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AN EXAMINATION OF THE RELATIONSHIP BETWEEN RECREATIONAL READING AND READING ACHIEVEMENT FOR EIGHTY SIX FIFTH AND SIXTH GRADE STUDENTS

By

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ABSTRACT

AN EXAMINATION OF THE RELATIONSHIP BETWEEN RECREATIONAL READING AND READING ACHIEVEMENT FOR EIGHTY SIX FIFTH AND SIXTH GRADE STUDENTS

By

Dennis Daniel Guiser

Previous research suggests a possible relationship between recreational reading and reading achievement. The present study is based on that body of research and utilizes the studies most often found successful.

This study attempted to answer the questions: (1) Did teachers use specific active strategies they had not previously used when they were encouraged by the researcher? (2) Were the use of the strategies related to an increase in the amount of recreational reading by students? and (3) Was an increase in the amount of recreational reading related to improved reading achievement?

Eighty-six students in two fifth and two sixth grade classes participated in the study. The researcher taught students to record the number of books they read per semester. These students were pretested, tested at mid semester and post tested using the Stanford Achievement Test

(comprehension subtest), and graded oral reading paragraphs, for rate.

At mid year, the researcher trained the two language arts teachers participating in the study to use specific active strategies to stimulate student recreational reading. The teachers received a list of 18 strategies and used one strategy per week.

Analysis of the results indicated that during the treatment condition: (1) teachers used the active strategies, while this did not occur in the baseline condition, (2) two classes of students read significantly more than in the baseline condition, while the other two classes did not, (3) students in all four classrooms made significantly more growth in reading comprehension, (4) the SAT results did not correlate positively with the number of books read, (5) the fifth grade students made greater gains in reading rate, while the sixth grade students did not, and (6) the reading rate results did not correlate positively with the number of books read.

Though the students in all four classrooms made greater gains in reading comprehension during the treatment condition than the baseline condition, the results did not support the hypotheses. There were no predictable relationships between the outcome measures and the treatment. The lack of positive significant correlations may have been an artifact of the unit of measure for recreational reading, books read.

Dedicated to:

my mother and father

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CHAPTER I

INTRODUCTION

The premise that student reading performance varies as a function of the amount read continues to stimulate research interest. Early studies examined the relationship between the amount of student reading and their school grades. Most current studies vary the type of recreational reading strategy and use reading achievement scores as an outcome measure in testing the premise.

To better understand the relationship between recreational reading and reading outcome measures, the present study uses a classroom intervention model to examine the following research questions: (1) Did teachers, who previously did not use active instructional strategies designed to stimulate recreational reading, use these strategies when encouraged by the researcher? (2) Did the amount of student recreational reading (reported as books read) increase during the semester teachers implemented these instructional strategies as compared to the previous semester when they did not use these strategies? (3) Did students show more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies? (4) Did the number of books read recreationally by students correlate positively with their comprehension ability as

measured by their score on the Stanford Achievement Test (SAT)? (5) Did students show an increase in their rate of reading the semester teachers implemented the instructional strategies as compared to their rate of reading the previous semester when teachers did not use the strategies? (6) Did the number of books read recreationally by students correlate positively with their rate of reading as measured by their score on the graded oral reading paragraph (GORP)?

Background to the Problem

Previous research on the relationship between recreational reading and reading achievement is presented in two categories. The first category consists of research conducted prior to 1950 and is referred to as early research. This research used students' school grades as outcome measures and largely ignored particular techniques teachers used to effect student reading. The second category of research, conducted since 1950, is referred to as current research (as it is more likely to use research techniques referred to as current). This work tended to use student achievement test data as the outcome measures and to identify the strategies teachers used to effect student reading.

Early Research: 1900-1950

The early research used broad general outcome measures, such as students' grades, to test the effects of student recreational reading. Pond (1940) found that the quality and quantity of the reading experience did not contribute significantly to success in school using grades as the criterion measure. Similarly, Harlow (1942) found no relationship between student voluntary reading and their school grades. However, Lipscomb (1931) used the number of books read as an outcome measure in an attempt to answer the question: Do children read books according to their reading ability, chronological age, or intelligence quotient, or do all these factors play equal roles? She concluded that the number of books read correlated better with student reading ability than with student intelligence quotient or chronological age. Two general conclusions reported in the older studies were: grades in school are not reliable measures for this type of research and there may well be a relationship between reading ability and the amount of recreational reading done by students.

Current Research 1950-1986

The current studies are examined as two distinctly different types of research. They are differentiated by the

type of techniques used to increase student reading, and the techniques are categorized here as either passive or active strategies. Passive strategies are those that allocate a set time for recreational reading. The most common passive strategy is USSR (uninterrupted sustained silent reading) also referred to as SSR (sustained silent reading) where time is allocated within the school day for the entire class to read self selected material. Active strategies involve the students in discussions of books, oral readings of entire books or sections of books, art and drama related activities and other forms of teacher directed encouragement of reading. They do not simply allocate time. Teachers actively spend instructional time encouraging reading or stimulating reading interest. Examples of active strategies appear in Appendix A.

The following section refers to seventeen current research studies that used either passive or active techniques. This research demonstrated that active techniques typically increased reading achievement more than passive techniques.

Research utilizing passive strategies. Twelve of the seventeen studies on recreational reading examined the effects of using passive strategies to increase reading.

Typical of this work was the research conducted by Cline and Kretke (1982) which showed that USSR had no effect on reading achievement comparing the control and experimental

group over a three year period. In a similar study by Wilmot (1972), 576 second, fourth and sixth grade students were pretested, placed in a treatment (USSR) or control (no USSR) group for seven months and then tested again using the Wilmot Reading Attitude Survey and the Gates Reading Test. The USSR groups at the fourth and sixth grades performed better on the attitude measure. Curiously, all the control students performed significantly better on the comprehension measure than did the students in the USSR groups.

Of the 12 studies examining the effect of passive techniques, only the work by Cromwell (1981), Lawson (1968) and Langford (1978) showed gains in reading achievement, therefore demonstrating the ineffectiveness of the passive techniques.

Research utilizing active strategies. Of the seventeen studies examined, five used active strategies to encourage student reading.

In an elaborate study, Bissett (1969) examined the factors that seemed related to increased student reading and the relationship of students' vocabulary and comprehension test scores to the number of books read. He found that students who had access to books while receiving an additional 90 minutes of weekly adult and student recommendations of books read significantly more books than students who did not have this experience. However, there was no significant difference between the two groups in the

mean gain on the vocabulary and comprehension test scores. Although Bissett managed to increase the amount of student reading using active strategies, he failed to show related student achievement gains. Bissett provided no teacher intervention and stated that teachers used strategies they chose without training. This lack of training and lack of a consistent approach for encouraging reading may well have been the reason for his inability to demonstrate related student achievement gains.

In further research, Sauls (1971) conducted a study to determine the relationship between the amount of student recreational reading and certain teacher and student variables. He studied 868 sixth grade students and 32 teachers. The students kept records of the number of books they read for one semester and both students and teachers completed questionnaires, test measures, and attitude scales. He concluded that: (1) the teachers' years of experience, amount of education and preparation for teaching children's literature made no significant difference in the number of books pupils read, (2) there was a significant relationship between the teachers' use of active strategies and the mean number of books pupils read, and (3) reading comprehension scores were significantly related to the number of books read by pupils.

Of the five studies examining the effect of active techniques, the works by Anderson (1977), Sauls (1971) and Yap (1977) demonstrated gains in reading achievement.

Although some of the research using passive strategies and some of the research using active strategies showed positive achievement gains, active teacher techniques were more often found to be effective. Overall, three of the five studies using active strategies and only three of the twelve studies using passive strategies showed student achievement gains. These results favor the use of active strategies over the use of passive strategies when student achievement is the desired outcome.

These data suggest that it is not what the teacher knows about children's literature but rather the active practices that he/she performs in the classroom which effect the amount of student reading. The questions that arise are; (1) Will teachers use specific active strategies they have not normally used if they are encouraged to use them? (2) Are the use of specific active instructional strategies related to an increase in the amount of recreational reading by students? and (3) Is an increase in the amount of recreational reading related to improved student reading achievement scores?

Summary of the Background

The question, does increased reading effect student reading achievement outcomes, has historically stimulated research interest. Current research focuses on teacher strategies for increasing the amount of reading and uses

reading achievement measures as outcomes. Of this current work, the research using active teacher strategies has shown the most promise in promoting gains in achievement. An intervention study is now needed in which teachers are taught to implement active strategies to see if students read more books and if the increased reading is related to reading achievement growth.

The Problem

Previous research suggests that active strategies are most effective in producing achievement outcomes. Therefore, in the present study a list of active strategies was developed, taught to teachers and then the teachers use of the strategies with children was monitored for one semester. The teachers were provided encouragement in the use of the strategies to the extent that an enthusiastic researcher recruited them, discussed the project regularly, and observed in their classrooms periodically. It was hypothesized that teachers taught and encouraged to use the active strategies would stimulate their students to do more recreational reading than they did prior to when the strategies were used and that the increased amount of recreational reading would be related to increased reading achievement by pupils. The specific variables examined in exploring these hypotheses and their method of operational measurement are listed. These variables are categorized as

either independent or dependent. The single independent variable was the intervention and this was measured through classroom observations. The three dependent variables were: (1) recreational reading which was measured by having students record the number of books they read, (2) reading rate which was measured by recording the number of seconds it took for each child to read orally graded paragraphs (the paragraphs were developed by Leidholt [1983] for use in her dissertation) and (3) reading comprehension which was measured using the comprehension subtest of the Stanford Achievement Test (1983). It was the purpose of this study, then, to answer the questions: (1) Will teachers use specific active strategies they have not normally used if they are encouraged to use them? (2) Are the use of specific active instructional strategies related to an increase in the amount of recreational reading by students? and (3) Is an increase in the amount of recreational reading related to improved student reading achievement scores?

Significance of the Problem

The results of this study will have implications for teachers, teacher educators and researchers. It will suggest: (1) whether the use of active strategies can be taught to teachers; (2) whether these active strategies, when applied in the teachers' classrooms, effect student achievement; and (3) whether teachers should include

specific activities for recreational reading in their schedules. These implications are significant because: (1) teacher educators need to know whether they should encourage teachers to incorporate the strategies in their classrooms and (2) teachers need to know how to best utilize the limited time they have with their students.

Research Questions

This study focuses on providing answers for the following research questions:

(1) Did teachers, who previously did not use active instructional strategies designed to stimulate recreational reading, use these strategies when encouraged by the researcher?

(2) Did the amount of student recreational reading (reported as books read) increase during the semester teachers implemented the instructional strategies as compared to the previous semester when they did not use the strategies?

(3) Did students show more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies?

(4) Did the number of books read recreationally by students correlate positively with their comprehension ability as measured by their score on the SAT?

(5) Did students show an increase in their rate of reading the semester teachers implemented the instructional strategies as compared to their rate of reading the previous semester when teachers did not use the strategies?

(6) Did the number of books read recreationally by students correlate positively with their rate of reading as measured by their score on the GORP?

The above research questions are restated below as research hypotheses.

(1.) The fifth and sixth grade teachers will use the strategies designed to encourage recreational reading.

(2.) The fifth and sixth grade students will read significantly more books during the second semester than they did during the first semester.

(3.) The fifth and sixth grade students will make more growth in reading comprehension in the second semester than they made in the first semester.

(4.) There will be a positive significant relationship between the number of books students read and their scores on the comprehension measure for the treatment semester.

(5.) The fifth and sixth grade students will make more growth in reading rate in the second semester than they made in the first semester.

(6.) There will be a positive significant relationship between the number of books students read and their scores on the measure of reading rate for the treatment semester.

Design of the Study

A two part intervention study was designed and conducted to answer the questions: (1) Will teachers use specific active strategies they have not normally used if they are encouraged to use them, (2) Are the use of specific active instructional strategies related to an increase in the amount of recreational reading by students, and (3) Is an increase in the amount of recreational reading related to improved student reading achievement scores?

The first part of the study occurred during the first semester of the 1983-1984 school year. The fifth and sixth grade students recorded the number of books they read and the researcher observed in all classrooms to document the instructional practices teachers used to encourage recreational reading. The researcher recorded informal interview data obtained from the teachers in the form of notes in his calendar. Pre and post testing for the first semester was conducted using the Comprehension Battery of the Stanford Achievement Test Forms E and F (1983) and Graded Oral Reading Paragraphs.

The second part of the study began just prior to mid-term when the teachers were trained to implement active

strategies for use during the second semester. During the second semester, students continued to keep a record of their reading. These records were used to determine if the number of books read the second semester, in which the teachers implemented the active strategies, was greater than the number of books read the first semester, when no strategies were implemented. The researcher continued to make classroom observations and to record informal interview data to document the practices teachers used to encourage recreational reading. Pre and post testing for the second semester was conducted using the Comprehension Battery of the Stanford Achievement Test Forms E and F (1983), and Graded Oral Reading Paragraphs.

Sample Selection

Four classes, two fifth and two sixth, in one school participated in the present study. The school is located in a rural, low socio-economic area in the upper part of the lower peninsula of Michigan. Prior to the school year, the students were assigned to classrooms by reading ability in an attempt to create a heterogeneous mixture of students in all classes. Thus both fifth grades and both sixth grades had a high, average and low reading group. The two fifth and two sixth grade teachers were departmentalized, with one teacher at each grade level teaching language arts and the other teacher at that level teaching math, science and

social studies. The students changed classes daily, spending half their time with each teacher. The students considered their first class of the day as homeroom and the teacher of that class as their homeroom teacher. When the class schedule was changed (simply inverted) at mid year, the students then considered the other teacher as their homeroom teacher. This meant that all students had both teachers as a homeroom teacher during one of the two semesters. The teachers used in this study were the two language arts teachers, one who taught language arts to both fifth grades and one who taught language arts to both sixth grades.

Data Collection

The data were collected at three points across one school year.

The first occurred in the fall of 1983 when all students in the study were tested by their classroom teachers using the comprehension battery of the SAT (1983). This type of test is a standard measure of reading and often used to determine the relationship between recreational reading and reading achievement (Evans and Towner, 1982 and Lawson, 1968). At this time, a randomly selected group of 31% of the students were also timed by the researcher as they orally read graded paragraphs. Their rate of reading, (a measure found to be highly correlated with fluency)

Leidholt (1983) was the second measure used in this study. Additionally, during the fall of 1983 all students kept logs of the books they read. The logs documented the number of books reported read by each child and were used as a baseline to compare with the number of books read the second semester. The final type of data collected at this point were field notes of each teacher's instruction during the total language arts block (one half day) for each of the four class units. This documented the type of strategies the teachers used to encourage recreational reading and documented if students were reading recreational literature during their normal school day. The recording of field notes was done by the researcher.

Cycle two of the data collection began in January. First, all of the students were tested by their classroom teachers using a different battery of the Stanford Achievement Test (1983). The same group of students tested in September for rate were again tested by the researcher. All students were reinstructed in how to fill out their logs for recording books read, and the researcher observed the two teachers and four class groups again.

The final data collection cycle began in May. The original battery of the Stanford Achievement Test was again administered by classroom teachers and the graded oral reading paragraphs were again given to the same group of students by the researcher to measure rate.

