed by the school district to assist teachers in determining the strengths and weaknesses of their students' abilities in math and reading, in order to better prepare them for the official TAAS test which is given every May. The items for the DSP were developed by the CTB company, a subsidiary of the McGraw Hill Publishing Company, which has a long record of publishing tests and test item banks. Its publications include the California Achievement Test (CAT) and the California Test of Basic Skills (CTBS). The DSP was modeled after the state TAAS assessment. There are six TAAS objectives that pertain to reading. Each objective is broken down into two to five more specific skills which are called targets. Test items for each objective and target on the DSP were selected from the CTB TAAS Item Bank which was developed over a six month period by experts in the field of reading and math. Included in the item bank are a minimum of ten items for each of the targets that are tested by the statewide test. The local school district selects items from the bank to develop different forms of a
test similar to the TAAS. Since this newly developed test is a criterion referenced diagnostic survey, it is not considered appropriate to develop norms.

The results of two tests for item quality indicated that the items on the DSP were constructed such that the test was indeed a fair replication of the TAAS. Though work is ongoing to improve the items on both of the fall and spring test forms, it was found that the initial forms were highly respectable. Using the students' answers, a probability or P value was found for each item of the test. That is, the probability that a student would get an item correct was found for each item of the survey. Items were considered to be well constructed if the P value was between .3 and .8. In other words, if students were able to correctly respond to the question between thirty and eighty percent of the time, the item was considered to be valid. Those items that had a low P value, or less than .3, (less than thirty percent of the students who took the test got them correct) were further analyzed for some type of question construction error, such as an unknown word, a syntax error, or some other phrasing that might cause the students confusion. Likewise, items that had an extreme P value over .8, (over eighty percent of the students got the answer correct) were considered to be too easy and were analyzed further. Very few items on both forms of the test were found to be below or above the recommended P value range of .3 through .8.

A point biserial correlation was used to determine if items on the surveys were able to discriminate between high and low achieving students. Most items had a point
biserial correlation greater than 0.3, indicating that most items were able to discriminate between high and low achieving students.

A correlational study between the items of the DSP and the TAAS showed test validity (Preliminary unpublished report from the Department of Test Development, 1997). Preliminary analysis of the items from the spring administration of the DSP to the TAAS which was administered in the spring, resulted in a correlation in the neighborhood of 0.65 at the fourth grade level and 0.70 at the sixth grade level. Item analysis from the answers of approximately 10,000 children at each grade level were used. Though this correlation factor was not especially high, it must be noted that the DSP is a diagnostic test, used to focus on the skills where students are weak. It was expected that the correlation between the two tests would be slightly lower than the 0.80 that is usually preferred, because inconsistent implementation of the DSP would differentially change the students’ response pattern on the TAAS relative to the DSP.

The reading portion of the DSP was used to analyze the effects of the two interventions against the control group in the present study. The test is divided into six subtests that assess each of the objectives that are tested by the state mandated test of basic skills. These objectives include (a) determine the meanings of words; (b) identify supporting details; (c) summarize written texts; (d) identify relationships and outcomes; (e) analyze information for inferences and generalizations; (f) identify point of view or fact and nonfact.
The DSP was administered to all students in the district in the fall of the school year and again in January, after the close of the semester. Two forms of the test were generated from a pool of items for each objective. The students in the present study took the profile in September and early February.

The Elementary Reading Attitude Survey (ERAS) was used to determine if the interventions had an effect on the students’ attitudes toward reading. This second assessment was used to determine the effectiveness of question three.

Question 3: Will reading informational trade books aloud improve the attitudes of fourth and sixth grade students toward reading?

The ERAS was developed by McKenna and Kear (1990) in order to overcome the shortcomings of earlier assessments that attempted to determine attitudes toward reading. They wanted to develop a test that was both valid and reliable. "The authors agreed that the survey must (a) have a large scale normative frame of reference; (b) comprise a set of items selected on the basis of desirable psychometric properties; (c) have empirically documented reliability and validity; (d) be applicable to elementary students, Grades 1 through 6; (e) possess a meaningful, attention-getting, student-friendly response format; (f) be suitable for brief group administrations; and (g) comprise separate subscales for recreational and academic reading" (McKenna & Kear, 1990, p. 627).

In developing an assessment which included the above standards, the authors used several previously devised surveys as models in the construction of the new instrument. Among them was one model that has been frequently used in the studies pertaining to the
effects of read aloud programs on reading attitudes. The Estes Scale to Measure Attitude Towards Reading (Estes, 1971) was used as the assessment in the studies on the effects of reading aloud on attitude toward reading by Lopez (1986); Cosgrove (1987); and Bartlett (1980). The ERAS builds on the strengths of this scale as well as several others (McKenna & Kear, 1990). For this reason, the ERAS was chosen as the assessment tool in the present study.

The ERAS uses the popular Garfield character, which is easily identified and liked by most children. The children select one of the four Garfield poses that best represent their feelings toward reading. The authors of the ERAS (McKenna & Kear, 1990) explain their use of a four point scale as opposed to a three or five point scale. A four point scale is preferred over a three or five point scale, because an even number of points on a scale forces the participant to make a stronger, more definite decision. Many of the previous scales made use of an uneven number of items, which was perceived as a weakness in the construction of the tool. In addition, rather than having many different questions on the assessment, a consistent format is used throughout the ERAS, each question starting with “How do you feel...” Finally, the survey assesses attitudes toward both academic and recreational reading. Ten questions address academic reading and ten questions address recreational reading.

Another feature of the ERAS that improves upon previous surveys is the collection of evidence for validity and reliability. The survey was given to a national sample of over eighteen thousand children, which was used as the norming group.
Construct validity was established for both the recreational component and the academic. Recreational validity was established by analyzing the use of the library in two different ways. The students in the norming group were asked two questions, (a) whether a public library was available to them and (B) whether they currently had a library card. (McKenna & Kear, 1990). The students with a library available to them, were placed into two groups according to whether or not they possessed a library card. The recreational scores on the ERAS were compared for these two groups of students. It was found that the students who held library cards (M = 30.0) had significantly higher (p < .001) scores on the recreational portion of the ERAS than those students who did not (M = 27.3, and that scores could be predicted on this basis.

The second test of construct validity compared the scores of students who had checked books out of a library to those who did not. The mean scores on the ERAS of the children who actually had books checked out (M = 29.2) were significantly higher (p < .001) than those children who did not (M = 27.3).

One more test on the recreational portion of the ERAS, compared the reported amount of time spent watching television to the score on the ERAS. The scores of students who watched less than one hour of television were compared to the scores of students who watched more than two hours each evening. It was found that the mean score on the recreational portion of the ERAS varied inversely with the amount of television watching that was reported. That is, the less television watching a student
reported, the higher the score on the recreational part of the ERAS \(M = 31.5\); the more television watching a student reported, the lower the score on the survey \(M = 28.6\).

The validity for the academic portion of the ERAS was established by comparing the survey scores to the reading ability of the students in the national norming group. Students were assessed as having low, middle or high reading ability by their teachers. Mean scores for the high ability group were 27.7 and 27.0 for the low group. This was a significant difference.

An intercorrelation coefficient of .64 was found between the two subscales on the ERAS. This meant that 41\% of the variance on one portion of the survey could be accounted for by the other. Since it would be expected that the two subscales would be somewhat related but not totally, this was considered a desired outcome.

Finally, factor analyses were conducted to determine if the items on the survey really measured recreational and academic attitudes toward reading. According to the authors, the factor analyses produced highly supportive evidence that the two portions of the survey represented two discrete types of reading.