Summary of the Design

The study was designed with the intention of chronologically dividing the school year into two equal parts. There was pre, mid, and post testing. There was no teacher intervention during the first semester and a specific intervention with teachers between the first and the second semester. The research questions asked were: (1) Did teachers who previously did not use active instructional strategies designed to stimulate recreational reading use these strategies when encouraged by the researcher? (2) Did the amount of student recreational reading increase during the semester teachers implemented these instructional strategies as compared to the previous semester when they did not use these strategies? (3) Did students show more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies? (4) Did the number of books read recreationally by students correlate positively with their comprehension ability as measured by their score on the SAT? (5) Did students show an increase in their rate of reading the semester teachers implemented the instructional strategies as compared to their rate of reading the previous semester when teachers did not use the strategies? (6) Did the number of books read recreationally by students correlate positively with

their rate of reading as measured by their score on the GORP?

Assumptions and Limitations

There are two major assumptions underlying this study:

(1) that teachers performed the same activities with the same degree of frequency whether the researcher was present or not,

(2) that the number of classroom observations were sufficient for the researcher to validate the strategies the teachers were using routinely.

There are six major limitations to this study.

(1) The researcher is the principal of the school where the study was conducted and the results produced could be affected by the supervisory relationship between the researcher and the teachers in the study (i.e., did either of the teachers in the study try harder than a teacher in a research setting in which the researcher was someone other than the building principal?).

(2) Given the small size of the sample and the fact that there was no control group, the study is descriptive rather than experimental, and the results are not generalizable beyond the specific population involved.

(3) The researcher used two forms of the Stanford Achievement Test for three testing settings. The first and last test administration utilized the same forms and

students could have remembered questions across the one year interval.

(4) The researcher used the same graded oral readings for all three assessments of rate and the students could have remembered the paragraphs across the one semester intervals.

(5) This study had no control group. The design required the students to serve as their own control, with semester one being the baseline condition and semester two being the treatment condition. Because there was no control group, and this was not a test with norms, there was no method to determine the average amount of growth in rate that would be predicted for each semester. Therefore, gains made in rate during the treatment semester can not be attributed exclusively to the treatment.

(6) The SAT scores in this study, referred to as adjusted scores, are a form of difference scores and thus share some of the problems associated with difference scores. These adjusted scores are less reliable as they introduce an additional source of error variance.

Definition of the Terms

Active strategies: Strategies that involve the participants in discussion of books, oral readings of books or sections of books, art and drama activities related to books and in

the overall direct encouragement of reading. Samples of these are listed in Appendix A.

Fluency: The ability of the reader to give a smooth oral reading performance which exhibits appropriate rate, attention to punctuation, an understanding of semantics, and an understanding of syntax.

Instructional Reading Level: The level at which the child can function adequately with teacher guidance. Comprehension should average 75% or better and word recognition should average 95% or better.

Frustration Level: The level at which the child cannot function adequately. Comprehension should average less than 74% and word recognition should average less than 94%.

Passive strategies: Strategies that simply allocate time for recreational reading.

Rate: The number of seconds the student requires for oral readings of graded paragraphs.

USSR (uninterrupted, sustained, silent reading): A period of time within the school day which is allocated for the entire class to read student selected material.

Organization of the Remainder of the Study

Chapter 1 contains the introduction, the background of the problem, the significance of the problem, the research questions, the design of the study as well as the assumptions and limitations, and definitions. Chapter 2 is a review of the literature and related research studies. Chapter 3 is an explanation of the procedures used in this study. This chapter also contains information on the sample, the instructional practices utilized, the procedure for collecting the data and the treatment of the data. Chapter 4 states the results of the analysis as well as an interpretation and discussion of this information. Finally, Chapter 5 lists the findings, summarizes the findings, and discusses the findings, the conclusions, the implications and the recommendations.

CHAPTER II

BACKGROUND

Chapter 2 provides an examination and a categorization of the relevant historical data. The focus of this examination is the relationship between recreational reading and reading achievement. There was not an abundance of research on the present topic. However, a chronological division allowed for a categorization of the early research (which typically used less stringent research technique) and the more current research (which was more likely to use currently accepted research methods). The first category of research, conducted prior to 1950, is referred to as early research. The early research tended to use students' school grades as outcome measures and largely ignored the particular techniques teachers used to effect student reading. The second category of research conducted since 1950, is referred to as current research. The current research tended to use student achievement as the outcome measure and to identify the strategies teachers used to stimulate recreational reading. Current research was further divided by studies which utilized active strategies to increase student reading and studies which utilized passive strategies to increase student reading. Two studies which utilized active strategies and one study which

described a teacher training model were examined in detail for use in the present study.

The organization of the present chapter served two purposes. Given the amount of material available on the topic, the chronological presentation of these data provided a method of organization for the reader. More importantly, there are significant differences in the outcome data when the research labeled current was sorted by research utilizing active strategies and research utilizing passive strategies. Although the total body of recreational reading research demonstrates little success in impacting student achievement, the research labeled active was proportionately more successful, having succeeded over 50% of the time.

Early Research:1900-1950

The early research concerning the relationship between recreational reading and reading achievement used broad general outcome measures such as students' school grades. This early research was examined in only three studies conducted from 1900 to 1950.

In the first study, Lipscomb (1931) attempted to answer the questions: (1) did children read books according to their reading ability, chronological age, or intelligence quotient; or did all these factors enter in and (2) which of these factors was the most important to consider when selecting books for children? One class of sixth grade

pupils with high reading ability was studied. The children came from homes where reading was encouraged. A number of tests were administered to these students with results provided as grade equivalencies (normal, above and below normal) and I. Q. points. The tests used were the Stanford Silent Reading Test, the Haggerty Reading Test, Gray's Oral Reading Test, and the National Intelligence Test. The treatment consisted of a book club with weekly class meetings to discuss specific books. The book club provided stimulus and interest in the suggested books and allowed the teacher to make an assessment of the number of books read. A further technique for checking the number of books read was a class record book where each child wrote a comment about the books they read. In many cases only a statement concerning the students' likes or dislikes was written. Lipscomb found that "among children of the same ability there is a higher relationship between the number of books read and the reading ability than there is between the intelligence and the number of books read" (p. 61). She admitted that no definite conclusions could be drawn from her study and suggested further work needed to be done with different and larger populations. She did, however, suggest some tentative conclusions. These conclusions were; " (1) The reading ability is the important factor entering into the number of books read; (2) That the interest and enthusiasm can be stimulated by means of discussion and exchange in social group "(p. 63). Though this study

provided limited information it appeared important because it recognized that; (1) there are things teachers can do to stimulate student interest in reading e.g. a book club and (2) a relationship may exist between reading ability and books read.

In a larger study, Pond (1940) tested 219 ninth-grade pupils using the Otis Self-Administering Test of Mental Ability, the Iowa Silent Reading Test and the Survey Test of Vocabulary. He compared his results with the students' school grades for the first semester of grade nine. Two of his six conclusions were relevant to this work. He found that: " (1) The quality and quantity of reading experiences do not contribute materially to success in school courses as at present organized. (2) The necessity for the development of good reading abilities on the part of all pupils is emphasized "(p. 443). His first conclusion may well have been an artifact of using school grades as outcome data. Grades in school are not only general but often not reliable as stated by Pond (1942) in the same article. The second conclusion was the one most consistently found in the research. It was presented in this study, as it was in many others without support of the data.

In a study examining older students, Harlow (1942) specifically focused on the question, "Are the heaviest readers the best students?" He studied 767 students at the Missouri School of Mines and Metalurgy during the spring semester of 1941-1942. He was able to record every book

each student checked out of the library by using the accounting system employed by the library. The grade point average and the number of books checked out by each student were listed and the resulting conclusions were divided into grade average groups. Harlow found: (1) there were no correlations between scholastic ranking and number of books withdrawn for home use for individual students and (2) that outside reading was a help to the student but by no means essential. He concluded that his method of measuring student reading was inaccurate because it only dealt with books checked out for home use. Students may have been doing extensive reading without taking books home and therefore, much of what he attempted to measure may have been missed.

Older research tended to examine data looking for relationships between very general measures while ignoring the strategies used to increase student reading. Current researchers began to develop questions that were best examined in more controlled studies and required more stringent data collection.

Current Research 1950-1986

There appeared to be no research on the present topic between 1950 and 1964. However, since 1964 there have been 17 studies done which examine the effects of increased student reading on student achievement. Consistent with the

increase in the quantity of research studies since 1964 was the increase in the quality of this research. The research labeled current was; (1) easier to replicate because of more specificity in the report and (2) more likely to demonstrate results because of more sensitive outcome measures e.g. test scores as opposed to school grades.

When all the research examining the relationship between recreational reading and student reading achievement was examined, it was found that there was a difference in the rate of success of studies labeled active and studies labeled passive. Therefore, in the present review of the literature, a division was made between research utilizing passive strategies and research utilizing active strategies to encourage student reading.

Passive strategies are strategies that allocate a set time for recreational reading. Researchers measure time and present this amount of time as the amount of reading. With this type of research, time of reading becomes a proxy for amount of reading. The most common passive strategy was U.S.S.R. (uninterrupted sustained silent reading) where time, within the school day, was allocated for the entire class to read self selected material.

Active strategies were those that involved the teachers and students in discussions of books, oral readings of books or sections of books, art and drama activities related to books, and in activities which directly encouraged reading. Through the use of these activities the teacher encouraged

reading or stimulated reading interest (for a list of eighteen active strategies see Appendix A).

The following section examined the current research that used passive techniques and the current research that used active techniques. It showed that active techniques typically increased reading achievement more than passive techniques. This section further examined research techniques developed in other studies that were incorporated in the design of the present study.

Research Utilizing Passive Strategies

Twelve studies utilizing passive strategies were found. Of these, 11 utilized USSR and 1 did not. The 11 using (USSR) were examined first.

The earliest of the current work was done by Lawson (1964) and examined 329 sixth grade students in the Nashville, Tennessee school system. He used the 1960 census data to select students located in areas labeled intermediate socioeconomic class. Teachers in the 12 classrooms studied were rated as better-than-average by their supervisors. Lawson developed four treatment groups of three classrooms each and exposed each group to different instructional strategies. The first group was a conventional group which received 45 minutes of basal reading instruction from an eclectic basal type series. This group had the least amount of time for free reading and was composed of 88

students. This group had the highest score on the reading test and was third on the vocabulary test. The second group was an individualized group which received 45 minutes of instruction based on individual conferences and the specific needs of the student. There were 84 students in this group and they had the most time for individualized reading. This group had the lowest score on both the reading and vocabulary tests. The third group was the experimental A group which received 45 minutes of reading with 30 minutes, the same as the conventional group and the remaining 15 minutes devoted to free reading. There were 87 students in this group. This group had the second highest scores on the reading test and the vocabulary test. The fourth group was the experimental B group which received 45 minutes of reading instruction with 15 minutes the same as the conventional group and the remaining 30 minutes devoted to free reading. There were 70 students in this group. This group scored third on the reading test and had the highest score on the vocabulary test.

Two relevant conclusions presented by the author were;

> For the four methods, greater gains in word knowledge seemed to be associated with more time spent in free reading. Greater gains in reading tended to be associated with more time spent in systematic instruction. The individualized method, having the most free time but the least amount of systematic instruction for the entire class actually showed a loss in word knowledge and in reading. (p. 503)

His study demonstrated that different programs with differing emphasis tend to produce different results. The two most successful treatments were the conventional and

treatment A. Though the results of the study were not what the author anticipated, there would appear to be validity and usable information in the author's statement;

> The findings seem to indicate that reading ability may be improved by the use of more than a single method of instruction and... the data rather well support the necessity for providing each child with systematic reading skills instruction... as well as the inclusion of free reading in the daily program. (p. 504)

In the following study, Oliver (1973) used a similar design where the control group received 60 minutes of direct basal instruction while the experimental group received 60 minutes of high intensity practice. The high intensity practice time was defined as 30 minutes of USSR coupled with 30 minutes of sustained silent writing and self selected activities. Self selected activities were defined as any activity involving an active response to words. Both groups were pre and post tested using the comprehension subtest of the Gates MacGinitie Reading Test. The results of this one month study favored the high intensity practice group but failed to achieve a statistically significant level. The author concluded that the one month duration may have been a reason for the results not achieveing statistical significance.

In a further attempt to examine the effect of high intensity practice, Oliver (1976) developed a second study using a design similar to the previous two studies. In this three month study, there were three groups which received varying treatments. Control group A received 55 minutes of direct basal instruction, group B received 30 minutes of

high intensity practice and 25 minutes of basal instruction while group C received 55 minutes of high intensity practice. The results of the Gates MacGinitie Reading Test revealed no significant differences in gains made between treatment groups. Oliver (1973) reported that; " All pupils did not appear to sustain themselves in silent reading all of the time. There were however, several USSR periods during which most of the children were reading silently..."(p.17). An apparent problem with this type of research related to the data collection. This approach measured time of activity rather than the amount of reading. There really was no accurate record of how much reading was done. The total measure of reading should not be in minutes but in words, pages or books.

In the follwing study, Wilmot (1975) extended the previous work and examined the effect of a program of SSR (sustained silent reading) on the students' performance and attitude toward reading. The study, which lasted from November 1972 through June 1973, involved 576 students in grades two, four and six from two school districts in Massachusetts. This work utilized the Wilmot Reading Attitude Inventory and the Gates Reading Test. The results indicated that students in the fourth and sixth grades who were involved in the SSR program had a significantly better attitude toward reading as measured by the Wilmot Reading Attitude Inventory. However, the students not exposed to SSR performed significantly better on the test of

comprehension. Wilmot's conclusions referred to a balance where attitude and comprehension were both valuable outcomes. She professed the beliefs that; (1) the best programs were those that provided an optimum amount of SSR within the total program and (2) that this optimum amount should be determined by more research.

In their study, Evans and Towner (1975) developed a very simple yet innovative experiment. They examined what happened to reading achievement after 10 weeks, when students were exposed to SSR versus selected commercial practice materials. The commercial practice materials were commonly used as supplemental to a basal program, (eg., workbooks and dittos). In this study, both groups of fourth graders received instruction using the basal series but the 20 minutes of practice was varied. The control group performed typical practice activities and the experimental group performed 20 minutes of SSR. The results from the Metropolitan Achievement Test indicated no significant difference between the practice groups. Their conclusions spoke to the need for further research at different grade levels, of longer duration and the need to examine the other positive effects of a more natural form of practice involving the total act of reading.

In an attempt to examine the effect of sustained silent reading on college students, Sister Mary Pardy (1977) worked for one term with high, medium, and low students in reading improvement classes. The results from the study using the

California Reading Test and the Nelson Denny Reading Test indicated there were no differences for the group using SSR compared to those using the normal reading program.

In a large study which examined the effects of sustained silent reading on reading achievement and reading attitude, Reed (1977) again found no significant results for the 1,064 ninth through twelfth grade students. The students in the 61 English classes were either exposed to the control treatment (which was five regular English periods a week) or the experimental treatment (which was four regular English periods and one period of SSR a week). The study lasted five and one half months and evaluated the students in reading and reading attitude. The conclusions stated that SSR did not retard reading and did not cause students to feel less positive toward reading. Her recommendations were that large numbers of urban secondary school students might be helped to become better readers if they were allowed to read what they chose during school time. Not only did this study fail to demonstrate significant results in reading achievement or reading attitude, it also failed to examine the effect of one less English period on students' English performance. Perhaps if there had been an English test, it might have been discovered that the students' reading scores stayed the same but their English scores declined. It was determined from this study that the content of the measurement instrument was important in that the tests used

provided the only material available for later use in reporting the findings.

A further example of the importance of the measurement instrument was demonstrated in a study by Langford (1978). She found a significant correlation between student participation in USSR and outcome data measured using the Slosson Oral Reading Test. Two hundred and fifty, fifth and sixth grade students in 11 classes were pretested with the Slosson Oral Reading Test. Six of the classrooms engaged in USSR for a period of six months. The remaining five classes participated in normal school activities and acted as a control group. Subsequently, all students were post tested on the same instrument. Perhaps the gains achieved on the Slosson Oral Reading Test were related to the fact that the test measured vocabulary. It appeared that the most common measure of reading affected was vocabulary when passive strategies were used to increase reading.

In the following study, the author suggested that measurement may have been a problem (Summers 1979). The seven month study of 1,242 children in 20 fifth, sixth, and seventh grade classes in Richmond, British Columbia was undertaken to discover the effects of SSR on the students' reading performance. Ten classes from four schools participated in the SSR group and 10 classes from five other schools made up the comparison group. It was found that neither reading nor attitude scores were affected by the

treatment. The author failed to list the measurement device but suggested that "...different measures might have shown different results."(p.179)

Another problem suggested in the literature was that passive strategies failed to get students involved in the task. Flynn (1980) studied eight college students to determine if increased reading impacted reading achievement. He found that, " Although the students had great difficulty selecting appropriate texts, two students eventually found appropriate books and increased their reading comprehension scores during the ten week project" (p. 7). This same problem was mentioned by Oliver (1973) "... all students did not seem to sustain themselves in silent reading." Inactivity appeared to be a problem often ignored when time, not the amount of reading, was the measure used in the research.

Probably the single most comprehensive study evaluating the effects of SSR was done over a three year period by Cline and Kretke (1980). Treatment students in this study attended the treatment junior high school and participated in SSR for three years. The control group came from two junior high schools which had a comparable student body but did not use the SSR program. Treatment and control students had to have complete test scores; SRA Assessment Survey, Lorge Thorndike Intelligence Test, and the Comprehensive Test of Basic Skills. Using these criteria, there were 111 students in the treatment group and 138 students in two

control groups. When the outcome data were analyzed, there were no significant differences between the experimental and the control groups. The authors suggested a further study examining more diverse populations for a longer duration.

In an examination of the previous studies using passive techniques, it appeared that vocabulary gains were more related to increased reading than were comprehension gains. Vocabularly gains were reported by Langford (1978), Oliver (1973) and were found in the following study by Crowell and Klein (1982). In this study, fifty children from a first and a second grade were randomly divided into a control and experimental group. Recreational reading materials from readiness to about the third grade were purchased mostly from Bowmar Publishers and Scholastic Book Services. The books and magazines were sorted by level of difficulty so that children would receive books with the appropriate reading level. One book was mailed each week for 10 weeks to the students in the experimental group while students in the control group received nothing. The first book was mailed two weeks after school closed in June. The final book was mailed the week before school resumed in September. The students were pre and post tested with alternate forms of the Gates MacGinitie Reading Test. The results showed significant gains in vocabulary for the first graders yet the results failed to demonstrate significant difference in vocabulary for second grade or for comprehension in either grade.

The research on passive strategies displayed an inherent weakness. The work measured time rather than the amount of reading. Consistently, the research failed to demonstrate significant relationships between the passive strategies that were implemented and student reading achievement scores. Perhaps it would be beneficial to actively involve students and thus know they are performing the act that is being measured.

Research Utilizing Active Strategies

The next section examined the five research studies which utilized active strategies to stimulate recreational reading. At the end of this general presentation, there is a further examination of three studies: specifically, the work by Bissett which is presented under the heading Teacher Training and the work by Sauls presented under the heading Promotional Practice Checklist. The last study examined (Roehler, Wesselman, and Putnam [1982]) is also found under the heading Teacher Training because it appears to provide insight into some of the methodological problems found in the Bissett work. The reason for the more thorough look at the work by Bissett and Sauls is that facets of their work have been adapted for use in the present study.

The earliest work utilizing active strategies did not appear until 1969. At this time Bissett developed an elaborate study to:

> 1. Examine the number of books reportedly read by students under conditions simulating a normal classroom.
> 2. Examine the number of books reportedly read by students who had books made accessible to them (a classroom library of 259 books).
> 3. Examine the number of books reportedly read by students who had books made accessible to them (a classroom library of 259 books) as well as 90 minutes weekly of adult and student recommendations of the books now available.
> 4. Examine the effects of the number of books reportedly read on vocabulary and reading comprehension test scores.
> 5. Examine the effect of the variables of sex, I.Q., and achievement on the number of books reported read.
> 6. Examine the interaction effects of the treatments of availability and recommendation with the variables of sex, I.Q. ,reading achievement (p. vii).

In this study, Bissett examined seven classrooms of 190 fifth grade children from two school districts. The children were pretested in reading achievement and I.Q. then randomly placed in one of three groups. They were placed in either Treatment A which simulated a normal classroom, Treatment B which increased accessibility of books, or Treatment C which increased accessibility of books and had teachers devote 90 minutes of language arts instruction time to teacher and peer recommendation of those books. During the 15 week experimental period, comprehension checks were administered to encourage honesty on the part of the students. Following the experimental period, post testing for gains in vocabulary and comprehension were administered. Over the 15 week reporting period, students in Treatment C read an

average of 22.67 books, students in Treatment B read an average of 11.76 books and students in Treatment A read an average of 8.56 books. These results were significant at the .01 level. However, the mean differences of gain on the vocabulary and comprehension measures were not significant. Though Bissett was able to increase the amount of student reading using active strategies, he failed to show related student outcome gains.

In a descriptive study, Sauls (1971) attempted to examine the relationship between: (1) certain teacher factors and the amount of student recreational reading and (2) certain student characteristics and the amount of recreational reading. He studied 868 sixth grade students and 32 teachers from the East Baton Rouge Parish Public School System. The students kept records of the number of books read for one semester. In addition, students and teachers completed questionnaires, tests and attitude scales. The relevant conclusions from his data were: (1) There was no significant difference in the number of books read by pupils when compared on the basis of the teacher's years of experience, amount of education and preparation for teaching children's literature, (2) There was a significant relationship between the teacher's score on the promotional practice checklist (a list of activities normally performed by those teachers which may have been related to increased student reading) and the mean number of books read by the pupils, and (3) Reading comprehension scores were found to

be significantly related to the number of books read by pupils.

These data suggest that it was not what the teacher knew but rather the active practices (specifically those from the promotional practice checklist) that he/she performed in the classroom that affected the amount of student reading. These data suggest a relationship and develop the logical question; would teachers who regularly perform more of the items on the promotional practice checklist stimulate children to read more? This question leads to a second question; would students who were stimulated to read more have better scores on reading achievement tests?

In the next study, Anderson (1976) examined 75 elementary school students over a summer break. The students were randomly placed in one of three programs. The first (the reading interest group) consisted of students performing nine independent reading contracts leading to badges, the second utilized a basal reader approach to summer school and the third consisted of students who had no school related summer activities. Results indicated that students in the reading interest group made significantly greater gains in a measure of comprehension than students in the other two groups.

In a further study, Yap (1977) asked the question; "Does an increase in reading activity contribute to higher achievement as measured by standardized tests?" The Hawaiian English Project (HEP) was an individualized

language arts program instituted on a state wide basis to teach Hawaiian children language arts in English. The project used a comprehensive management system where the teacher recorded the number of books read by each HEP student. The books were organized as levels in the instructional library, each level consisting of five books of 60 to 100 pages in length. Thus a child who read over four books was said to be reading at level one. The instructional library levels range from one to twenty five at which point the reader would have read over 139 books. To be certified as having read a book, the pupil must answer a set of comprehension questions. Peer tutoring and various reward systems were used to encourage the HEP pupils to engage in reading activity.

For the 1970-71 school year, data relating to the Hawaiian English Project (HEP), reading levels and reading achievement were gathered for 202 second grade students from two HEP schools. The reading level data were gathered from teacher record books while reading achievement was measured by the vocabulary and comprehension batteries of the California Reading Test. Analysis of data relating to the reading achievement revealed that the amount of reading had significant influence on reading ability in both vocabulary and comprehension. The system of encouragement which involved active strategies may have been a factor impacting students' scores in both comprehension and vocabulary.

In the final descriptive study, Holt (1981) commented on the effect active involvement with reading had on the quantity of student reading when he stated, "... given more time to explore and discuss with the teacher, it is clear that children can generate enthusiasm for reading" (p.47). His conclusions, like Sauls, spoke to the teachers use of knowledge, as indicated when he stated, " It is significant that the eleven children in the follow-up group who were involved in close discussion of reading interests tended to read more books than other children of similar ability in the sample." (p. 49)

Of the five studies examined, Sauls (1971), Holt (1981), Bissett (1969), and Yap (1977) found a key factor influencing the amount of student reading to be the active strategies teachers employed (what they did), rather than the teacher's knowledge, training or the passive strategies utilized. While Sauls (1971), Anderson (1977), and Yap (1977) demonstrated that gains in reading achievement were positively related to the active strategies they used to stimulate increased student reading.

The following section is a more thorough examination of the work by Bissett (1969) and the work by Sauls (1971) as portions of their work have been adapted for use in the present study. There is also an examination of the work on teacher training by Roehler et al. (1982) as this provided alternatives for some of the inadequacy in the design developed by Bissett. The section was organized using the

headings "teacher training" and "promotional practice checklist".

Teacher training. In the study discussed earlier by Bissett (1969)

> Teachers were instructed to devote 90 minutes a week of their language arts instruction time to language arts activities (thinking, listening, speaking, and writing) related to books accessible to children in their classrooms. Activities for these 90 minutes a week fell into various peer and teacher recommendations of books to be read. For the first 10 weeks, for instance, teachers introduced the 10 collections of books, introducing the contents of each book and recommending individual titles from the collections. After children had read books, teachers stimulated oral peer recommendations of the books or similar titles. Discussions and writing assignments were conducted to stimulate children to think and reflect upon what they had read.
> Suggestions were offered to teachers for these activities, but each of the treatment C teachers was provided a wide latitude to choose from a number of suggested activities those most suitable for his class. No formal check on the actual time allocated to these recommended activities were conducted. However, occasional visits to classrooms and reports from principals and reading teachers in the schools indicated that teachers did attempt to follow the time allotment (p.34).

Current research would be more likely to include: (1) a more rigorous system to evaluate what went on in the classroom, for example observations with field notes (McDermott, 1977) and (2) training sessions to insure the appropriate use of strategies (Roehler et al., 1982). The research demonstrated that Bissett could increase the amount of reading done by students. However, his student data failed to show a significant gain on the vocabulary and comprehension test scores. It is impossible to know, without classroom observations if teachers actually did 90

minutes of activities weekly and if they did them appropriately. There is recent research which indicates that attempting to do what is requested by the researcher may not be sufficient for successful performance.

In a study of four teachers by Roehler et al. (1982), teachers received information, wanted to change and accommodate the new information, and tried to do so, yet, only one was able to, Their research focused on what was done with their successful teacher, Teacher B, that allowed him to appropriately integrate the instruction and use it.

> This study ...is a descriptive study of how teachers can be helped to improve their reading instruction. It grew from a study of the explanation behavior of four teachers which was designed to determine if there was a relationship between the rated explicitness of the information provided by the teacher during the lesson and awareness demonstrated by low group students following instruction and subsequent achievement on standardized tests. It was our hypothesis that students in low reading groups would become better readers if the teacher, by talking to them about what is being learned, provide information which rearrange the students' cognitive structures thereby creating an understanding of how and when to do something the students formerly had not been able to do (p. 1).

In a superficial examination of the descriptive findings of the study, it was determined that all teachers received the same training. However, under closer examination there appeared to be qualitative differences in the way Teacher B's researcher presented the training model. These differences were examined so that the researcher could replicate a similar training format, for the present study, based on the work by Roehler et. al.

The first significant difference appeared in the first stage of a three stage process. Here all teachers received information. However, the successful teacher, Teacher B, first received information that was related to his personal background experiences, second was shown positive and negative examples of the teacher explanation behavior, and finally was required to note his performance on a previous lesson using the information discussed in the first two steps above. The process required active involvement and evaluation of Teacher B by the reseacher and by Teacher B.

The second significant difference appeared in the second stage which focused on the teachers receiving an example of a lesson. All teachers received an example. However, the successful teacher, Teacher B, again received more comprehensive instruction. The instruction for Teacher B included an introduction component, a practice component, and an application component in which the entire process was talked through by Teacher B's researcher.

The final significant difference occurred in stage three. Here:

> rather than receiving a written model from the educator/reseacher and then being left to apply on his own , Teacher B received verbal modeling, gradually diminished assistance and corrective and supportive feedback over the course of subsequent lessons until he was applying explanation strategies totally on his own (p.9).

The three different specific behaviors appeared to be the differences that allowed teacher B to be more successful than his three counterparts. This research by Roehler et

al. (1982) was the foundation of the training for teachers in the use of strategies for the present study.

Promotional practice checklist. In the research by Bissett, "teachers were provided a wide latitude to choose from a number of suggested activities " (p.34) to increase reading, yet none were listed. In the work by Oliver (1976), students were to be involved in "self selected activities". Self selected activities were defined as "any activity involving an active response to words" (p.226). However, there were no specific activities listed in this study. There were no research studies which provided specific activities usable by teachers to increase the amount of student reading. However, in a dissertation by Sauls (1971), there is a brief description of a promotional practice checklist. He states:

> The last page of the teacher's questionnaire was made up of a checklist of possible activities for encouraging pupil's recreational reading. The activities suggested on this checklist were taken from the recommendations of Huck (1968) and Arbuthnot (1957). The teacher was asked to check whether he used these activities regularly, frequently, sometimes, rarely, or never (p. 40).

This checklist was found by Sauls to be positively correlated to increased reading by students. In other words, " There was a significant relationship between the teacher's score on the promotional practice checklist and the mean number of books read by his pupils" (p.ix). Eighteen of the strategies found to be positively correlated to increased reading were selected and redesigned for use in the present study.

Summary.

The research designated as early demonstrated an interest in the current topic and suggested there were things teachers could do to increase student reading. This work failed to find significant relationships between the students' reading habits and ranking in school. It suggested that ranking in school (school grades) may have been inaccurate and therefore a poor measure of performance. A final conclusion of importance for the present study dealt with the measure of reading. Library use records for the number of books read was inaccurate as it only examined the books checked out, not the books read. The early work is most beneficial in its depiction of research flaws that in the future could be avoided.

The current research on passive strategies showed that student achievement was related to increased reading 25% of the time. There were four conclusions considered relevant to the present work reported in the research which utilized passive strategies. First, the length of study was suggested as a problem in studies of 10 weeks, 1 month and 3 years. Second, it was suggested in four studies that differing the emphasis of the reading program would provide different results which mirror the respective program emphasis. Third, in two of the studies getting students to actively participate in the passive strategies appeared to be a problem. Fourth, it was apparent that the specific

outcomes measured affected the results. In passive studies, the measure of vocabulary was most often associated with significant results and, in the study by Reed, a further measure of the students' English ability may have changed her findings. The results of the research utilizing passive strategies indicated that: (1) the use of passive strategies was not consistently effective and (2) there were a number of things to avoid in future research studies.

The current research on active strategies showed that student achievement was related to increased reading 60% of the time. There were two conclusions from this body of research considered relevant for the present study. First, there were things teachers could do to increase the amount of student reading. Second, it appeared that what a teacher did related to literature was more important than the amount of training they had in literature. Overall, the results indicate that strategies which actively involve students in reading were more successful. Again, as with previous research, the specific problems were discernable and alternative solutions could be developed for improvement. Finally, in the current research utilizing active strategies, a closer look was taken at three research studies having adaptable ideas for the present study. It appears that a research study is necessary in which teachers are trained to implement a set of active strategies which in turn may stimulate recreational reading by students.