**Description of the Interventions**

The process of the selection of the read aloud materials used during the course of the study are described in this section. A description of Intervention I and the discussion techniques that were utilized in Intervention II are included as well.

The selection of the materials read aloud was based on three factors. First, an attempt was made to match the trade book being read aloud to the theme or topic
currently being studied by each grade level. Otherwise, a trade book of exceptional
quality that pertained to a related theme or topic was chosen, or a topic previously
studied. Secondly, the trade book selected for reading aloud was selected on the basis of
its potential to feature one of the six targeted objectives on the DSP. Books were chosen
by the researcher with the assistance of a specialist in science literature, and a media
specialist. Third, an attempt was made to read trade books selected on the basis of their
quality as determined by recommendations in education and library journals. Sources
that were used to locate appropriate trade books can be found in Appendix A and a listing
of the books read aloud in the course of the study are listed in Appendix B.

The same trade books were read aloud for both Intervention I and Intervention II
groups. Both treatments occurred for fifteen minutes daily for a period of ten weeks.
Since the study took place through the holiday months of November and December, there
were some weeks which were three or four days long. These days were made up, so that
the interventions actually took place for fifty days.

In Intervention I, the teacher introduced the book with a two or three sentence
statement regarding the background of the book, new or difficult vocabulary and new
concepts. Included in the statement was a reference to one or two of the six targeted
reading objectives. The students were directed to listen for examples in the literature that
exemplified that objective. The students then listened to the teacher read the book aloud
for no more than ten minutes. As closure to the reading, students were asked what they
learned and allowed a short period to respond that usually lasted about one minute. The
remainder of the fifteen minute block of time was spent playing a game, independent silent reading with the researcher present in the classroom, or a one to one interaction with the researcher.

Students in the Intervention II group listened to the same informational book and number of pages as was read in Intervention I. In addition, students and teacher engaged in interactive discussions that occurred before, during and after the read aloud event. Though the discussions were not very long in duration, they were based on and used as much as possible, Goldenberg and Gallimore’s (1991; Goldenberg & Patthey-Chavez, 1995) Ten Principles of Instructional Conversations. These principles include conversations that involve (a) a thematic focus; (b) the activation of prior knowledge which is cycled back into the discussion; (c) direct teaching, if needed; (d) the promotion of higher levels of language usage and expression; (e) the promotion of metacognition and the use of text, pictures, and reasoning, by using probing questions such as “how do you know that?”; (f) the use of open ended questions; (g) responsiveness to students’ questions and interactions; (h) a connected discussion that builds on the interactions and comments of everyone participating; (i) a nonthreatening yet challenging atmosphere; (j) voluntary turn taking and participation by all or most students.

A variety of interactive devices has been suggested in the literature to allow students to respond to literature. Among these are language to literacy charts, (Roser, Hoffman, and Farest, 1990), reciprocal teaching (Palinscar & Brown, 1984), discussion
webs (Gambrell & Almasi, 1996) and written reflections (Maxwell, 1993). These strategies as well as some others from a variety of sources were used to focus the discussions in Intervention II on the basis of the content and format of the trade book being read aloud. For a list of these resources, see Appendix C.

In addition, at the onset of the study, it was clear that students in both intervention groups required some training in listening skills. At the beginning of each day for one week, a brief two minute lesson about the importance of listening and listening skills was conducted. Students in both groups made a T chart on listening, how it looks and how it feels, and completed a self report checklist after the reading was completed.

Data Collection Procedures

The DSP was administered in September, eight weeks prior to the beginning of the interventions. All students in the entire school district took the assessment at this time. Approvals from the school’s principal, from the area assistant superintendent, and the district’s Research and Evaluation Institute were solicited. Permission was sought from the parents of every fourth and sixth grade student to participate in the study and use the DSP results and ERAS. In accordance with the American Psychological Association’s (1982) “Ethical Principles in the Conduct of Research With Human Participants”, a copy of the Letter of Informed Consent is provided in Appendix D.

Upon obtaining permission from the parents for their children to participate in the study, students in grades four and six took the ERAS. This survey was administered by the homeroom teachers. All results were given to the researcher for analysis.
A schedule of times for each of the interventions to take place was arranged with the fourth and sixth grade science teachers. A fifteen minute block of time was required for two fourth grade classes and two sixth grade classes, one for each of the two interventions at each grade level. The researcher began the interventions as described upon completion of the attitudes assessment in October. One group listened to an informational trade book read aloud with a minimum of interaction. A second group listened to an informational book read aloud in combination with discussion and a variety of techniques that promoted that discussion. A third group served as the control group. The teacher and class in this group carried on with their regular school activities.

At the end of the ten week treatment period, a different form of the DSP was administered, as was the ERAS for a second time. Analysis of the data then began.

Research Design

Data from the results of the two assessments was analyzed using a design based on current theories of educational design proposed by Willett (1994), Bryk and Raudenbush (1987), and others. In the past, educational researchers have used the mean scores of the entire treatment group and compared them to the other groups. Based on the degree of significance, a determination was made as to the effectiveness of the interventions. Little or no consideration was given to why a change occurred and how it related to individual student background, training, or environment.

In order to better understand the effects of the interventions on individual change as opposed to an average of the whole group, current theorists in research design call for
an analysis that consists of two stages. The first stage or within-subject stage, utilizes data from individual students. Growth rates for each subject using an ordinary least squares (OLS) analysis are plotted on a graph so that a growth trajectory can be estimated. These results of the within-subject stage were then used as the basis for the second or between-subject stage. The growth rates from stage one are regressed on or correlated to variations in student backgrounds or experiences, such as ethnicity, socio-economic status, or experimental treatments.

In the present study, the difference scores between the pre and post tests were used to get the best estimate of growth for each individual and to compare the effects of the treatments. The subjects were considered to be the random effect; the treatments and the time period were the fixed effects. The subjects were nested within each treatment group as shown in Table 1. The variables that were analyzed in the second or between-subjects stage included ethnicity, sex, attendance, a teacher rating of discipline, parental involvement, and reading level, time of the intervention and time of reading instruction.

Table 1

<table>
<thead>
<tr>
<th>Treatment as Fixed Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Treatment (fixed effect)</strong></td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Pre</td>
</tr>
<tr>
<td>S1</td>
</tr>
<tr>
<td>S4</td>
</tr>
<tr>
<td>S7</td>
</tr>
</tbody>
</table>
Research Hypotheses

This study was designed to test the following hypotheses:

Question 1

**Research hypothesis 1:** No differences will be found in reading comprehension scores as measured on six subtests of the DSP between students who listened to informational trade books and those who did not listen to informational trade books.

**Alternate hypothesis 1:** The reading comprehension scores on the six subtests of the DSP will be greater for those students who listened to informational trade books, than those students who did not listen to informational trade books.

Question 2:

**Research hypothesis 2:** No differences will be found in reading comprehension scores as measured on six subtests of the DSP between students who listened to informational trade books in combination with discussion and those who did not listen to informational trade books.

**Alternate hypothesis 2:** The reading comprehension scores on the six subtests of the DSP will be greater for those students who listened to informational trade books in combination with discussion, than those students who did not listen to informational trade books.

**Research hypothesis 3:** No differences will be found in reading comprehension scores as measured on six subtests of the DSP between students who listened to informational
trade books in combination with discussion, and those who listened to informational trade books without discussion.

Alternate hypothesis 3: The reading comprehension scores on the six subtests of the DSP will be greater for those students who listened to informational trade books in combination with discussion, than those students who listened to informational trade books without discussion.

Question 3:

Research hypothesis 4: No differences will be found in attitudes toward reading scores as measured by the ERAS between students who listened to informational trade books and those who did not listen to informational trade books.

Alternate hypothesis 4: The reading attitude scores as measured by the ERAS will be greater for those students who listened to informational trade books, than those students who did not listen to informational trade books.

Limitations of the Study

1. The population studied was limited to fourth and sixth grade students.

2. The population studied was limited to the minority students in an inner city elementary school.

3. The study was limited to the extent that all read aloud interventions were conducted by the researcher.
4. The study was limited by the extent to which books about certain topics that were being studied in each classroom could be selected from recommended sources in library or school journals for quality and content.

5. The study was limited by the extent to which a specific book selected for the study contained sufficient examples to teach one of the six comprehension objectives that are specifically tested on the DSP and the TAAS. The judgment that a specific book contains such examples was decided by the researcher with assistance provided by a librarian and an expert in children’s science literature.

6. The study was limited to the extent that the classes were not intact classrooms. The addition of two to six students limits the effectiveness of the interventions and particularly the discussion treatment.

Summary

This chapter has described the population that was used in the study, the research instruments and the treatments that were used in the study, and the procedures for implementing the study. A description of the research design, both the research and directional hypotheses, and limitations of the study were also included.

Subjects for the study included one hundred fifteen fourth and sixth grade students attending an inner city school in a major urban school district in the southwest.

Analysis was done on the scores of one hundred nine subjects. The researcher compared the effects of reading aloud informational books during science classes on a diagnostic reading test that was similar to a mandated state test and a reading attitude survey. Three
groups at each grade level were compared in a two by three factorial pretest posttest
design. One group served as the control group. The two remaining groups participated in
two different read aloud treatments. One group heard books read aloud in combination
with a discussion of the content, while the other group listened to the same book with a
minimum of discussion.
CHAPTER IV

AN ANALYSIS OF THE DATA

Introduction

This study was designed to measure the effects of listening to a teacher read aloud informational trade books on the reading comprehension and attitudes of inner city fourth and sixth grade students. The read aloud event took place during the course of a unit of study in science. Six groups, three at each grade level, consisting of approximately twenty children, were the subjects for the study. One group at each grade level listened to the informational book read aloud, one group listened and participated in interactive discussion and the third group, as the control, continued the science class as usual. It was expected that the scores of the students in the two experimental groups would be greater than those of the students in the control on both measures of assessment. The scores from the Diagnostic Skill Profile (DSP), a diagnostic reading comprehension test similar to a state mandated test, were used to determine which style of reading aloud, if either, was more effective for comprehension. Similarly, the scores from the Elementary Reading Attitude Survey (ERAS) were analyzed and evaluated to determine which style of reading aloud, if either, resulted in a better attitude toward reading.
Presentation of the Hypotheses

This study was designed to test the following questions and hypotheses:

Hypotheses 1, 2, and 3

Question 1. Will reading informational trade books aloud as part of a unit in science, improve the reading comprehension scores of fourth and sixth grade students on the DSP?

Research hypothesis 1: No differences will be found in reading comprehension scores as measured by the total reading scores on the DSP between students who listened to informational trade books and those who did not listen to informational trade books.

Alternate hypothesis 1: The reading comprehension scores on the DSP will be greater for those students who listened to informational trade books, than those students who did not listen to informational trade books.

Question 2. Will reading informational trade books aloud as part of a unit in science followed by a period of discussion, further improve the reading comprehension scores of fourth and sixth grade students?

Research hypothesis 2: No differences will be found in reading comprehension scores as measured by the total scores on the DSP between students who listened to informational trade books in combination with discussion and those who did not listen to informational trade books.
Alternate hypothesis 2: The reading comprehension scores on the DSP will be greater for those students who listened to informational trade books in combination with discussion, than those students who did not listen to informational trade books.

Research hypothesis 3: No differences will be found in reading comprehension scores as measured by the total reading scores of the DSP between students who listened to informational trade books in combination with discussion, and those who listened to informational trade books without discussion.

Alternate hypothesis 3: The reading comprehension scores on the DSP will be greater for those students who listened to informational trade books in combination with discussion, than those students who listened to informational trade books without discussion.

To determine if either style of reading aloud had a significant impact on the reading achievement of the students in the experimental groups, a difference score was first computed for each student who participated in the study, including those students in the control group. This score was calculated by finding the difference between the totals of each student’s reading comprehension scores from the fall administration of the DSP to the spring. This difference score was used as the dependent variable for several statistical tests of analysis of variance.

In order to determine the amount of variance among the groups, analysis of variance first calculates a mean score for each group. Estimates of the group mean
difference scores for the read aloud group were 2.01, for the read aloud with discussion, 5.78, and for the control group, 4.54. Pairwise comparisons between the mean difference scores of the groups, shown in Table 2, reflect a significant difference in the mean scores between the read aloud only group and the read aloud with discussion. Both Post Hoc Tukey HSD and LSD multiple comparisons substantiated these results. The relationship between the groups is better shown in the profile plot in Figure 1.

Table 2

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I - J)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read Aloud Only</td>
<td>Read Aloud with Discussion</td>
<td>-3.79*</td>
<td>.011</td>
</tr>
<tr>
<td>Control - Regular Routine</td>
<td></td>
<td>-2.55</td>
<td>.090</td>
</tr>
<tr>
<td>Read Aloud with Discussion</td>
<td>Control - Regular Routine</td>
<td>1.24</td>
<td>.409</td>
</tr>
<tr>
<td>Read Aloud Only</td>
<td>Read Aloud with Discussion</td>
<td>3.79*</td>
<td>.011</td>
</tr>
<tr>
<td>Control - Regular Routine</td>
<td></td>
<td>-1.24</td>
<td>.409</td>
</tr>
<tr>
<td>Read Aloud Only</td>
<td></td>
<td>2.55</td>
<td>.090</td>
</tr>
</tbody>
</table>

Note. Figures are based on estimated marginal means. *p < .05.
Figure 1. The mean difference from the Read Aloud Only group to the Read Aloud with Discussion was significant.

Based on the data from the ANOVA paired comparisons as shown in Table 2, hypothesis 1 is accepted. The students in the read aloud only group performed below the students in the control group.

Based on the same data, hypothesis 2 is accepted. Though Figure 1 shows that the students in the read aloud group with discussion performed better than the students in the control group, the difference in the variations between the two groups was not significant at the .05 level.
Based on the same data, hypothesis 3 is rejected. The difference scores of the students in the read aloud with discussion group were significantly higher than those students in the read aloud only group. This difference between the groups was significant at the .05 level.

The data obtained from the fall and spring administration of the DSP was further analyzed by an analysis of variance as implemented by GLM that included the following terms and the interactions between them: (a) grade, (b) gender, (c) group, and (d) reading attitude. An ANOVA of the interactions between combinations of these variables based on the difference scores between the pre and post tests of the DSP indicated significant differences for grade, gender, group, and gender combined with grade as indicated by Table 3.

Table 3

**Between Subjects Analysis of Variance**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>2</td>
<td>3.421*</td>
</tr>
<tr>
<td>Grade</td>
<td>1</td>
<td>15.328*</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>4.205*</td>
</tr>
<tr>
<td>RAttitude</td>
<td>1</td>
<td>.022</td>
</tr>
<tr>
<td>Gender/Grade</td>
<td>1</td>
<td>4.679*</td>
</tr>
<tr>
<td>Group/Grade</td>
<td>2</td>
<td>.436</td>
</tr>
<tr>
<td>Group/Gender</td>
<td>2</td>
<td>1.14</td>
</tr>
<tr>
<td>Gender/Grade/Group</td>
<td>2</td>
<td>.493</td>
</tr>
</tbody>
</table>
Note. The difference score was calculated by subtracting the total fall score from the total spring score. *p < .05.