CHAPTER III

THE STUDY

The purpose of the study was to determine if: (1) teachers would use specific active strategies they had not normally used if they were encouraged to use them, (2) the use of specific active instructional strategies was related to an increase in the amount of recreational reading by students and (3) an increase in the amount of recreational reading was related to improved student reading achievement scores. This chapter specifies the procedures of the study, the sample studied, the instructional practices utilized, the procedures for collecting the data, and the treatment of the data.

Procedures

A two part study was carried out during the 1983-84 school year in an attempt to better understand the relationship between recreational reading and reading outcome measures. The present study used a classroom intervention model to introduce specific strategies and to examine the effect these strategies had on the reading outcome measures.

Eighty six students from four classrooms and two grades (41 sixth grade and 45 fifth grade students) were involved in the study. The students were placed in classrooms by reading ability with the intention of maintaining a heterogeneous mixture of students in all four classes. Although there were 2 fifth grade teachers and 2 sixth grade teachers in the school, only two of the teachers were studied because only two were teaching reading. The fifth and sixth grade teachers were departmentalized, with one teaching language arts and the other teaching math, science, and social studies. The students changed classes daily, spending half their time with each teacher. The only teachers involved in this study, consequently, were the fifth grade language arts teacher and the sixth grade language arts teacher. This arrangement allowed for the study of four populations of students and two teachers. The teachers were volunteers and were not informed of the intent of the study until near mid semester when the intervention occurred.

In September of 1983, classroom teachers tested all fifth and sixth grade students using the Stanford Achievement Test (SAT) Comprehension Battery, Form E. In October of 1983, the researcher further tested a random sample of 27 of these students (13 fifth graders and 14 sixth graders) using graded oral reading paragraphs (GORP) (see Appendix B for the paragraphs). At this time the researcher also began observing in both classrooms. The

SAT, the GORP and the classroom observations became the baseline information for the teachers and students involved in this study.

In September of 1983, the researcher taught students to record on log sheets all books read. These sheets contained title, author, the number of pages read, if the book was completely read, the source of the recommendation for reading the book, and a student interest rating of either high, average, or low (see appendix C for an example sheet). The only information used in this study from that sheet was whether the book was completely read. Not all the students filled out all the information on the log sheets. However, all the sheets did contain the information concerning the books completely read and the rating of interest. The log sheet and the outcome data books read were the same information collected and used successfully by Bissett (1969).

During the first semester, the researcher recorded field notes of the teachers' instructional practices. They were used to determine: (1) if there were strategies the teachers used to stimulate recreational reading and (2) how many students were observed reading recreationally. One half day of observation was conducted in each of the four classrooms. During the analysis of the data, it was determined that five comments the teacher's made had been recorded by the researcher in his calendar and that these would be used as they were relevant to the study. These

comments relating to the use of the strategies were included with the data.

In late December, the researcher began training the two teachers involved in the study on the appropriate use of the suggested instructional strategies. The strategies were those that would be used 90 minutes a week in each classroom. The teachers were encouraged to use one of the 18 strategies each week for the 18 weeks remaining in the school year. The training was conducted over three weeks and employed a plan described by Roehler et al. (1982). The Roehler et al. model was chosen because it also dealt specifically with the content of reading.

In January, the students were again tested by their classroom teacher using form F of the SAT (Comprehension Battery). Also, 25 of the randomly selected students (one fifth and one sixth grader from the original sample had moved) were retested by the researcher using the GORP measure. These two measures served two purposes: (1) they served as posttest data for the first semester, allowing the researcher to determine the amount of gain students made during the interval when no strategies were employed and (2) they became the pretest data for the second semester when the strategies were employed. Following this testing, all students were further instructed in the appropriate procedure for filling out logs. The researcher's observations of the two classrooms and the recording of teachers comments were continued during the second semester.

On February 1, the teachers began implementing the strategies for 90 minutes each week.

In mid May, all students were posttested by their classroom teachers using form E of the SAT (Comprehension Battery). Also, the researcher tested 22 of the students from the original random sample (three of the sixth graders were unavailable since two had moved and another was seriously ill) were tested by the researcher using the GORP measure. This completed the testing and provided the post test data for the second semester.

Sample

The sample for this study are all from one school and includes 86 subjects and two teachers.

Subjects

The subjects involved in this study were all the fifth and sixth grade students in Hale, Michigan during the 1983-84 school year who had a complete battery of tests.

Eighty six students ranging in age from 10 to 14 years old participated in this study. There were 45 fifth grade students and 41 sixth grade students. There were 25 girls in the fifth grade and 20 boys. There were 12 girls in the sixth grade and 29 boys. Students who were not in Hale at the beginning of the year or who moved and did not have a

complete battery of tests were eliminated from the analysis. Students absent on test days were tested on alternate days with one exception. One student contracted mononucleosis and missed six weeks of school at the time of testing. Due to this abnormal absence, she was not tested and was eliminated from the study.

There were two fifth grade classes and two sixth grade classes. The students were placed in classrooms by reading ability with the intention of maintaining a heterogeneous mixture of students in all classes. Each class had an above average, an average and a below average reading group.

Teachers

The fifth grade reading and language arts teacher and the sixth grade reading and language arts teacher volunteered to participate in the study. The teachers involved in the study had six and seven years of teaching experience respectively and both had Master's degrees. Both teachers were considered to be above average teachers by their principal. The teachers eagerly attempted to perform all the suggested tasks. Prior to the year of the study, both teachers read to their classes at least three times weekly and attempted to record biweekly the number of books each child read. The biweekly record of books read was routinely used by the principal as part of a "McReaders" activity to determine which class in the fourth through

sixth grades read the most books. The "McReaders" program was developed by the principal of the elementary school three years prior to the research study and was intended to encourage students to increase the amount of reading they were doing. The teachers recorded and tallied student reading and the class which read the most books won a 15 minute reading from the principal. During the three years before the study began, the students in neither teacher's classes had previously read inordinate numbers of books. Neither teacher had been observed using the active strategies that were taught in the intervention prior to the treatment.

School

The elementary school where the study was conducted is a kindergarten through sixth grade located in Hale, Michigan. Hale is a typical northern Michigan community with limited industry and a varied population representative of all socio-economic levels.

During this study, 360 children attended this northern Michigan rural school. There were two classes of each grade level from kindergarten to sixth grade. The students were drawn from the Hale area, which is a 200 square mile, class D school district. The children in the study ranged from upper class, whose parents own the major businesses, to children whose families are low income (50% of the

population) as determined by the free lunch statistics. The area in which the school is located is rural but has limited farming. The region mainly depends on summer tourism.

Instructional Practices

The teachers and students who participated in the study were trained in specific instructional practices. The practices and the intervention related to these practices are discussed here.

Promotional Practice List

The active strategies used in the study were based on those cited by Sauls (1971). He found that, "There was a significant relationship between the teacher's score on the promotional practice checklist and the mean number of books read by his pupils"(p. viii). Sauls refers to the promotional practice checklist as "A checklist of possible activities for encouraging pupils recreational reading" (p.40). He further states that, "The activities suggested on this checklist were taken from the recommendations of Huck (1968) and Arbuthnot (1957)"(p. 40). Saul's checklist contained 27 items. Three of these practices were considered negative and activities teachers should not do, while the rest were considered positive, the types of practices that would promote reading. From this group of 24

positive practices, 18 were chosen that dealt specifically with reading related activities and which could be adapted and used as active strategies. These eighteen activities were selected for use by the teachers during the second 18 weeks of the study (see Appendix A for strategies).

Saul's (1971) checklist became the specific list of active strategies which the teachers were encouraged to use with students to stimulate increased recreational reading during the second semester.

Teacher Training

A distinctive feature of the present study is the intervention with the two teachers. In all of the research in this domain, it is assumed that teachers understand and can do what is requested of them with no training. An example of this is described in the research by Bissett (1969), he states, "Suggestions were offered to teachers for these activities, but each of the treatment C teachers was given wide latitude to choose from a number of suggested activities the most suitable for his class" (p.33). No suggestions were listed and it is difficult to know if instructions were provided for teachers.

The research by Roehler et al. (1982) would indicate a need for teacher training prior to the use of innovative instructional practices. They found: "All of the teachers received the information, wanted to change and tried to do

so; however, only one out of four was consistently successful" (p.1). The differences in the successful teacher's performance and the three teachers that were not able to perform successfully were related to the techniques used in the training sessions. The present study used the training techniques developed by Roehler et al. because of the similarities in the two studies.

The work by Roehler et al. (1982) determined three important facets of training. First, the training should focus on the thinking that goes on in the development of a lesson. Second, effective lessons require gradual fading out of assistance and third, the teacher is not just told about a specific strategy but provided assistance as he/she changes his/her cognitive structure.

Using the conceptual framework in this model, the two teachers in this study were exposed to three training sessions. The first session consisted of the researcher developing a lesson orally with the two teachers, explaining what and how it would be done. At this time, the researcher tried to link the new material to the teachers' previous experiences. For instance, the activity for week one was to bring in new books for presentation to the class. One of the teachers involved in the study was a voracious reader of science fiction. Consequently, the researcher presented a number of science fiction books, then developed a lesson on what constitutes science fiction, what were the types of science fiction and finally read selections of

science fiction stories to the teachers as if they were the class. During the discussion of what constitutes science fiction, positive and negative examples of science fiction were examined for the teachers. Finally, teachers were asked to think of an example of a similar lesson they taught (e.g., a lesson on poetry) and to determine if they had provided the necessary information. Had they introduced poetry, provided material to help define what is and is not poetry, examined different types of poetry, and finally shared poetry by reading it? Next the teachers taught the lesson to their students while the researcher observed.

The second session consisted of a discussion of the first lesson taught by the teacher and the joint development of the second lesson. This began the gradual fading of assistance as the teacher took more responsibility for this lesson. The second lesson was then taught by the teacher in her classroom and again observed by the researcher.

The final session focused on a discussion of lesson two followed by the development of lesson three by the teacher with less assistance from the researcher. This lesson was presented to the students, observed by the researcher, and discussed. This group of three meetings included the criteria suggested in Roehler, et al. (1982) and provided more specific techniques than that found in Bissett's (1969) work.

Data Collection

Qualitative and quantitative data were collected. The qualitative data were field notes of the teachers' instruction, recorded at intervals across the year and teacher comments recorded in the researcher's calendar. The quantitative data were SAT scores, GORP scores and the students' logs listing the number of books reported read.

Qualitative Data

The qualitative data consisted of observations of the teachers' instruction, in the form of field notes recorded at regular intervals. Observations were done during the first semester as a baseline to determine the amount and type of reading activities performed. There were two baseline observation periods for each teacher (one for each class group). The observation periods were one half day each. The fifth grade teacher was observed for 191 minutes and the sixth grade teacher was observed for 244 minutes. The difference in time was related to the fact that one teacher had a planning period on one of the days she was observed. Field notes were completed for each observation and included a running description of teacher-student dialogue, with time intervals recorded regularly. A limited number of statements were made by teachers at times other

than the observations. For example, the researcher asked the teacher during a coffee break if the strategies were working out and she stated, "Yes, and they are working well". These were recorded in the researcher's calendar.

In January, further collection of field notes began. There were five observations of each teacher during this semester, with the fifth grade teacher being observed for 199 minutes and the sixth grade teacher being observed for 295 minutes. Again the difference in time was related to the fifth grade teacher's planning periods which occurred during the data collection. This did not happen in the sixth grade and thus the sixth grade observations were longer. The observations consisted of two half day periods and three observations while each teacher was implementing the active strategies. The researcher was observing to determine: (1) If teachers used the active strategies during the treatment semester and (2) How many children were observed to be engaged in recreational reading.

Quantitative Data

In September of 1983, all students in the Hale elementary school were tested using the SAT. This is done annually in September by all classroom teachers. The student's score on the subtest labeled "reading comprehension" was used as baseline data for each student in this study.

During the second week of school, (in September of 1983) students in the fifth and sixth grades were provided reading logs and trained by the researcher in the appropriate process for filling them out. The logs contained title, author, number of pages read, if the book was completely read, the source of the recommendation and a student's rating of interest in the book, from one high to three low (see Appendix C for a sample log sheet). The students were told that the information they provided would help determine the kinds of books purchased for the library. This approach was chosen because Bissett (1969) found, "that when adults did not exert undue pressure for large numbers of books read, children felt free to record their actual reading honestly" (p.24). For this reason, emphasis was placed on the need to decide which books to purchase for the library. The importance of complete records was stressed to the students and the appropriate method for filling these out was explained once at the beginning of each semester. The teachers stated that students had no trouble filling out the forms, and that the students did this regularly during the time provided.

In October, the researcher selected a random sample of six or seven children from each classroom (depending on the number of children in that class) and tested them using graded paragraphs. The 27 students read between three and five graded oral reading paragraphs. Their entrance level was determined by their score on the Stanford Achievement

Test. The students were given material considered to be at their independent reading level and were required to stop reading when they read the seventh grade paragraph or when they reached their frustration level. The frustration level was defined as the paragraph at which the student read with less than 94% accuracy in word recognition. The score recorded on this evaluation was rate, defined as the number of seconds it took the student to orally read the graded paragraphs. Rate was chosen as a method of evaluation because of the work by Leidholdt (1982), which demonstrated that rate was the most accurate measure of fluency and that fluency was highly correlated with comprehension. Of the paragraphs read by each child, one grade level paragraph was chosen as the appropriate level (the instructional level) and used for that child. The fifth grade paragraph was used for seven of the fifth grade students and the seventh grade paragraph was used for seven of the sixth grade students because those paragraphs were found to be at the appropriate instructional levels. For the remaining 13 students, a less complex or more complex paragraph (from second grade to seventh grade) was used, again the paragraph found to be at the appropriate instructional level. The instructional level paragraph was defined as the paragraph that the student read with between 94% and 99% accuracy for word recognition and nearest the child's score on the SAT. There were seven paragraphs selected from the Harcourt, Brace,

Jovanovich (1979) series. This series was unfamiliar to the students in Hale.

In January, the data collection cycle began again with comprehension test scores from an alternate battery of the SAT. This was followed by a student reminder from the researcher regarding the importance of the logs and the need for accurate data. The data collection continued in February with further readings of graded paragraphs by 12 fifth graders and 13 sixth graders (one fifth grade student and one sixth grade student had moved).

In May, the final data were collected. This data collection consisted of: (1) comprehension scores from the original form of the SAT, (2) student scores on the GORP tests for 12 fifth graders and 10 sixth graders (two more sixth graders had moved and one was ill), and (3) students' logs.

There were both qualitative and quantitative data on students and teachers collected at three intervals. The purposes for the data collection were to determine if: (1) teachers would use specific active strategies they had not normally used if they were encouraged to use them? (2) the use of specific active instructional strategies were related to an increase in the amount of recreational reading by students? and (3) an increase in the amount of recreational reading was related to improved student reading achievement scores?

Data Analysis

This section describes how the data were collected, organized for analysis and the various analyses that were conducted. It contains the six research questions and their respective research hypotheses.

Data Organization

There were 51 fifth grade students and 51 sixth grade students. For each student, there were data collected on the number of books read and reading achievement. The data on the number of books read were tabulated for each child. Totals were computed for each child, for each class, and for each grade by semester.