Hypothesis 4

Question 3. Will reading informational trade books aloud influence the attitudes of fourth and sixth grade students toward reading?

Research hypothesis 4: No differences will be found in attitudes toward reading scores as measured by the ERAS between students who listened to informational trade books and those who did not listen to informational trade books.

Alternate hypothesis 4: The reading attitude scores as measured by the ERAS will be greater for those students who listened to informational trade books, than those students who did not listen to informational trade books.

In order to determine the effect of the read aloud treatments on attitude toward reading, a difference score between the results of the fall and spring administrations of the ERAS was calculated for each student. Preliminary descriptive perusal of the data indicated a negative rather than positive gain for most of the students as shown in Table 4. The control group, overall, was the only group that demonstrated an increase in their attitude scores toward reading.
Table 4

<table>
<thead>
<tr>
<th></th>
<th>Read Aloud Only</th>
<th>Read Aloud with Discussion</th>
<th>Control - Regular Routine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-2.00</td>
<td>1.75</td>
<td>12.27</td>
</tr>
<tr>
<td>Male</td>
<td>-12.78</td>
<td>-0.63</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Grade 6</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-0.20</td>
<td>-1.71</td>
<td>-6.83</td>
</tr>
<tr>
<td>Male</td>
<td>0.13</td>
<td>-5.00</td>
<td>-1.46</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-14.85</td>
<td>-5.59</td>
<td>4.98</td>
</tr>
</tbody>
</table>

Pairwise comparisons for the difference in attitude score as well as Post Hoc multiple comparisons revealed that no significant differences existed among the three groups. An analysis of variance test of between-subjects effects, however, indicated a simple effects group by grade interaction significant at .022 (p<.05).

Profile plots, using the estimated marginal means of the difference in attitude score, showed cross-over in attitude by grade as shown in Figure 2.

Figure 2
In order to investigate the simple effects of the group by grade interaction of the difference scores in attitude, tests of significance using MANOVA revealed a significant difference between the groups in grade four at the .012 level. The differences in attitude were not significant in grade six.

Further Analysis

The relationship of the main effects for grade, group, gender, and group with gender for the difference scores on the DSP, were explored further using the data plots which follow in Figure 3, 4, and 5.

Figure 3

**Estimated Marginal Means of difference scores by Grade**
Figure 4

Estimated Marginal Means of difference scores by Gender

Figure 5

Estimated Marginal Means of difference scores by grade and gender
Some observable patterns emerge from this data. First, even though the evaluation instrument used in this study was considered to be a diagnostic test constructed specifically for each grade level, the sixth graders in the present study appeared to perform at a higher level than the fourth graders. The estimated mean scores based on the difference scores for each subject ranged from 1.40 for the fourth graders to 6.65 for the sixth graders. Figure 4 suggests a gender difference. The estimated mean difference scores for the females in the study was 5.07 and only 2.98 for the males. This finding is substantiated in Figure 5. A pairwise comparisons analysis between the males and females was significant at the .05 level. (p. < .04)

In order to test the significance of these gender, group, and grade relationships, a Pearson Correlation regression analysis for each group by grade and by gender was performed. On a 1-tailed test, fourth grade females were found to be positively correlated with the difference score of the DSP from fall to spring in all three groups and significantly correlated in the read aloud only group and with the control group.

As indicated by Table 5, there were no significant correlations found for any of the groups in relationship to gender for the sixth grade. Looking at the table, in the read aloud only group, it could be said that approximately seventy-seven percent of the time, the variance in the difference scores of the fourth grade females in the read aloud only was attributable to the variance in their total fall score on the DSP and the fact that they were female. In contrast, for the males, the variance of the difference score could only be attributed to their fall score approximately four per cent of the time.
Table 5

Correlations using the Total Fall Score of the DSP as a predictor

<table>
<thead>
<tr>
<th>Gender/Grade</th>
<th>R Square</th>
<th>Sig. F</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Read Aloud Only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>.774</td>
<td>.009*</td>
<td>7</td>
</tr>
<tr>
<td>male</td>
<td>.042</td>
<td>.595</td>
<td>9</td>
</tr>
<tr>
<td>6 Read Aloud Only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>.003</td>
<td>.883</td>
<td>9</td>
</tr>
<tr>
<td>male</td>
<td>.001</td>
<td>.947</td>
<td>7</td>
</tr>
<tr>
<td>4 Read Aloud with Discussion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>.438</td>
<td>.074</td>
<td>8</td>
</tr>
<tr>
<td>male</td>
<td>.075</td>
<td>.510</td>
<td>8</td>
</tr>
<tr>
<td>6 Read Aloud with Discussion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>.019</td>
<td>.766</td>
<td>6</td>
</tr>
<tr>
<td>male</td>
<td>.084</td>
<td>.386</td>
<td>10</td>
</tr>
<tr>
<td>4 Control - Regular Routine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>.427</td>
<td>.029*</td>
<td>10</td>
</tr>
<tr>
<td>male</td>
<td>.016</td>
<td>.840</td>
<td>4</td>
</tr>
<tr>
<td>6 Control - Regular Routine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>.004</td>
<td>.909</td>
<td>5</td>
</tr>
<tr>
<td>male</td>
<td>.020</td>
<td>.643</td>
<td>12</td>
</tr>
</tbody>
</table>

Note. Females in the fourth grade were found to have a higher correlation between their score on the fall administration of the DSP and their total difference score.

*p < .05.
Additional Data Analysis

Additional analysis of the data was undertaken for two reasons: (1) In order to better understand the factors that might be related to the changes in the students that occurred throughout the duration of the study, and (2) to deal with a common occurrence in evaluation research termed “heterogeneity of variance” (Bryk and Raudenbush, 1988).

Traditionally, analysis of variance (ANOVA) has been used to analyze the effectiveness of treatment intervention studies. It pools the differences in the variation of the group members to get an overall estimate of the variation for the group. This estimate is then attributed to two factors, treatment effects and other sources of variation, which ANOVA refers to as “error”. By pooling the differences, ANOVA makes the assumption that all students are equally effected by the treatment. Clearly, this does not occur. Students in any group vary in their rates and amounts of change across time. These changes that occur may be predicted by other measured variables such as gender, race, socio-economic status, or parental education. It was in the interest of the present study to search for individual factors that might contribute to the success or failure of the interventions.

Secondly, current researchers in statistical analysis suggest that an interaction may occur among students in a particular group that would cause them to be more alike. This interaction is termed “heterogeneity of variance” and when found, is a violation of the parameters for using ANOVA. The presence of heterogeneity suggests that individual differences may be interacting with the treatment to cause it to be more or less powerful.
Several researchers in statistical design (Bryk and Raudenbush, 1988; Lyons and Howard, 1991) suggest that both individual and treatment differences should be explored whether or not heterogeneity is found. They argue that even if the ANOVA assumption of homogeneity is met, there are likely individual differences that are interacting with the treatment.

With these two reasons in mind, an exploratory descriptive analysis was undertaken with the data in the present study to estimate the growth rates of the different groups. Not only was it in the interest of the researcher to find possible factors that may be related to the effectiveness of the interventions, but the groups used in the intervention indeed violated the "homogeneity" assumption required by ANOVA which was used in the present study.