Comprehension scores were recorded for each child at each of the test intervals. Any child not having the requisite three scores was eliminated from this study. Seven of the fifth grade students and ten of the sixth grade students did not have pre, mid, and or post test SAT scores. These seventeen students appeared to have scores that were similar to the remaining 86 students who were used in the study. Consequently, the final analysis was run using the 45 fifth grade students and 41 sixth grade students.

The design of the study provided for the observation of students at two time intervals. Interval one served as the baseline condition and interval two served as the treatment

condition. By using this two interval design, the students could function as their own controls. This method made it possible to determine changes in the reading measures between intervals (i.e., semesters).

However, without a control group the design inadequately allowed for the normal reading growth expected for an average child during each semester. Thus, it is possible that average students typically make little gain the first semester and then make large gains the second semester. To more accurately determine the proportion of change associated with the treatment condition, the median score for each test interval (which was the scaled score corresponding to the 50th percentile) taken from the Stanford norming data was subtracted from each child's scaled score at each test interval. For example, subtracting the median expected score of 626 from a fifth grade student's pretest score of 630 would yield an adjusted SAT score of plus four for that child. In this sense the 50th percentile score functioned as a control variable or covariate, adjusting the student's score by removing the average expected reading growth for that semester. The adjusted mean scaled scores on the SAT pre test for the 2 fifth grades and the 2 sixth grades are as follows;

fifth grade section one	-13.3
fifth grade section two	-10.5
sixth grade section one	-19.6
sixth grade section two	-1.8.

All four classes had mean scores that were below average, as average would be a score of zero.

This adjusted score served as the student's SAT score for all statistical analysis using SAT scores run in this study.

The above statistical procedure is based on the premise that Stanford's norming population and the population in the present study are similar enough to make this comparison. Descriptive statistics for the two populations are provided in an attempt to display this similarity. The descriptive statistics available on the norming population used by Stanford were provided in raw scores only. These data are presented with the descriptive statistics in raw scores, for the fifth and sixth grade students in the present study. The data for the two populations display the similarity of the groups;

(1) SAT norm group grade six Mean 38.7 S.D. 12.6

(2) Hale grade six Mean 36.8 S.D. 12.5

(3) SAT norm group grade five Mean 38.2 S.D. 13.5

(4) Hale grade five Mean 35.3 S.D. 11.8.

The data relating to rate were collected by the researcher on 31% of the children in an individualized test setting. The researcher recorded the time it took each student to orally read each graded paragraph. The children read from two to four paragraphs.

The descriptive statistics for the three dependent variables the number of books read, the SAT scores, and the

rate scores for each classroom (where appropriate), by variable are provided in Appendix D.

Data Analysis

There are six research questions and each required a different analysis. The first question was: Did teachers who previously did not use active instructional strategies designed to stimulate recreational reading, use these strategies when encouraged by the researcher? This question was analyzed in terms of the following research hypothesis: The fifth and sixth grade teachers will use the strategies designed to encourage recreational reading. This hypothesis required the observation of both teachers during the baseline and treatment semesters. The observations were recorded in field notes. The field notes listed the activities the teachers were doing and the activities the students were doing including the number of students reading recreational literature. When all the field notes were collected, they were analyzed for instances of the use of the active strategies. From a comparison of this data it could be determined if the teachers used the strategies during the treatment condition and if the teachers had been using the strategies during the baseline condition.

The second question was: Did the amount of student recreational reading increase during the semester teachers implemented these instructional strategies as compared to

the previous semester when they did not use these strategies? This question was analyzed in terms of the hypothesis: The fifth and sixth grade students will read significantly more books during the second semester than they did during the first semester. This hypothesis was assessed using both qualitative and quantitative data. The qualitative data consisted of classroom observations of students engaged in recreational reading. These data were examined for instances of students reading recreational literature during their normal instructional day. These results were then tabulated by semester and presented. The quantitative data required a tabulation of the number of books read by each child, for each classroom, for each grade and for each semester. These totals were compared using paired t-test to determine if students read significantly more books the second semester than the first semester.

The third question was: Did students show more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies? This question was examined in terms of the research hypothesis: The fifth and sixth grade students will make more growth in reading comprehension in the second semester than they made in the first semester. In order to examine this hypothesis, paired t-tests of the Stanford test data were run. The analysis and resulting tabulations allowed the researcher to determine if there

were statistically significant changes in the students' test scores between time periods.

The fourth question was: Did the number of books read recreationally by students correlate positively with their comprehension ability as measured by their score on the SAT? This was analyzed in terms of the hypothesis: There will be a positive significant relationship between the number of books students read and their scores on the comprehension measure for the treatment semester. The question required a correlational analysis of the number of books read and the Stanford test scores to determine the relationship between the two sets of measures.

The fifth question was: Did students show an increase in their rate of reading the semester teachers implemented the instructional strategies as compared to their rate of reading the previous semester when teachers did not use the strategies? The question was examined in terms of the research hypothesis: The fifth and sixth grade students will make more growth in reading rate in the second semester than they made in the first semester. In order to examine this hypothesis, paired t-tests of the rate test data were run. The analysis and resulting tabulations allowed the researcher to determine if there were significant changes in the students' test scores for the two conditions.

The sixth question was: Did the number of books read recreationally by students correlate positively with their rate of reading as measured by their score on the GORP? The

question was examined in terms of the hypothesis: There will be a positive significant relationship between the number of books students read and their scores on the measure of reading rate for the treatment semester. This hypothesis required a correlational analysis of the number of books read and the rate test scores to determine the relationship between the two sets of measures.

Summary

The study examined the relationships between the amount of recreational reading and students' scores on measures of reading comprehension and reading rate. To do this, the year was examined as two semesters with each semester a different treatment interval. The beginning and end of the semesters were the beginning and end of the test cycles. During the first semester, all students were taught to make a record of their recreational reading. Teachers did not employ strategies at this time. At the end of the first semester teachers were taught a system for implementing a set of strategies which would be used 90 minutes a week to encourage student reading. Again, students were taught to record the number of books read. The students involved in this study were pre, mid and post tested using:

1. Stanford Achievement Test (1983),
2. graded oral reading paragraphs.

In addition to the testing there were:

1. classroom observations and interviews,

2. teacher training for implementation of active strategies to be used with all students and

3. student instruction on how to fill out a reading log, a necessary measure of the amount of reading done.

CHAPTER IV

FINDINGS

The study addressed six questions: (1) Did teachers who previously did not use active instructional strategies designed to stimulate recreational reading use these strategies when encouraged by the researcher? (2) Did the amount of student recreational reading increase the semester teachers implemented these instructional strategies as compared to the previous semester when they did not use the strategies? (3) Did students show more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies? (4) Did the number of books read recreationally by students correlate positively with their comprehension ability as measured by their score on the SAT? (5) Did students show an increase in their rate of reading the semester teachers implemented the instructional strategies as compared to their rate of reading the previous semester when teachers did not use the strategies? and (6) Did the number of books read recreationally by students correlate positively with their rate of reading as measured by their score on the GORP?

The design of the study provided for the observation of students at two time intervals: interval one served as the baseline condition and interval two served as the treatment condition. By using this two interval design, the students could function as their own controls. This method made it possible to determine changes in the reading measures between intervals, ie. semesters.

The study measured 86 fifth and sixth grade students reading proficiency across two semesters. At the beginning of the second semester, teachers introduced specific active strategies to encourage student reading. The active strategies were presented using the teacher training model developed by Roehler et al.(1982). For the purposes of this study, statistical values with an associated probability of .05 or less are considered statistically significant.

For organizational purposes and ease of reading, this chapter is organized by analysis of qualitative data and then the analysis of quantitative data. The findings in each domain are organized and reported by research question and by hypothesis.

Qualitative Analysis

This section provides the analysis of the qualitative data and reports it by research question. This section addresses only research questions one and two.

The field notes and interview data collected by the researcher are the qualitative data.

Qualitative Findings Relative to Question One

Question One asked whether teachers who previously did not use active instructional strategies designed to stimulate recreational reading used these strategies when encouraged by the researcher? This research question was restated as the research hypothesis: The fifth and sixth grade teachers will use the strategies designed to encourage recreational reading. The related analysis required an examination of the field notes for instances of the use of active strategies during the baseline and the treatment condition.

The eight half day classroom observations began in the fall of 1983. Table 1 displays the data indicating observations of each grade each semester and provides the amount of time by grade and by semester for the observations.

Table 1

Minutes of Observations Done Each Semester by Grade

Grade	Semester 1	Semester 2
Grade 5	191	155
Grade 6	244	213

During four one half day observations in the first semester, neither teacher was observed using specific active strategies nor were there any other indication of their use (e.g., displays of book reports, book related art work etc.). In the second semester, the four one half day observations were done again. During three of the four one half day observations there was a statement made directing students to participate in an active strategy. In these instances the teachers used the strategies designated by the researcher, during the appropriate week. In an observation of Teacher K on May 2, 1984, she stated: "Any photo essays not done, get them finished". Photo essays were used to share readings through art activities, this was the activity labeled 15 and done in the 15th week of the treatment semester. On May 9, 1984, Teacher K stated: "You are to

think about the plays we saw and be ready to discuss them. Let's look at what you liked and didn't like". In this activity, students were discussing the drama performed by other students portraying a section of a book they had read. The activity was from the list provided to the teachers for use during that week. On May 24, 1984, during an observation of Teacher D, she stated: "Remember, sentences on both sides about a book you read". This was a comment related to the work on student book reviews activity 18, the active strategy that had been recommended for use that week. During this same observation, the researcher recorded information concerning room decorations made by students. These were mobiles that were book reports and a bulletin board display of pictorial book covers made by students, both of which were on the suggested list of active strategies.

In three of the four half day observations during the treatment semester, teachers made a statement concerning the active strategies. During these four observations, two examples were noted of student work performed in response to the strategies. In discussions on March 14, 1984, May 9, 1984 and May 24, 1984, the researcher asked the teachers if they were using the strategies and they stated "yes", "yes and they are working well" and "yes" respectively.

From the field notes of observations and interview data, it was found that the teachers were using the active strategies during the treatment semester. In contrast,

there was no evidence of the use of such strategies during the baseline semester. Consequently, the research hypothesis was supported; teachers did use the instructional strategies during the treatment semester when they were provided with encouragement and training.

Qualitative Findings Relative to Question Two

Question Two asked whether the amount of student recreational reading increased during the semester teachers implemented these instructional strategies as compared to the previous semester when they did not use these strategies. The research hypothesis related to question two was: The fifth and sixth grade students will read significantly more during the second semester than they did during the first semester. In order to answer this question it was necessary to analyze the field notes recorded both semesters to determine how many times students had been observed reading for recreation and to then run numerical comparisons by semester.

Instruction in the fifth grade occurred in both total group and in small groups. During the intervals in which instruction was occurring in small groups, some students were working with the teacher while others were doing assigned work, extra work or reading for recreation. The field notes of the two half day observations each semester were used to respond to this hypothesis. The field notes

list times and record the activities students were doing at regular intervals. The observations of the specific active strategies (done as part of the training sessions) were not included because in some instances all students were reading as part of a specific strategy and were not reading by choice. During the first semester observations in the fifth grade, seven students were observed reading for recreation. In an observation done on October 18, 1983 the following was recorded:

> (2:09 students busy doing work except Schrage reading a comic and Coleman doing a puzzle) and (2:42 students busy, Schrage reading comic book, Allen boy reading book at book center, Carie and Resseau reading books).

During the two second semester observations in the fifth grade, 22 students were observed reading for recreation. In an observation done on May 2, 1984 the following comment was recorded in the field notes:

> (1:50 nine students were doing written work, Todd, Becky, Jenifer Webb, Belinda Runyon, Chris, Michael, Daun, Ricky H., Brian and Becky Landis were reading trade books) and that (2:08 Allen S. and Allen O. are now reading also).

These data from the four observations indicate that the fifth grade students read more the second semester than they did the first semester (7 students reading during the first semester compared to 22 students observed reading during the second semester).

Instruction in the sixth grade occurred in total group activities and small group activities during the observations in the first semester but only in total group activities during the observations which occurred in the second semester. Because of this, there were no students observed reading for recreation during the treatment semester as everyone was required to participate in the teacher selected activities. However, three students were observed reading trade books in the first semester as indicated by the entry in the field notes dated October 17, 1983:

> 11:22 two students at computer, Tom, Eddie and Charles reading comic books, rest doing assignment.

It appeared from the qualitative data collected and treated that the sixth grade students did less reading of recreational literature during the school day in the treatment condition than during the baseline condition.

The sixth grade teacher was doing all whole group activities during the observations in the second semester and therefore these students had no time for recreational reading during the school day. The data examined in this section failed to support the research hypothesis. The fifth grade students read more but the sixth grade students read less the second semester as compared to the first.

In a supplemental analysis, the combined data (for both fifth and sixth grade students) indicated that students were observed reading more recreationally during the treatment

semester (10 students reading semester one compared to 22 students reading semester two). These results suggest increased reading by students but indicate that the teacher or the grade may have been important variables.

Quantitative Analysis

The quantitative data are presented by research question and by hypothesis. These data include the SAT results, the GORP results and the results of the student reading logs. This section addresses only research questions 2, 3, 4, 5 and 6 because no quantitative data were collected related to question one. This section presents data for each research question and research hypothesis by grade and, when appropriate, by classroom.

Quantitative Findings Relative to Question Two

Question Two asked whether the amount of student recreational reading increased the semester teachers implemented these instructional strategies compared to the previous semester when they did not use the strategies. The research hypothesis developed relative to question two was: The fifth and sixth grade students will read significantly more books during the second semester than they did during the first semester.

To answer this question, it was necessary to determine the number of books read during each semester of the school year. In the fall of 1983, the researcher taught students a system for recording the number of books read. Students used this system, weekly completed log sheets, and returned them to their teachers. On January 12th, at mid year, the researcher collected all the first semester log sheets not previously returned. The researcher then reviewed the procedure for filling out the logs with students. This began the second interval and students started recording their books read during spring semester. In May, the researcher collected all log sheets. The number of books read was tabulated for each child and aggregated to arrive at the total number of books read for each grade level per semester.

As seen in Table 2, the 45 fifth grade students reported reading 235 books the first semester and 423 books the second semester. The results of paired t-tests revealed that the number of books students read differed significantly between semesters. These data suggest that the fifth grade students read more books during the semester their teachers used active strategies to promote recreational reading than they did the first semester when the teachers did not use these strategies. These results provide some evidence of the effectiveness of the treatment condition in comparison to the baseline condition.

Table 2

Books Read by the Fifth Grade Students Each Semester

	Semester 1	Semester 2	paired t-value	P-value
Total Books	235	423		
M	5.2	9.4	-3.27	.002
SD	5.8	7.2		
n	45	45		

In a final supplemental analysis of the fifth grade data, the percentage of students reading more books was further determined. Sixty six percent of the fifth grade students read more books during the treatment condition than in the baseline condition, with a range of 1 to 30 more books. The remaining students read the same (11% of the students) or fewer (22% of the students) number of books the second semester, with a range of 2 to 18 books fewer.

As seen in Table 3, the 41 sixth grade students reported reading 97 books the first semester and 121 books the second semester. The results of paired t-tests revealed that the number of books read the second semester did not

significantly change from the number read the first semester. These results indicate that the sixth grade students failed to read significantly more books during the semester the teachers used the active strategies.