Student background and individual characteristics based on teacher input were added to the initial data set for each student in order to determine possible factors of change. A complete list of these characteristics are listed in Table 6. Each of the characteristics was compared on the basis of group, gender, and grade since these variables were already established through the ANOVA as having a significant relationship to the outcome of the study.
Table 6

**Student Characteristics Explored as Variables for Predictors of Change**

<table>
<thead>
<tr>
<th>Subtest, characteristic, or background</th>
<th>Fall score</th>
<th>Spring score</th>
<th>Rating by teacher below, average, above</th>
<th>Categorical Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Attitude</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word Meaning</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supporting Ideas</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summarization</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationships and Outcomes</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inference</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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**Note.** Cell sizes for most of the listed characteristics were too small for data analysis when broken down by gender, grade, and group.

The descriptive data on each of the characteristics was studied for patterns in variance or systematic differences. In addition, S-plus as well as SPSS and SAS were
used to graph scattergrams in order to visually assess the relationships between the spring score on the DSP, the total difference scores, and other selected individual differences of the students.

Once again, as established with the original ANOVA, gender, grade, and group were the factors found to have the most impact on the difference scores between the fall administration of the pretest and the spring administration of the posttest. Based on the exploratory analyses, another variable emerged as a factor with the potential to predict difference scores on the DSP. That variable was reading attitude. Lack of sufficient subjects in each cell limited the analysis in the areas of parental involvement, discipline, and reading level as rated by the teacher as well as ethnicity. Daily attendance was totaled for the intervention groups alone, so was not used in the analysis since the data was not complete.

Analysis of the regression lines from the scattergrams for group comparisons allowed the researcher to determine possible predictors of change. Patterns observed in the regression lines, based on the variables on the X and Y axes, allowed the researcher to find evidence of variation among the students. Variation was determined by the presence of some predicted fanspread effect of the student scores; that is by the presence of a regression line other than flat.

A regression line is “fitted” to the points of data that are plotted for each student; it is a best fit of all the scores. If the regression line was flat it would indicate that all of the students scored the same on whatever variable was plotted. If however, the regression
line was angled, it would indicate the possibility that the slopes of the regression lines for each student were very different. Consequently, the scores for each student would reflect a fanspread effect.

This fanspread effect could be the result of several different patterns of scores. First, the pattern of student scores could be such that they criss cross; that they actually change in rank order from the initial assessment to the last. Second, the scores could be such that most of them start close together and all increase at varying amounts.

This fanspread effect presents an argument against (1) the use of ANCOVA to analyze this set of data, (2) as evidence that the difference score is reliable, and (3) as evidence that there is not regression toward the mean. Evidence of patterns of variability are an indication that an ANCOVA would not be appropriate with this data. Evidence of variability suggests that the growth of individual students is not equivalent and that their rates of growth are nonparallel. That is, that the slopes of the regression lines are not parallel. Parallelism is an assumption that must be met in using ANCOVA.

Second, there has been tremendous controversy among statisticians over the reliability of difference scores. Finding variability of change over time increases reliability, as does parallelism. According to Willett (1983), “When the variation of the true change from one person to the next is large, the reliability of the difference score can even be greater than the reliabilities of the constituent pretest and post-test scores”. He adds that low reliability occurs when most of the people in the sample are changing at the same rate. Clearly, based on the patterns in the scattergrams as well as individual profile
plots, the students in the present study had a wide range of variability and they were changing at different rates.

Finally, the finding of increased reliability and this fanspread effect is an argument against those statisticians who would say that there was regression toward the mean. The finding of the regression lines fanning out over time implies that they are not regressing toward a mean score.

The patterns of variability allow the researcher to find possible interactions occurring between some factor or factors that may be systematic and may account for the change in the variable that has occurred. In looking for systematic differences in the data, a series of scattergrams was plotted first in relation to the difference in reading scores and then in relation to the difference in reading attitude. Both sets of graphs are presented in Appendix E. Initially the total fall score was plotted against the difference total score for all of the students in all of the groups. This scattergram was compared to one generated with the total spring score plotted against the same difference total score. Noticeable was the flat line of the total fall score and the slope of the total spring, indicating an increase in the variability of the students over time.

These plots were broken down by grade and group. Figure 7 shows a fanspread effect for fourth grade with fall regression lines appearing to cross over the spring lines.

Finally, each scattergram was broken down by grade, by group, and by gender for analysis. When the total difference scores between the fall administration of the DSP to the spring were plotted against the total fall scores, the fourth grade groups produced
fairly steep slopes, as shown in Figure 9. This slope indicated a steeper growth curve for
the fourth graders in all of the groups, and a more pronounced slope for both of the read
aloud groups. The sixth grade groups’ regression lines were flatter and showed a great
deal of variability around the regression line.

The remaining scattergrams using the difference in reading attitude scores
provided insight into the variability of the students. Figure 10 revealed that the higher the
difference in attitude score, the higher the difference score in reading. The total fall score
on the DSP was plotted against the difference in attitude scores for each grade by group
by gender as was the total spring score. In addition, the difference in reading attitude was
plotted against the total difference score of the DSP from fall to spring.

Preliminary findings for the total fall score of the DSP regressed on reading
attitude score shown in Figure 13, suggest that the lower a student’s fall score, the higher
their difference score in reading attitude. This finding would seem to hold true for female
fourth grade students in both the read aloud only and read aloud with discussion groups
as well as the sixth grade females and males in the read aloud with discussion. Fourth
grade males, and sixth grade males to a lesser extent, appear to vary in just the opposite
way.

Gender differences were also indicated in the regression of the difference in
reading attitude to the difference total score from fall to spring on the DSP shown in
Figure 15. It appears that females in the fourth grade changed in attitude as their
achievement on the DSP increased. The attitude of sixth grade females on the other hand, appeared to decrease as their achievement increased.

A final regression of the total spring scores on the difference in reading attitude scores as shown in Figure 15, revealed that low achieving females on the spring administration of the DSP appeared to have higher reading attitude difference scores.

Findings of the Study

This chapter presented the research hypotheses and the analysis of the data for each. Statistical analysis of the data revealed a significant difference only between the read aloud only group and the read aloud with discussion, allowing the researcher to reject the null for Hypothesis 3, with a 95% confidence that the acceptance of the alternate hypothesis is accurate as follows.

Alternate hypothesis 3: The reading comprehension scores on the DSP will be greater for those students who listened to informational trade books in combination with discussion, than those students who listened to informational trade books without discussion.

Though the group means revealed a positive direction favoring the read aloud with discussion group, the analysis for Hypothesis 2 failed to show a significant difference. Hypothesis 2 was retained.

Research hypothesis 2: No differences will be found in reading comprehension scores as measured by the total scores on the DSP between students who listened
to informational trade books in combination with discussion and those who did not listen to informational trade books.

Hypothesis 1 was retained. In fact, the mean difference scores of the students in the read aloud only group were inferior to those of the students in the control group to the extent that the difference was nearly significant. (*p = 0.09)

**Research hypothesis 1:** No differences will be found in reading comprehension scores as measured by the total reading scores on the DSP between students who listened to informational trade books and those who did not listen to informational trade books.

According to the analysis of the present study, reading aloud informational trade books, with or without discussion, fails to improve student attitudes toward reading. Hypothesis 4 was retained.

**Research hypothesis 4:** No differences will be found in attitudes toward reading scores as measured by the ERAS between students who listened to informational trade books and those who did not listen to informational trade books.