Table 3

Books Read by the Sixth Grade Students Each Semester

	Semester 1	Semester 2	paired t-value	P-value
Total Books	97	121		
M	2.4	3.0	-.62	.541
SD	4.5	4.7		
n	41	41		

Again in a supplemental analysis, it was determined that 34% of the sixth grade students read more books the second semester, with a range of 1 to 14 books more. The remaining students read either the same (46% of the students) or fewer (20% of the students) with a range of 5 to 16 books fewer.

The results related to this hypothesis were mixed indicating that the fifth grade students read significantly more during the treatment semester while the sixth grade

students did not read significantly more. The research hypothesis was not supported.

In a further supplemental analysis, Table 4 displays the total and average number of recreational books read by each of the four classes during each semester. This information is provided in an attempt to determine if the differences in the number of books read occurred by grade or possibly by class within grade.

The results of paired t-tests revealed that only students in classrooms 5-2 and 6-1 read significantly more books the second semester. Students in classroom 5-1 read more books during the treatment but this gain failed to show statistical significance. Students in classroom 6-2 actually read fewer books the second semester. This analysis revealed that the differences were not by grade as much as by class and that one fifth grade class and one sixth grade class did read significantly more the second semester compared to the first semester.

Table 4

Books Read by Each Class During Each Semester

Class	Five-1	Five-2	Six-1	Six-2
1. Sem. One	145	90	8	89
M books	6.3	4.1	.4	4
2. Sem. Two	201	222	69	52
M books	8.7	10.1	3.6	2.3
P-value	.155	.005	.012	.21
paired t-value	-1.47	-3.12	-2.79	1.29
n	23	22	19	22

To specifically examine the quantitative patterns of books read, a supplementary classification analysis collapsed the number of books read into three categories. The three categories were composed of all stutents (n=86), students reading more books (n=42), and students reading fewer books (n=16). The 28 students who read the same number of books both semesters appear in the group labeled "all students" but were not analyzed further as their reading patterns remained constant both semesters.

Table 5 displays this classification and lists the number of students in each of the collapsed categories. The first section of the table examines "all students" reading and displays that 50 students read no books the first semester and that 32 students read no books the second semester. The data revealed that there were a number of students each semester who did not read any books (58% of the students in the first semester and 37% of the students in the second semester). However, more students read books during the treatment condition than during the baseline condition.

The second subsection labeled "students who read more books semester 2" provides information concerning the students who read more books the second semester than the first. In examining these 42 students, note that the greatest gain occurred among those students who read no books the first semester. These 28 students (67% of the 42) showed marked change in their reading habits the second

semester. This table does not trace each student's growth but does suggest that they found an incentive to read more books.

The final subsection labeled "students who read less books semester 2", provides information concerning the students who read fewer books the second semester than the first. An examination of these 16 students revealed that 10 of these students (63% of the 16) read no books the second semester.

Table 5

All Students, Those Reading More, and Less by Semester

The total 86 students by books read by semester		
no. of books read	semester 1	semester 2
none	50	32
1-10	28	29
11-20	6	21
21-30	2	4
n	86	86

Students who read more books semester 2		
no. of books read	semester 1	semester 2
none	28	0
1-10	13	19
11-20	1	19
21-30	0	4
n	42	42

Students who read less books semester 2		
no. of books read	semester 1	semester 2
none	0	10
1-10	10	5
11-20	4	1
21-30	2	0
n	16	16

In summary, 42 students read more books the semester the teachers implemented the treatment. At the classroom level, 1 fifth grade and 1 sixth grade class of students read significantly more during the treatment semester. At the individual level, 64 percent of the fifth grade students and only 34 percent of the sixth grade students read more during the treatment semester. These data suggest the students did not all react equally to the treatment condition as some found stimulation while it suppressed or had no effect on other's reading habits. In addition to rival explanations, a potential reason for the change in the amount of reading is that the treatment encouraged reading for 50% of the students but failed to do this with the other 50% and in fact encouraged a decrease in the amount of reading for 20% of the students.

Quantitative Findings Relative to Question Three

Question Three asked whether students showed more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies. This research question was restated as the hypothesis: The fifth and sixth grade students will make more growth in reading comprehension in the second semester than they made in the first semester. To answer this question, students were

given the Stanford Achievement Test (Form E) in May of 1983. The following January, students again took the test using the Stanford (Form F). In May of 1984, the students took the test for a third time again using Form E. Paired t-tests of the Stanford test data were used to determine if there were statistically significant changes in the students' test scores between the time periods.

As seen in Table 6, the paired t-tests revealed statistically significant change for three of the four mean scores. An anomalous finding was that both the fifth and sixth grade mid year values decreased, indicating the students scored lower at the mid year than they had on the pretest. Specifically, the fifth grade students' average adjusted scaled score began at -11.9 and regressed by the end of the first semester to -24. This statistically significant change ran the reverse of that predicted by Stanford. During this same interval, the average adjusted sixth grade scaled score began at -10 and regressed by the end of the first semester to -14.5. These results were again the reverse of that predicted by Stanford, but not statistically significant. By comparison, both the mid to post test differences showed statistically significant changes in a positive direction. The fifth grade average adjusted scaled score improved from -24.2 to -4.5. The average student's score improved by 20 points, well above the 8 points considered normal by SAT. A similar pattern was observed in the sixth grade where the average adjusted

student score began at -14.5 and by the end of the time interval was 19. The average sixth grade student's score improved by 33 scaled score points, when three is considered normal by Stanford. The improvement in both the fifth and sixth grades was statistically significant and in the direction predicted by Stanford. The anomoly related to the mid year findings must be considered when examining the results for the three test intervals, it could be that the results are not as much growth, as a regression toward the mean. The research hypothesis was supported, the fifth and sixth grade students made more growth in reading comprehension during the treatment semester as compared to the control semester.

Table 6

Scores for Students by Test Interval by Grade

SAT	n	M	SD	paired t-value	P-value
Pre 5th	45	-11.9	27.4		
Mid 5th	45	-24.2	31.2	.348	.001
Mid 5th	45	-24.2	31.2		
Post 5th	45	-4.5	47.2	-3.79	.0001
Pre 6th	41	-10.1	40		
Mid 6th	41	-14.5	38.6	1.1	.278
Mid 6th	41	-14.5	38.6		
Post 6th	41	18.9	47.7	-7.3	.0001

Quantitative Findings Relative To Question Four

Question Four asked whether the number of books read recreationally by students correlated positively with their comprehension ability as measured by their score on the SAT. The research hypothesis developed to test this was: There will be a positive significant relationship between the number of books students read and their scores on the comprehension measure for the treatment semester. The analysis for this question examined the nature of the relationships between achievement scores and books read.

The correlation between the number of books read during the first semester and the students' (n=86) adjusted Stanford scores at mid year was .166, with a statistical probability of .063. Although in the expected direction, this relationship failed to show statistical significance.

The correlation between the number of books students read the second semester and their adjusted Stanford post test revealed a negative (-.1138) and statistically nonsignificant relationship (p=.149). An examination of the scatter plot of the data points for the two variables revealed that some of the students' scores fell outside the expected distribution, potentially affecting the correlations. This examination required the graphing of all students with one point of the graph being the number of books read and the other being the adjusted Stanford score.

Examples of the scores that were statistically eliminated were (1) 124 points gain on Stanford and no books read, (2) 100 points gain on Stanford and 20 books read and (3) a loss of 88 points on Stanford and no books read. A regression routine was used which statistically determined and eliminated ten such extreme scores. Revised correlations based on 76 cases remained basically unchanged from the original correlations. These results indicated that the number of recreational books students read in either semester failed to correlate significantly with their adjusted Stanford scores.

In a supplementary analysis, the same measures examined at the classroom level presented a more complex and very inconsistent picture. Table 7 presents the correlations between the number of books students read and their adjusted Stanford scores at the two time intervals for each classroom. The classrooms labeled 5-1 and 6-1 showed positive correlations ranging from .46 to .13. The classrooms labeled 5-2 and 6-2 had three negative correlations which ranged from -.14 to -.28. None of the correlations for 5-2 and 6-2 achieved significance.

Table 7

Books Read and Test Scores by Class by Semester

		Semester One		Semester Two	
Classroom	n	Correlation	P-value	Correlation	P-value
Five-1	23	.46	.014	.19	.195
Five-2	22	-.14	.267	-.14	.267
Six-1	19	.13	.298	.30	.109
Six-2	22	.22	.159	-.28	.105

In an attempt to test for interactions by initial ability level on the SAT, the students were placed in three sub-groupings by their pre-test SAT scores. The students were placed in high, medium or low achieving groups, each containing approximately one third of the students. The intra group correlations between their adjusted Stanford scores and books read (see appendix D for correlations) revealed that of the 27 correlations only four showed statistical significance. The research hypothesis: There will be a positive significant relationship between the students' quantity of reading and their scores on the comprehension measures was not supported. Students did make gains but the relationship between these gains and the number of books read was not regular or predictable.

Quantitative Findings Relative to Question Five

Question Five asked whether students showed an increase in their rate of reading the semester teachers implemented the instructional strategies as compared to their rate of reading the previous semester when teachers did not use the strategies. The research question was restated as the research hypothesis: The fifth and sixth grade students will make more growth in reading rate in the second semester than they made in the first semester.

To answer this question the researcher tested 13 fifth and 14 sixth grade randomly selected students in October of

1983 using graded oral reading paragraphs. The students read between three and five graded paragraphs.

The data for rate were analyzed by grade and for the total group, using paired t-tests to determine differences and correlations to determine associations. The small sample size prohibited an examination of the measures for each classroom.

As seen in the analysis in Table 8, the results regarding rate provided mixed results by grade level. Fifth grade students improved both semesters but significant growth was noted only during the second semester. In contrast, the sixth grade students demonstrated gains during both time intervals in the expected direction (positively), but they made statistically significant gains in the control condition only. The results failed to support the hypothesis. The fifth grade students made significant improvement in rate semester two as compared to semester one, but the sixth grade students did not.

Table 8

GORP Scores by Grade for Each Test Interval

		n	M Time	SD	paired t-value	P-value
			Grade Five			
Rate	Time 1	12	82.3	39.5		
					.22	.832
Rate	Time 2	12	81.1	33.1		
					2.62	.024
Rate	Time 3	12	68.1	30.9		
			Grade Six			
Rate	Time 1	10	59.7	22.5		
					3.89	.004
Rate	Time 2	10	53.4	26.8		
					1.82	.101
Rate	Time 3	10	48.0	18.4		

The data in Table 9 is a supplementary analysis for the total group and displays the mean reading time of the paragraphs decreased from 72 seconds to 68.5 seconds from the pre to the mid test interval. This change was in the expected direction in that the students took less time to read the paragraphs but not significantly less time. The mean reading time of the paragraphs decreased from 68.5 to 58.9 seconds from the mid to the post test interval. This change was in the expected direction and was significant. When the 22 children were examined across two semesters, it was found that their growth the second semester was significantly greater than their growth the first semester. Again we appear to see evidence for the effectiveness of the active strategies the teachers used during the second semester.

Table 9

GORP Scores for Each Test Interval

Intervals	n	M time	SD	paired t-value	P-value
GORP Time 1	22	72.0	34.1		
				1.11	.281
GORP Time 2	22	68.5	32.8		
				3.11	.005
GORP Time 3	22	58.9	27.4		

Quantitative Findings Relative To Question Six

Question Six asked whether the number of books read recreationally by students correlated positively with their rate of reading as measured by their score on the GORP. This research question was restated as the research hypothesis: There will be a positive significant relationship between the number of books students read and their scores on the measure of reading rate for the treatment semester. The analysis examined the nature of the relationships between reading rate and books read. Table 10 presents the results of this analysis.

An examination of the coefficients in the column labeled Semester one, books, reveals that, as expected, the number of books students read varied indirectly (the more books children read, the less time they took to read a paragraph) but none of the coefficients showed statistical significance. In contrast, the coefficients in the column labeled Semester two, books, revealed that the number of books students read did not vary indirectly and that the students who read the most books were not those whose rate improved. Again none of the coefficients were statistically significant. These data indicate the amount of recreational reading failed to predict how a child did on the measure of rate. The research hypothesis was not supported, as there were not positive significant relationships reported between the students' quantity of reading and their scores on the measures of rate.

Table 10

Correlations Between Books Read and GORP Scores

	Semester One		Semester Two	
Fluency	Books	P-value	Books	P-value
Time-1	-.1759	.217	.0522	.409
Time-2	-.0735	.373	.2156	.168
Time-3	-.0719	.375	.1711	.223

Summary

Did teachers who previously did not use active instructional strategies designed to stimulate recreational reading use these strategies when encouraged by the researcher? This research question was restated as a research hypothesis: The fifth and sixth grade teachers will use the strategies designed to encourage recreational reading. The analysis of the field notes indicated that both teachers used the active strategies consistently; the hypothesis was supported.

Did the amount of student recreational reading increase during the semester teachers implemented the instructional strategies as compared to the previous semester when they did not use these strategies? This question was examined as the research hypothesis: The fifth and sixth grade students will read significantly more books during the second semester than they did during the first semester. When the observations of the fifth grade were examined, the qualitative data indicate that seven students during the first semester and 22 students during the second semester were observed reading for recreation. The quantitative data showed 45 fifth grade students reported reading 235 books the first semester and 423 books the second semester. The results of paired t-tests for the fifth grade revealed that the average number of books students read differed significantly between semesters.

The qualitative data indicated that three sixth grade students during the first semester and no sixth grade students during the second semester were observed reading for recreation. The quantitative data showed 41 sixth grade students reported reading 97 books the first semester and 121 books the second semester. The results of paired t-tests for the sixth grade revealed that the average number of books the sixth grade students read was not significantly different semester one compared to semester two. When the entire group was the unit of measure, the treatment can be said to stimulate increased reading. Yet, the results

varied and were not nearly as consistent by grade or at the classroom level. The fifth grade students read significantly more during the treatment semester, the sixth grade students did not, the hypothesis was not supported.

Did students show more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies? This question was examined as the research hypothesis: The fifth and sixth grade students will make more growth in reading comprehension in the second semester than they made in the first semester. The 86 students' mean adjusted scaled scores decreased by 8.5 scaled score points in the first semester and increased by 26.2 scaled score points the second semester. When the data were analyzed by grade, it was found that both the fifth and the sixth grade students made significant improvement during the treatment condition. These results indicate the hypothesis was accurate; the students made significantly greater gains semester two than semester one.

Did the number of books read recreationally by students correlate positively with their comprehension ability as measured by their score on the SAT? This question was examined as the research hypothesis: There will be a positive significant relationship between the number of books students read and their scores on the comprehension measure for the treatment semester. The correlations

between the number of books students read the second semester and their Stanford post test scores revealed a negative and statistically nonsignificant relationship (p=.149). Though students' comprehension significantly improved during the second semester, there were no related associations between comprehension and books read. The hypothesis was not supported.

Did students show an increase in their reading rate the semester teachers implemented the instructional strategies as compared to their rate of reading the previous semester when teachers did not use the strategies? This question was examined as the research hypothesis: The fifth and sixth grade students will make more growth in reading rate in the second semester than they made in the first semester. The 22 students' rate of reading improved by 4.5 seconds the first semester and 10.4 seconds the second semester. The results were statistically significant. However, when the data were analyzed by grade, it was found that the fifth but not the sixth grade students made significant improvement during the treatment condition. The research hypothesis was not supported.