Additional analysis of the data through descriptive and correlational analysis substantiated and revealed other findings. Specifically, they are as follows:

1. Significant main effects were found for group, gender, grade, and group and gender combined.

2. Though not statistically significant, effects were found at the .09 level of significance between the read aloud only group and the control group in a negative
direction. In other words, the effect was in the opposite direction of the research hypothesis.

3. Fourth grade students’ growth curves were steeper than those of the sixth grade students.

4. Females made significantly higher difference scores from the pre to post assessment than males in all three reading groups.

5. Low achieving fourth grade females, involved in either read aloud group, improved in their attitude toward reading more than fourth grade males.

6. Low achieving females in the spring, had higher reading attitude difference scores than males and higher achieving females.

Summary

This chapter provided an in-depth overview of the analysis of the data for the present study. Analysis of variance as well as regression was used in the analysis. The means between the two treatment groups differed significantly, allowing the researcher to reject hypothesis 3 at the 0.05 level of confidence. The remaining four hypotheses were retained.

Chapter V summarizes the study and suggests implications for further research and its impact for the classroom.
CHAPTER V

DISCUSSION OF THE RESULTS

Overview of the Study

The ability and will of the children in the inner cities of our country to read has long been a concern to educators. It seems that even though much has been learned about the best methods to teach reading, we have most often failed to make these methods available to inner city children. Whether they lack the interest, the opportunity, the materials, or the appropriate instruction, many of these children have failed to master the skills needed for literacy. This problem is compounded at the beginning of fourth grade, when students across the country experience a slump in achievement (Chall & Snow, 1982). No longer are the students expected to learn how to read, they are expected to read in order to learn. The problems of those children who can't read are compounded.

At this point, the Matthew affect sets in (Stanovich, 1986), and the children who can read, read more, build fluency, improve their ability to comprehend, and consequently, learn more; those children who lack the ability to decode, read less, learn less, and may even lose the ability to perform any of the skills they had previously acquired. In addition, as children enter the intermediate grades, more emphasis is placed on passing tests of basic skills. So that children pass these tests, particularly in schools where there is a high poverty and minority population, the focus of instruction is on
discipline, test taking skills, and teaching only the objectives that are on the test. The content subjects, social studies, history and science, are not tested. Therefore, they are not considered important and very often given short time allotments, if given any at all. Yet the skills most necessary to pass the objectives of such tests, a wide vocabulary and broad experiential background, are promoted and expanded in the teaching of these same content subjects.

For this reason, the present study was conducted, not only to offer validation for incorporating read aloud in intermediate classrooms, but to demonstrate the benefits of reading informational books as well. Reading aloud informational books to students in the intermediate grades, especially those lacking in background knowledge, could help them build vocabulary and knowledge about subjects with which they are not familiar. Reading aloud could provide a connection to print, that, because the information is presented in a more thorough, meaningful way, allows students to learn. Reading aloud informational books to children who lack reading skills, could provide the means for them to learn something they could not or would not learn on their own.

Reading aloud to students has been suggested as the "single most important activity for building the knowledge required for eventual success in reading" (p. 23), by the Commission on Reading in *Becoming A Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985). Though this statement is frequently quoted, studies on the effectiveness on reading aloud have not been conclusive. The research fails to show clearly that simply reading aloud helps children to gain vocabulary, learn strategies, and
foster skill building. What it is beginning to show, is the need for an interactive approach (Stahl et. al; Cochran-Smith, 1985; ). Children need to be actively engaged no matter what the method or topic in order to learn.

The present study was designed to measure the effects of listening to a teacher read aloud informational trade books on the reading comprehension and attitudes of inner city fourth and sixth grade students. Three questions were asked:

1. Will reading informational trade books aloud as part of a unit in science, improve the reading comprehension scores of fourth and sixth grade students on the Diagnostic Skill Profile (DSP)?

2. Will reading informational trade books aloud as part of a unit in science, followed by a period of discussion, further improve the reading comprehension scores of fourth and sixth grade students?

3. Will reading informational trade books aloud influence the attitudes of fourth and sixth grade students toward reading?

Two different styles of reading aloud, one which included student discussion, and one that did not, were compared to a control group. It was expected that the scores of students who had listened to books being read aloud in either style would show greater achievement on a reading assessment as well as a reading attitude survey. The books that were read aloud were chosen to coincide with the units the students were studying in their science classes. One hundred fifteen fourth and sixth grade students were included in the study, but only the scores of one hundred three children were used in the analysis. One
group at each grade level listened to the informational book read aloud, one group
listened and participated in interactive discussion and the third group, as the control,
continued the science class as usual. The scores from the DSP were used to determine
which style of reading aloud, if either, was more effective for comprehension. Scores
from the Elementary Reading Attitude Survey (ERAS) were analyzed and evaluated to
determine which style of reading aloud, if either, resulted in a better attitude toward
reading.

Overview of the Results

Statistical analysis of the data from this study allowed the researcher to reject only
one of the original four hypotheses. Analysis of variance and regression were used to
analyze the data. Additional preliminary findings were revealing.

1. Hypothesis I was accepted. No differences were found in reading
comprehension scores as measured by the total reading scores on the DSP between
students who listened to informational trade books and those who did not listen to
informational trade books. The data clearly show that the mean differences of the
students in the control group at both grade levels were greater than the Intervention I
group which was the read aloud only group. This finding is important in light of the
numerous claims for reading aloud. With this population, just reading aloud did not
produce greater achievement in reading. There are several factors that could be attributed
to this finding. These factors include the type of text used and the children’s
unfamiliarity with it, and certainly, the lack of interaction with the information in the text.
The use of informational trade books themselves as read aloud material, is not very common and particularly with the students in the inner city. These inner city students lack what Rosenblatt (1968) calls a "reservoir" of experiential background. Not only are they limited in their exposure to experiences outside their neighborhood and by their parent's lack of knowledge and modeling, they also often lack materials both inside the school and out. Presenting information to children who lack these experiences, even though in an interesting format, without building background or clarifying vocabulary and concepts, or allowing them time to interact with the new information in any significant manner, appears to fail to add to their knowledge base. Merely reading aloud, at least informational books, to this population failed to achieve the desired results.

2. Hypothesis 2 was accepted. No differences were found in reading comprehension scores as measured by the total scores on the DSP between students who listened to informational trade books in combination with discussion and those who did not listen to informational trade books. Though this hypothesis was retained due to the lack of a significant difference in the two groups, it was clear from the data that reading aloud with discussion was favored over the control group. Though not significant, this favorable finding supports others in the field of research who have found positive effects for reading aloud to intermediate students (Briechle, 1984; Cosgrove, 1987; Fearn, 1971; Porter, 1971; and Wright, 1992). Further, it supports the effective use of informational trade books in a read aloud program, illustrating that though children may be primarily used to hearing narrative text, their overall reading achievement can be improved by
listening to information about science topics. This finding speaks as well to those teachers and administrators who rely on test-taking strategies and an overemphasis on teaching the specific objectives of standardized or criterion referenced tests. In this study, the reading skills for those students in the discussion group were improved during a science class.