Did the number of books read recreationally by students correlate positively with their rate of reading as measured by their score on the GORP? This question was examined as the research hypothesis: There will be a positive significant relationship between the number of books students read and their scores on the measure of reading

rate for the treatment semester. Though the correlations the first semester were indirectly related (the more books a child read, the faster he/she read the paragraph) as was predicted, they were not indirectly related the second semester and in neither instance were the results significant. The results failed to support the research hypothesis. Though overall the students' rate significantly improved during the treatment semester, there were no associations between rate and books read.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Introduction

This Chapter contains six sections: summary, findings, discussion of the findings, conclusions, implications and recommendations.

Summary

This study examined the relationship between recreational reading and reading achievement. The design of the study provided for the observation of students at two time intervals. The first interval constituted the baseline condition and the second interval served as the treatment condition.

Eighty-six students in 2 fifth and 2 sixth grade classes participated in the study. The researcher taught these students to record in logs the number of recreational books they read each semester. These students were pretested, tested at mid semester, and post tested using the Stanford Achievement Test (comprehension subtest). The researcher randomly selected six or seven children per classroom (depending on the number of children in that class) and

tested their reading rate using graded oral reading paragraphs at each of the three test intervals.

In January, at mid year, the researcher trained the two language arts teachers participating in the study to use specific active strategies to stimulate student recreational reading. The researcher observed the teachers during both semesters to, (1) determine the practices they were using to encourage recreational reading, (2) provide feedback to teachers in their use of the strategies during the second semester, and (3) record the number of students reading recreationally at each grade level. The teachers received a list of 18 different strategies and used one strategy per week over the 18 weeks of the intervention to stimulate recreational reading.

Analysis of the data determined if: (1) teachers would use specific active strategies they had not normally used if the strategies were provided and the teachers were encouraged by the researcher, (2) the use of specific active instructional strategies is related to an increase in the amount of recreational reading by students, and (3) an increase in the amount of recreational reading is related to improved student reading achievement scores.

The present study is of value for the information it provides concerning the relationship between recreational reading and reading achievement. However, this work like some of the early work makes its greatest contribution in demonstrating some methodological areas that should be

examined thoroughly in further research. The next section summarizes the findings pertinent to the respective research hypotheses.

Findings

This section is organized by research questions and presents the relevant findings for each of the six questions.

Question One

Question One asked whether teachers who previously did not use active instructional strategies designed to stimulate recreational reading used these strategies when encouraged by the researcher. This research question was restated as the following research hypothesis: The fifth and sixth grade teachers will use the strategies to encourage recreational reading.

An examination of the qualitative data revealed that the teachers made no statements encouraging students to participate in active strategies during the four half day observations in the first semester. In contrast, the fifth grade teacher made two such statements and the sixth grade teacher made one, during the four half day observations in the second semester. Further, during one of the four observations in the second semester, the researcher reported observing examples of two different products created by sixth grade students as part of the teachers' use of two of

the strategies. None of this was observed during the first semester. On three occasions during the second semester, the teachers stated they were using the strategies. From the field notes of observations and comments by teachers, it was apparent that the teachers were using the active strategies during the treatment condition whereas no evidence of this was apparent during the baseline condition. The hypothesis was supported.

Question Two

Question Two asked whether the amount of student recreational reading increased during the semester teachers implemented these instructional strategies as compared to the previous semester when they did not use the strategies. This research question was restated as the research hypothesis: The fifth and sixth grade students will read significantly more books during the second semester than they did during the first semester.

The qualitative and quantitative data regarding this hypothesis showed mixed results by grade level and by class within grade level. During two half day observations of the fifth grade in the first semester, the researcher observed seven students reading recreationally. In contrast, during the two half day observations of the fifth grade in the second semester, the researcher observed 22 students reading recreationally. The 45 fifth grade students reported

reading 235 books the first semester and 423 books the second semester, a statistically significant change between semesters. However, when these data were further examined by class, it was found that while both fifth grade groups read more during the treatment condition, the difference in the number of books read was significant only for the class group labeled 5-2.

During the two half day observations of the sixth grade in the first semester, the researcher observed three students reading recreationally. In contrast, during the two half day observations of the sixth grade in the second semester, the researcher observed no students reading recreationally, because the sixth grade teacher was using whole group activities during these observations rather than allowing individual reading. The 41 sixth grade students reported reading 97 books the first semester and 121 books the second semester; an increase which was not statistically significant. However, when the data were further examined by class, it was found that the sixth grade labeled 6-1 actually read significantly more books while the class labeled 6-2 read fewer books during the treatment condition than during the baseline condition. In sum, both the qualitative data and the quantitative data produced mixed results regarding this research hypothesis. When the data were aggregated by grade, the fifth grade students read significantly more and the sixth grade students did not. When the data were aggregated by classroom, one fifth grade

class and one sixth grade class read significantly more while the other two classrooms did not. The hypothesis was not supported.

Question Three

Question Three asked whether students showed more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies. This research question was restated as the research hypothesis: The fifth and sixth grade students will make more growth in reading comprehension in the second semester than they made in the first semester.

Analysis of the data revealed that students in both grades and all four classrooms made significantly more growth in reading comprehension during the second semester than during the first semester. This hypothesis was supported.

Question Four

Question Four asked whether the number of books read recreationally by students correlated positively with their comprehension ability as measured by their score on the SAT. This research question was restated as the research

hypothesis: There will be a positive significant relationship between the number of books students read and their scores on the comprehension measure for the treatment semester.

The correlational analysis determined that the two measures correlated positively the first semester and negatively the second semester. Neither analysis reached statistical significance. The hypothesis was not supported.

Question Five

Question Five asked whether students showed an increase in their rate of reading the semester teachers implemented the instructional strategies as compared to their rate of reading during the previous semester when teachers did not use the strategies. This research question was restated as the research hypothesis: The fifth and sixth grade students will make more growth in reading rate in the second semester than they made in the first semester.

The analysis showed mixed effects. The fifth grade students made significantly more growth in reading rate the second semester compared to the first semester but the sixth grade students did not. The hypothesis was not supported.

Question Six

Question Six asked whether the number of books read recreationally by students correlated positively with their rate of reading. This research question was restated as the research hypothesis: There will be a positive significant relationship between the number of books students read and their scores on the measure of reading rate for the treatment semester.

The correlational analysis determined that the two measures correlated positively the first semester and negatively the second semester. Neither analysis reached statistical significance. The hypothesis was not supported.

Synthesis of Findings

It was expected that there would be a pattern to the results found in this study. The anticipated pattern was that teachers would use the active strtegies during the treatment semester, which would result in increased student reading for that semester. This increased reading was then expected to positively impact student scores on the outcome measures.

However, this pattern failed to emerge. Instead, what was found was a series of inconsistent results. First, from the observations it appeared the teachers did use the strategies. However, not all students read more books and

the differences were at the classroom level with one fifth grade and one sixth grade reading significantly more. Therefore, the results indicate that the teachers may have used the strategies more rigorously with one class than with the other class. Second, as stated earlier, the data on the number of books read was not consistent. There were four classes of students involved in the study. Of the four class groups two classes read significantly more books during the treatment condition and two did not. Third, the students made significantly greater gains in reading comprehension during the treatment condition, but these results appeared to be due to the inordinately low scores they posted at mid-semester. Fourth, there were no positive significant correlations between the number of books read and the student outcome measures. Fifth, the fifth grade students, but not the sixth grade students made significantly greater gains on the measure of reading rate during the treatment semester.

Because the results failed to produce consistent patterns, one must conclude one of two things. Either there is no relationship between active strategies, books read, and achievement, or the methodology was faulty.

Discussion of the Findings

The findings related to the research questions demonstrate the importance of proper methodological

procedures when working in complex educational environments. In the following section, the questions will be listed followed by the expected results, the actual results and a discussion of both. Where appropriate, the discussion is organized by discussions related to the learner, the teacher, the subject matter and the milieu (Schwab, 1969).

Question One

Did teachers who previously did not use instructional strategies designed to stimulate recreational reading use these when encouraged by the researcher?

Drawing from previous research regarding teacher use of recreational reading strategies (Sauls, 1971) and teacher training (Roehler et al., 1982), it was predicted that the two teachers would employ the selected 18 strategies over the 18 weeks of the treatment condition. The results collected in the qualitative data appeared consistent with the predicted results. However, more observations and longer observations would have provided more convincing data. It appears the teachers did use the strategies regularly.

When teachers were trained in the use of specific strategies designed to encourage recreational reading, they did use them.

Question Two

Did the amount of student recreational reading increase during the semester teachers implemented these instructional strategies as compared to the previous semester when they did not use these strategies?

The research by Bissett (1969) on student reading and the work by Sauls (1972) on teacher behaviors related to student reading, suggested that the students would read significantly more during the treatment condition than during the baseline condition. Students did in fact read more in the treatment period. However, not all students responded to the treatment in the same manner, as some failed to read more and some even read less during the treatment condition.

An interesting finding concerning the number of books read related to the apparent inconsistency in this data. When all 86 children were considered, the data indicated that they read significantly more books during semester two as compared to semester one. However, analysis by grade revealed that the fifth grade students read significantly more while the sixth grade students did not. In further supplementary analyses by classroom, the results indicated that the difference was really at the classroom level not the grade level. In this analysis one fifth grade and one sixth grade class read significantly more and one fifth

grade and one sixth grade class did not read significantly more. It appeared that either the treatment varied or the treatment affected some students as predicted but failed to impact other students and that there was not a pattern to these results. An extended observation schedule might have allowed the researcher to determine why two classes read significantly more during the treatment condition and why two other classes failed to read significantly more during this same interval. In an attempt to determine if ability was a variable related to this apparent inconsistency, the 86 students were divided into three equal groups of students: those performing above average, those performing average, and those performing below average as compared to the total group. A correlational analysis of the books read with ability failed to demonstrate any significant relationships. It appeared that some students accepted and benefited from the strategies while others did not and again there appeared to be no pattern to these results. These differences did not appear related to ability or grade or teacher.

A possible explanation for the inconsistent results relates to the unit for measuring reading, which was books read. This unit was used in other research (Bissett, 1969), and yet appeared to be too general for this study. Fifty-eight percent of the students failed to read any books during the baseline condition while 37% read no books during the treatment condition. It is possible that many of these

students read but failed to complete the books they were reading. The study used only completed books read and may have ignored data necessary in the development of accurate correlations. A further problem with the books read data relates to the number of books read. Students reading one additional book were considered to have "read more". Perhaps a minimum amount of increase in reading is necessary to improve the outcome data, with this minimum amount being in number of books or in a percentage increase from the previous semester.

It seems the classroom was the most appropriate unit of analysis and that some classrooms accepted the treatment and responded as predicted while others did not. Without more observational data it is not possible to determine the reason for the differences by classroom and by student.

Question Three

Did students show more reading comprehension growth the semester teachers implemented the instructional strategies as compared to their reading comprehension growth the previous semester when teachers did not use the strategies?

Given the results of the research on student achievement and teacher characteristics by Sauls (1971), it was predicted that paired t-tests would indicate a significant improvement during the treatment semester. The predicted results relevant to the research question were consistent

with the actual results. However, during the baseline condition, the mean scaled score for each child on the Stanford went down by 7.5 scaled score points when Stanford predicted it would rise by 12. This anomaly in the outcome data was not predicted. During the treatment condition, the average scaled score improved by 26 points when Stanford predicted an improvement of 6. During the semester the treatment was in effect, the students made more improvement than the semester prior to the treatment, and the results were significant. Further analysis by grade and by classroom demonstrated similar results. The students made significantly greater gains during the treatment condition compared to the gains made during the control condition.

A possible explanation for the large gains made by students during the treatment condition were the extremely low scores recorded in January. The results for both class groups at this test interval were significantly lower than would have been predicted. These very low scores at this point would encourage the likelihood of much higher scores at the next test interval as the results would tend to regress toward the mean.

Another possible explanation is that the growth observed is evidence of the effective use of the active strategies. The students made significantly greater gains during the semester the treatment was being implemented as compared to the previous baseline semester.

Question Four

Did the number of books read recreationally by students correlate positively with their comprehension ability as measured by their score on the SAT?

Given the research on teacher characteristics and student learning reported by Sauls (1971), it was predicted there would be positive significant correlations between the number of books read recreationally by students and their SAT scores during the treatment condition. However, this was not what the data revealed. The SAT results failed to correlate positively with the number of books read during the treatment semester. The relationship between the number of books read and the SAT test scores during the baseline semester was positive but not significant. The same relationship between the number of books read and the SAT test scores during the treatment condition was found to be negative but not significant. Students did appear to make significant gains on the SAT during the treatment semester but the recorded number of books read was not related to this growth.

Three possible explanations for the lack of positive significant correlations related to question four are presented. The first possible explanation related to the teacher and dealt with the selection of the material introduced to the children. During the first semester, students read what they chose; during the treatment semester

students were exposed to specific literature with the intention of encouraging them to try particular books. Perhaps the students selected books at a more personally appropriate level prior to the teacher intervention. Some children may have been discouraged as the level of difficulty or interest varied. Proficient readers may have already acquired tastes for literature types and may not have been impacted by encouragement in the different literature domains provided by the teachers. This did not appear to be a problem in methodology. However, it is possible that extended observations or observations and student interviews could have provided information concerning this.

A second possible explanation that must be discussed concerns the relationship between recreational reading and the reading outcome measures. Perhaps the use of the active strategies to encourage recreational reading is not related to improved student achievement. Though the results do indicate that some students did read more when the teachers employed the treatments, the increase in reading was not predictably associated with the SAT results. The findings indicate that increased student reading failed to significantly hinder or improve the children's performance on the outcome measures. The predicted relationship between the use of the strategies and student achievement may not exist.

The third explanation relates to the unit for measuring reading, which was books read. This unit appeared to be too general for the present study. With the unit of measure being books read students reading a number of partial books were treated the same as students who read no books. If the amount of reading was related to improved scores on comprehension and rate, the student reading a portion of many books would perform as well as a student who read the same number of words but did this by completely reading several books. If this in fact happened the correlations would be inaccurate and fail to display predictable relationships. When the total group was considered, the students read more books and made greater gains on the reading measures during the treatment semester. However, the two measures (books read and achievement) did not appear related. If the problems suggested concerning the unit of measure did occur, it could explain the lack of associations found in this data.

Despite the lack of significant relationships between the SAT scores and books read, students appear to have improved significantly. However, this improvement did not vary as a function of the number of recreational books the students read.

Question Five

Did students show an increase in their rate of reading the semester teachers implemented the instructional strategies as compared to their rate of reading growth the previous semester when teachers did not use the strategies?

Given the work by Sauls (1971) regarding student achievement and the work by Leidholdt (1983) concerning rate's relationship to comprehension, it was predicted that the hypothesis would be supported. The results however failed to show this as only the fifth grade students made significantly greater gains in rate during the treatment condition. The sixth grade students made gains during both semesters but significant gains only in the control condition.

An explanation that appeared possible was that age or grade were factors contributing to the students' success. The fifth grade students had a one second change in their overall performance in rate from the first to the second testing interval. This same group had a 13 second change in their overall performance in rate from the second to the third testing interval. These differences were obvious and significant. The sixth grade students had a six second change in their overall performance in rate from the first to second testing interval. This same group had a five second change in their overall performance in rate from the

second to the third testing interval. Though the differences do not appear large, there are enough differences to demonstrate significance in the baseline condition and not the treatment condition. The sixth grade students made similar gains both semesters while the fifth grade students made much larger gains during the treatment semester. This same phenomenon was observed with the books read data (the fifth grade students read many more books during the treatment condition, while the sixth grade students had similar results for both conditions) and when this data was analyzed by classroom the results indicated the differences occurred more at the classroom level than by grade. However, the possibility that the fifth grade students accepted the strategies more thoroughly than the sixth grade students must be raised. There was no analysis of this data at the classroom level because there were not enough students with measures of rate. However, rate data on more students would have been helpful because it appears that classroom not grade was the important difference.