3. Hypothesis 3 was rejected. The data revealed a significant difference between the read aloud only group and the read aloud with discussion with a 95% confidence to accept the alternate hypothesis. That is, the reading comprehension scores on the DSP were greater for those students who listened to informational trade books in combination with discussion, than those students who listened to informational trade books without discussion. The discussion group, though the difference was not significant, not only did better than the control group, but they performed significantly better than the other read aloud group. It is clear that discussion played an even greater role than was expected at the onset of this study. The findings support the most recent wave of descriptive research (Eschevaria, 1993; Burton, 1993; Maxwell, 1993; and Beloin, 1995) dealing with reading aloud that was referenced in Chapter II. Two of these studies (Eschevaria, 1993; and Beloin, 1995) used interactive discussion strategies or instructional conversations very successfully with special needs students. The results of the study also reflect the findings in studies by Roser, Hoffman, and Farest (1990) where the use of discussion in combination with written responses to text in the form of Language to Literacy charts,
proved highly effective in improving the achievement of students on a state mandated test of minimum skills.

4. Hypothesis 4 was accepted. No differences were found in attitudes toward reading scores as measured by the ERAS between students who listened to informational trade books and those who did not listen to informational trade books. Unlike many of the studies previously done with reading aloud and attitude (Porter, 1971; Weidner, 1976; and Cosgrove, 1987), the present study failed to produce any positive increase in student attitude toward reading. In fact, it appears as though just the opposite occurred.

An explanation for such a result would be helpful. In looking at the research, it could be said that the results on studies using reading aloud and reading attitude are quite mixed. There were studies mentioned in Chapter II, that failed to produce a gain in reading attitude. Bartlett (1980) failed to find a positive effect with respect to reading attitude in his work with middle socio-economic fourth graders. Likewise, Lopez (1986) failed to find a significant effect with third graders in a metropolitan area.

In the interest of the present study, an explanation may be found in the administration of the assessment tool, the time allotment for the study, the text used, the schedule of the school day, or the read aloud event itself. The ERAS, used as the reading assessment tool, was administered by the homeroom teacher, not the researcher, for each of the groups of students involved in the study. This procedure was done in order to eliminate student bias toward the researcher. Possibly, there was a lack of clarity or direction on the part of some of the administrators. In addition, though this assessment is
highly standardized, it was a very novel activity the first time it was done. This fact, in combination with the a fairly short interim between the two assessments, could possibly account for a poor second rating by most of the students.

A second factor could lie in the time allotted for the interventions. In both fourth and sixth grade science classes, there was a limited time built within the class period to do homework or have free time. Students who participated in the two interventions were deprived of this extra time which possibly effected the outcome of the reading attitude scores.

Third, the informational text used was new to the students. They were not familiar with the format of the trade books. The books, though selected from recommended sources, were sometimes difficult for the students to relate to, pictures were unable to be seen, or difficult for comprehension. As the reader and observer in the intervention groups, it is difficult for the researcher to believe that this was a factor in the negative difference on the reading attitude scores.

Fourth, the schedule during the school day may have effected the response of the students, particularly the fourth graders. In preparation for the state mandated test, the fourth graders were provided with intensive drill in writing skills during approximately half of the duration of the interventions. During this time period, the schedule of classes was disrupted such that the two intervention groups received only instruction in writing skills and very little, if any, in reading. The control group, on the other hand, received
daily reading instruction as well as the writing instruction. This factor could account for
the negative reading attitude scores for intervention groups and the positive score for the
fourth grade control group as shown in Table 4. This factor could also account for some
deflation in the difference scores in comprehension of the fourth graders.

Finally, the read aloud event itself or the reader could have negatively impacted the
reading attitude scores. The researcher, though not unbiased, would have to conclude
from observation of student response that this was not a factor.

Overview of Additional Results

The additional analysis of the data through ANOVA, descriptive and
correlational analysis was revealing.

1. Significant main effects were found for group, gender, grade, and group and
gender combined.

2. Though not statistically significant, effects were found at the .09 level of
significance between the read aloud only group and the control group in a negative
direction. In other words, the effect was in the opposite direction of the research
hypothesis. This finding was discussed at length under hypothesis 2.

3. Fourth grade students’ growth curves were steeper than those of the sixth grade
students.

4. Females made significantly higher difference scores from the pre to post
assessment than males in all three reading groups.
5. Low achieving fourth grade females, involved in either read aloud group, appear to improve in their attitude toward reading more than fourth grade males.

6. Low achieving females in the spring, had higher reading attitude difference scores than males and higher achieving females.

These findings lend support to previous research that has been done with reading aloud. Porter (1971) also found that the students in the fourth grade made more gains in reading comprehension than those students in fifth and sixth grade and concluded that reading aloud may help younger students more than older students. Cullinan, Jagger, and Strickland (1974) as well as Stahl et al. (1991) found that the less able reader had the most to gain in read aloud programs that promoted vocabulary. In addition to the finding for vocabulary, Cohen (1968) found similar results for the low achiever in reading comprehension, as did Fearn (1971). This finding is supported by the present study; low achievers, according to either the fall or the spring assessment, showed higher reading attitude difference scores.

It became clear through several analyses of the data, that females appeared to benefit more from the interventions than males, but they also gained more in the control group as well. This is not a particularly surprising outcome as there have been many studies done with gender that show that school age girls gain at a more rapid rate than boys.
Implications of the Results

The findings of this study supported only in part the statement made by the authors of *Becoming a Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985). That is, that reading aloud is the “single most important activity for building the knowledge required for eventual success in reading” (p. 23). It seems that there needs to be more explanation in the definition of reading aloud. Implications of the findings are discussed in terms of theory, research, and practice.

Implications in Terms of Theory

Louise Rosenblatt (1978) talks about allowing children to respond first aesthetically and then efferently to narrative as well as informational text. In light of the present study, it seems clear that children indeed do need a time to respond, to make a meaningful connection in some way to the information that was presented. The group of children who participated in the read aloud without discussion, had little opportunity to reflect and respond to the text. They were unable to make connections to the text or, if they did, to reinforce that connection by expressing it to a peer or the teacher. Neither were they asked any significant questions about it. It remained an event that, outside of having a connection to the unit of study in their science class, had little meaning to them. On the other hand, the children in the group which included discussion, responded freely, were given time to ask questions, tell an interesting fact, relate new information to something they already knew, or allowed some opportunity to manipulate or use the information in some expressive way.
In terms of Vygotsky’s sociocultural theory, the teacher in the read aloud only group could not act as the scaffold and assist the students in their understanding of the text as she did in the read aloud with discussion group. Neither could any other member of the class. Unlike the discussion group, there was no opportunity to negotiate the meaning of the text with others as did the children in Marilyn Cochran-Smith’s rugtime (1987). There was no opportunity to strengthen the new connections learned from the print on the page. The present study clearly documents the power of social interaction for learning.

**Implications for Research**

The limitations of this study in terms of the subjects and size of the population and the generalizability to other populations, the materials used, and the time allotment, suggest topics for further research.

1. Utilize a similar research design measuring understanding of and attitude toward science rather than reading.

2. Utilize a similar research design using only informational books that are highly recommended and surrounding a variety of topics, not limited to classroom units of study.

3. Utilize a similar research design using second and third grade subjects.

4. Utilize a similar research design comparing the effects of students listening to stories read aloud to students listening to or reading stories that are technology generated.

5. Utilize a similar research design over a longer period of time.
6. Utilize a similar research design across cultural and economic lines.

7. Utilize a similar research design using multiwave data.

Implications for Practice

There are several implications for practice that are suggested by the findings of this study. They include a rationale for incorporating strategic reading aloud as part of regular classroom routine, a rationale for allowing students access to informational text and the use of trade books to assist in teaching academic objectives, a rationale for building positive attitudes toward reading, and a rationale for providing opportunities for students to engage with informational text at younger ages.

Though not all of the findings of this study were significant in the traditional sense, the children who participated in the intervention with discussion clearly benefited from the discussion both in fourth and sixth grade. Not only were their difference scores more varied, their growth curves were steeper on the whole than the children in the group with read aloud only or the control. The implications from the findings then would seem to indicate a strategic read aloud program. Weidner (1976) showed that a short consistent daily read aloud program was highly effective. Recent descriptive studies (Cochran-Smith, 1984; Harrington, 1995; Burton, 1993; Beloin, 1995; Maxwell, 1993 and Echevaria, 1993) as well as the present experimental study would indicate a need to incorporate a highly interactive social context for the reading aloud program.

Second, numerous studies have documented the benefits of reading aloud to language development and vocabulary (Chomsky, 1972; Cullinan, Jagger, and Strickland,
1974; Cohen, 1978; Stahl, Richek, and Vandevier, 1991; Maher, 1991; Phillips, 1900), as well as reading achievement (Cohen, 1968; Raftery, 1974; Roser, Hoffman, and Farest, 1990; Fearn, 1971; Porter, 1971; Weidner, 1976; Briechle, 1984; Cosgrove, 1987). The important difference in the current study was the inclusion of all informational books. The use of informational books as a separate genre as long as it was combined with discussion, proved to be an effective strategy to use in a content classroom. In fact, even though the read aloud intervention was conducted in a science classroom with science trade books, the read aloud with discussion group outperformed both the read aloud only group and the control group on a reading achievement test.

Third, though it appears from the present study that the reading aloud of informational trade books does not help to improve attitudes toward reading, there is an implication in this regard that can be drawn from the findings in this study. The children who benefited most in attitude toward reading were low performing students who participated in either one of the read aloud groups. It would seem that if reading aloud could be used to effectively improve the attitudes of poor performing readers early on, there would be a greater chance to improve their reading skills.

Finally, findings of the study indicate a need to provide opportunities for children to be exposed to informational text in earlier grades. As indicated by the steeper growth curves of the students in the fourth grade in both the read aloud and read aloud with discussion groups, the fourth graders benefited more from the intervention than did the
sixth graders. Even though the scores for the sixth graders appeared to improve the most, the fourth graders learned at a faster rate.

Further, Beidelman (1991) and Pappas (1991) both worked with very young students where the amount of familiarity with the text that was being read made a difference in the levels of discussion that were attained during and following the listening session. In other words, the more familiar a student is with a certain style of text, the better able he or she is to talk about it and understand it. This finding, in conjunction with Pappas' (1991) argument that there is a "primacy of narrative" in the lower grades that dictates that most children hear only story and rarely if ever hear informational text read aloud, could account for the lack of a significant effect in the read aloud with discussion group. The children in this study had not often been exposed to informational text, and therefore may not have been able to comprehend it readily. "Exclusive use of stories, thus, may end up being a barrier to full access to literacy" (Pappas, 1991, p. 461).

Summary

This study measured the effects of reading aloud informational books to intermediate fourth and sixth grade students in the inner city. Two different styles of reading aloud, one which included student discussion, and one that did not, were compared to a control group in a pretest posttest design. One hundred three fourth and sixth grade students from three intact science classes at each grade level were the subjects for the study. The researcher conducted both of the interventions, one in each of two science classes at each grade level. The remaining science class was used as the control
group. Both interventions took place for a period of ten full weeks with a duration of fifteen minutes daily. Students in Intervention I listened to the teacher read aloud an informational trade book for approximately ten minutes and then interacted with the class for the remainder of the block. Students in Intervention II listened to the teacher read aloud the same informational trade book for a period of fifteen minutes daily with discussion and interaction occurring throughout.

Data from two assessments were analyzed for effects. The Diagnostic Skill Profile (DSP) and the Elementary Reading Attitude Survey (ERAS) were administered in the fall just before the onset of the interventions, and in February, just after the ten week completion of the interventions.

Analysis of variance was used to compare the effects of the interventions on the entire group, and regression was used to study the growth rates of individual students.

Data analysis yielded main effects for group, grade, and gender. Though the read aloud with discussion group had the highest mean score, followed by the control group, the mean differences between these two groups for reading achievement were not significant. Differences between the read aloud with discussion and the read aloud only group were significant at the 95% level of confidence. There were no significant effects for reading attitudes, though the total difference in reading attitude for both interventions was negative.
Preliminary additional findings revealed that females benefited more than males, low achieving students benefited more than higher achieving students, and fourth graders benefited more than sixth graders.

Implications for theory suggest that reading aloud with discussion fits well into the theories of Rosenblatt and Vygotsky, but just reading aloud without benefit of interaction does not. Suggestions for research were given in the final chapter as well as implications for practice. Suggested are the inclusion of daily strategic reading aloud practices, the use of informational trade books to assist in teaching academic objectives, the incorporation of strategies to build positive attitudes toward reading, and a provision for children in the primary grade to interact with informational text.

The present study was conducted to offer validation for incorporating read aloud into intermediate classrooms, to demonstrate the benefits of reading informational books aloud, to offer an alternative to drilling on skills in preparation for state or national assessments, and to offer a rationale for using effective reading aloud strategies with inner city intermediate youngsters.
APPENDIX A

RECOMMENDED RESOURCES FOR INFORMATIONAL BOOKS
RECOMMENDED RESOURCES FOR INFORMATIONAL BOOKS


Outstanding science trade books for children. New York, National Science teachers Association and Children’s Book Council, listed annually.


APPENDIX B

BOOKS SELECTED FOR READING ALOUD
BOOKS SELECTED FOR READING ALOUD


NY: Franklin Watts Aladdin Books Ltd.
SELECTED REFERENCES AND RESOURCES FOR DISCUSSION STRATEGIES


APPENDIX D

PERMISSION LETTER
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Learning Center
October 16, 1996

Dear Parents and Guardians,

The fourth and sixth grade students at our school will be participating in a research study which will be conducted between October 1996 and January 1997.

I am interested in finding out if reading informational books aloud to students will improve their scores on a diagnostic test similar to the TAAS. The students will listen to informational books about science topics for fifteen minutes a day. Some of the students will just listen to the book while others will listen and discuss the book. A third group of students will be a comparison group.

Scores from the Diagnostic Skill Profile will be used to compare the effects of listening to the books. All Dallas students are taking this test in September and in January. The results of this assessment will be kept confidential and will not affect the student's grades in school. None of the names of students or the school will be given in any report.

This study should help our students improve their scores on the TAAS. Please sign the permission form below so that your child may participate in the read aloud study. Thank you for all your cooperation. You may call me at any time if you have any questions at 214-689-1540.

If you are interested in finding out about the results of the study, please add your address and phone number. I will call you or send you the results before the end of the school year.

Sincerely,

Pamela Dougherty
Reading Demonstration Teacher/Doctoral candidate
Learning Center/University of North Texas

Constance Whalon
Principal
Learning Center

I agree to allow my child ______________________ to participate in the Read-Aloud Study.

Signed: ______________________________ Date: __________________

__________________________ I am interested in finding out about the results of the study.

Address: ___________________________ Phone: __________________
APPENDIX E

SCATTERGRAMS FOR ADDITIONAL DATA ANALYSIS
Figure 7
Figure 8
Figure 10

- **4:00**
  - Read aloud with discussion
  - Female
  - Male

- **4:00**
  - Read aloud only
  - Female
  - Male

- **5:00**
  - Control - regular routine
  - Female
  - Male
Figure 12
Figure 13

Robust Regression
Figure 14
Figure 15
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