In order to determine if there was a ceiling effect for rate which disproportionately impacted the better readers, average scores in words per minute were calculated for the nine students who used the seventh grade paragraphs. The results were an average change of 19 words per minute in rate from the pre to the mid test interval and an average change of 11 words per minute in rate from the mid to the post test interval. In contrast, the eleven students who

were evaluated on either the third, fourth, or the fifth grade paragraphs were found to display an apparently opposite pattern. The results from these calculations were an average change of two words per minute in rate from the pre to the mid test interval and an average change of twenty one words per minute in rate from the mid to the post test interval. The differences in the change patterns introduces speculation that rate may have been a more appropriate measure for students who were less proficient readers.

Question Six

Did the number of books read recreationally by students correlate positively with their rate of reading as measured by their score on the GORP?

Given the research on teacher characteristics and student learning by Sauls (1971), it was predicted that there would be positive significant correlations between the number of books read and the GORP scores during the treatment condition. However, the data revealed no significant relationships between books read and students' GORP scores. When only the fifth grade was considered, the same phenomenon was displayed. Although the students appeared to make significantly greater gains during the treatment condition, these changes were not related to the treatment books read. When both grades were considered, again the students made significant gains in rate. Yet,

there were no relationships between books read and rate for those showing growth.

Two explanations presented for the inconsistency in these data are similar to those presented relative to Question four. It appears that: (1) the unit of measure, books read, ignored data and thus developed results that were inconsistent and (2) the implementation of the strategies did not affect all students in a similar manner with a majority of the students reading more but some reading less and others remaining unaffected. Further rate may not have been a reasonable measure for the better readers because of a ceiling effect.

Conclusions

There were a number of conclusions drawn from the discussion of the results. However, the most significant was that there were no conclusions concerning the basic hypotheses that could be stated with any degree of certainty. It appeared that as each hypothesis was examined there were methodological problems that either caused the hypothesis to be rejected or caused speculation concerning the validity of the results. The remaining conclusions relate to design.

The 18 strategies selected did not affect all students in the same manner. Almost half the students read more, some read the same amount and a few read less during the

treatment condition as compared to the baseline condition. The results for the total group show that the students did read significantly more while teachers were implementing the strategies than when they were not used. Yet, this varied at the class and grade level and there were not enough observational data to determine why the differences occurred. The specific strategies were found to be usable but they need to be studied further with a more rigorous design.

Classrooms are the most realistic place in which we can observe the process of education. Given the complexity of this environment, the researcher should collect a variety of information on the subjects (ie. achievement, ability, observation, and interview data) as it may be helpful in explaining the different ways the subjects respond to the treatment.

The unit of measure-- books read-- was too general. It ignored data and may have been a key variable responsible for the failure of this study to demonstrate significant correlations.

In this study it appeared that the classroom was the most appropriate unit of measure. Two teachers tried to introduce the same material to four different class groups and achieved dramatically different results.

Implications

The implications drawn from the discussion and the conclusions of the study are organized by implications for teachers, implications for teacher educators and implications for researchers.

Implications for Teachers

There was one implication for teachers that could be drawn from the results of the study.

The implication was that there appears to be a number of seemingly simple techniques, (eg. the use of active strategies) which in reality may require instructional assistance. The teachers in the present study were provided a list of 18 active strategies and then instructed in the appropriate techniques for their implementation. The instruction focused on three important facets necessary for teacher understanding. First, the instruction focused on the thinking that went on in the development of the lesson. Second, the instruction required gradual fading of assistance with the lesson preparation and third, the teacher was provided gradual assistance as she changed her cognitive structure regarding the necessary steps in the lesson preparation. Because of the teacher intervention model (Roehler et al., 1982) the use of the strategies was well understood and well implemented.

Implications for Teacher Educators

There was one implication for those involved with preservice and inservice teacher education. The implication relates to the process by which teachers learn.

The present work supported the findings of Roehler, et al. (1982). When teaching teachers to perform new educational practices, their specific training model which included input, modeling with feedback, and application with diminishing assistance was effective. Teacher educators should treat prospective teachers as students who learn best with a well structured lesson containing input, modeling with feedback, and application with diminishing assistance. It appears that teacher educators should provide the appropriate instruction and the necessary assistance for students in education to change their cognitive structure regarding the specific tasks to be learned. Teachers learning new techniques are students with the same needs all students have. They need logical, complete instruction.

Implications for Researchers

The following are implications relevant for those involved with research. All but one relate specifically to the design of the study and the methods used to implement the design.

The most obvious and powerful finding was that the unit of analysis (eg. the size of the population chosen for analysis) is significant and may well determine the results reported by the researcher. If the total group were the unit analyzed in this study than the students would have read significantly more literature and the measure of comprehension and rate would have improved significantly during the treatment condition. However, the classroom level appeared to provide the most accurate accounting of what occurred during the study though at this level the results were not nearly as consistent. Two teachers attempted to use the strategies with their two classes. Both teachers had students in one class that appeared to accept the strategies and read more and students in one class that did not. If the total group were the unit of analysis than the fact that one sixth grade actually read less would not have been recognized. The classroom was the appropriate level as this was the level at which the intervention occurred and the data indicated, the level at which the treatment was accepted by the student.

The unit of analysis may have been responsible for spurious results regarding the measure, books read. This unit appeared to be inappropriate for this study. It was not sensitive enough because it failed to recognize a student who started and never finished two or three books. When almost 60 percent of the baseline population failed to

read any books, the unit books read, may have ignored much data necessary for the development of accurate correlations.

There were a number of strategies that when implemented did appear to encourage increased reading with 50% of the students in the present study. There was not another list of strategies which had been used in research and these may deserve further examination. Perhaps in another study with more observation it could be determined why the strategies did not work equally well with all four groups.

The final implication is that it is difficult to accurately assess what occurs in the complex environment of the classroom. If we are to develop a better understanding of what occurs in classrooms, it will be through rigorous research with numerous types of data collection.

Recommendations for Research

There are a number of recommendations for researchers which arose from the present study. The recommendations relate more to the design of the study than the hypotheses of the study.

Further examination of the relationship between recreational reading and reading achievement should continue. However, future studies should utilize an experimental design with random assignment of pupils to class groups as this would eliminate many problems found in the present study. Future studies should also utilize more

classroom observations to determine the differences among classes responding to the treatment and those failing to respond to the specific treatment. Besides an increase in the number of observations there should be more interview data recorded from teachers and students.

The method of measuring student participation, books read, should be modified in future research. The unit of measure, words read, was considered and rejected because it would be difficult to record. It was felt that if students had to learn a strategy and consistently monitor their words read they would not. Therefore there needs to be a system which is more sensitive than time or books read and more manageable than words read. There are two possibilities: (1) a system which had students record the number of books read to the nearest quarter of a book as this would correct for some error, (2) a combination of measures where students record the amount of time they spend reading for recreation as well as the number of books they read to the nearest quarter of a book. It may prove most beneficial to use the combination of measures.

Research of this type should recognize the classroom as the unit of analysis. The treatment is implemented at the classroom level and even if the same teacher attempts to implement the same strategy with two similar groups the results can vary. The unit of analysis should be the same as the unit of treatment. Though the individual would be an easier unit to collect data on, as the extraneous factors

could be eliminated, the interactions occurring in the treatment setting are a significant part of the research.

Summary

There is a need for further research on the effects of recreational reading by elementary students as it relates to their reading achievement. The present study failed to find predictable relationships but appears to have failed more because of errors in design rather than because of the lack of the relationships which may exist in this domain. If possible, further studies should use (1) a purely experimental design, (2) both vocabulary and comprehension as outcome measures, (3) both interviews and extended observations, and (4) a more thorough method for recording the amount of student reading.

APPENDICES

APPENDIX A

APPENDIX A

EIGHTEEN ACTIVE STRATEGIES

The following is a list of the 18 strategies used by teachers during the 18 weeks of the treatment condition. The strategies were used once a week for 90 minutes each week.

1. Read to your class (short stories, poetry, etc.)
2. Discuss literature structure with students (e.g. plot, theme, genre) giving story or book examples.
3. Have pupils use puppets to interpret a story or poem.
4. Have a "Have you read this?" session.
5. Bring in new books for presentation to the class (e.g., develop anticipation, "Tomorrow we will be a vampire!").
6. Have pupils share reading.
7. Make suggestions to students (listing suggested works) to broaden their reading.
8. Suggest supplementary reading in recreational books related to units in social studies or science.
9. Suggest related readings after a particular story in pupils' readers.
10. Have pupils read poems to classmates.
11. Have pupils do partner readings. Partner reading is when partners take turns sight reading aloud to each other in a group of two to four that have chosen to read a text together.

12. Provide time for USSR and reinforce students who actively participate.

13. Provide time for you to guide students in their selection of books.

14. Make use of bulletin board displays to encourage reading. This could be discussed or done as a class project.

15. Have pupils share readings through art activities such as murals, collages, felt stories, original illustrations, etc.

16. Have pupils dramatize part of a book or story.

17. Develop a book promotion with the class, (bulletin board in class or in hall, oral presentations etc.).

18. Have students write and share book reviews.

APPENDIX B

APPENDIX B

GRADED ORAL PARAGRAPHS

SECOND GRADE PARAGRAPH

PENCILS

Children use many tools in school. One tool is a pencil.

Some people think that pencils have lead in them. But did you know that pencils have no real lead at all? Real lead is soft. It is dark gray. But what you see in pencils is not really lead. It just looks like lead, so it is called lead. The "lead" in pencils is made from graphite. People dig up graphite from the land. Graphite, together with clay and water, is used to make the lead for pencils. How are pencils made? Many things are needed. First of all, a piece of wood is needed.

THIRD GRADE PARAGRAPH

WOULD YOU BELIEVE IT?

The world of nature is full of surprises. The more that you look at it and read about it, the more surprises you will find.

Did you know that there is a bird that can fly backwards? Did you know that bees can "talk" by dancing?

Here are a few of the many animals that make the world of nature such a strange and wonderful place.

Would you believe there's an animal that loves to slide down hills? It's the otter, one of the most fun-loving animals in the world.

Otters make their homes near rivers and lakes. There they have great fun in a most surprising way. Over and over again, summer and winter, they will slide down a hill on their stomachs!

FOURTH GRADE PARAGRAPH

SPECIAL FRIENDS

There are many different kinds of friendships between animals. No one knows how or why many of these friendships got started.

In certain friendships, some animals behave like guests". Often a guest will live in another animal's house without helping to build or clean it. The " t" seems willing to do all the work. It just wants to have the pleasure of the guest's company.

In other friendships, "worker" animals do jobs for their "friends". They will clean, feed, or protect their friends. In return, they will receive help that they need.

The ziozac bird and the crocodile have a strange friendship. Feared by people and most animals, the crocodile has terrible jaws. The jaws are filled with several rows of sharp, pointed teeth. Its body is covered by scales. It has a long, flat tail that could knock you down.

FIFTH GRADE PARAGRAPH

LIVING LIGHTS IN OUR WORLD

Tiny flashes of light are sprinkled through the summer evening. These winking lights are made by living creatures called fireflies.

The firefly is not a fly. It is a dark-colored little beetle, about half an inch long. The male has four large wings and can fly swiftly through the air. But in many species, the female cannot fly.

Both male and female fireflies have something which most other beetles do not have. At the very end of its body, each firefly carries a light that it can turn on and off whenever it wants. This is no ordinary light, it is a living light.

SIXTH GRADE PARAGRAPH

DISCOVERING DINOSAURS

Dinosaurs lived on the earth millions and millions of years ago.

What did a dinosaur look like? There were thousands of kinds, some of them were true monsters, the biggest land animals that have ever lived on the earth, bigger than you can believe. People are likely to think that all dinosaurs were like that. Some, though, were as small as a cat that can crawl under a fence. And some of them were in between, not terribly big, but not small.

Dinosaurs were prehistoric lizards, so in one way or another, all of them looked something like the lizards you can see today.

Let's look at some of the biggest dinosaurs and see what they were like.

SEVENTH GRADE PARAGRAPH

A LETTER

Dear Sirs:

I have your letter, updated, saying that I am harboring an unlicensed dog in violation of the law. If by "harboring" you mean getting up two or three times every night to pull Minnie's blanket up over her, I am harboring a dog all right. The blanket keeps slipping off. I suppose you are wondering by now why I don't get her a sweater instead. That's a joke on you. She has a knitted sweater. But she doesn't like to wear it for sleeping; her legs are so short they work out of a sweater and her toenails get caught in the mesh, and this disturbs her rest.

APPENDIX C

APPENDIX C

STUDENT LOG SHEET

Title:_____

Author:_____

No. of pages read:_____

Completely read:_____

Source of recommendation:_____

Student rating of interest: 1 - 2 - 3

High Ave. Low

Title:_____

Author:_____

No. of pages read:_____

Completely read:_____

Source of recommendation:_____

Student rating of interest: 1 - 2 - 3

High Ave. Low

Title:_____

Author:_____

No. of pages read:_____

Completely read:_____

Source of recommendation:_____

Student rating of interest: 1 - 2 - 3

High Ave. Low

APPENDIX D

APPENDIX D

Descriptive Statistics by Dependent Variable

Table D-1

Descriptive Statistics for Books Read by Semester

	Semester 1		Semester 2	
Class	Mean	S.D.	Mean	S.D.
five 1	6.3	6	8.7	5.5
five 2	4.1	5.5	10.1	8.7
six 1	.4	1.8	3.6	5.6
six 2	4	5.5	2.3	3.6

Table D-2

Descriptive Statistics for SAT by Test Intervals

	Interval 1		Interval 2		Interval 3	
Class	Mean	S.D.	Mean	S.D.	mean	S.D.
five 1	-13.3	27.8	-22.7	36.3	-3	48.6
five 2	-10.5	27.5	-25.6	25.7	-6.1	46.7
six 2	-19.6	32.4	-18.1	39.3	18.2	42.9
six 2	-1.8	44.7	-11.4	38.7	19.7	52.6

Table D-3

Descriptive Statistics for Rate by time by Grade

	Interval 1		Interval 2		Interval 3	
Grade	Mean	S.D.	Mean	S.D.	Mean	S.D.
Grade 5	82.3	39.5	81.1	33.1	68.1	31
Grade 6	59.7	22.5	53.4	26.8	48	18.4

APPENDIX E

APPENDIX E

Correlations of Books Read and Stanford Achievement Test Scores for All Students by Ability Group

Table E-1

SAT for High Achieving Students to Books Read Data

	BOOKS READ 1	BOOKS READ 2	BOOKS READ CHANGE
S.A.T. 2	.008	-.328	-.253
	p=.484	p=.044	p=.097
S.A.T. 3	-.264	-.103	.135
	p=.088	p=.302	p=.246

Table E-2

SAT for Average Achieving Students to Books Read Data

	BOOKS READ 1	BOOKS READ 2	BOOKS READ CHANGE
S.A.T. 2	-.083	-.01	.041
	p=.334	p=.479	p=.417
S.A.T. 3	-.235	-.411	-.235
	p=.110	p=.013	p=.110

Table E-3

SAT for Lowest Achieving Students to Books Read Data

	BOOKS READ 1	BOOKS READ 2	BOOKS READ CHANGE
S.A.T. 2	.184	.167	.056
	p=.170	p=.193	p=.378
S.A.T. 3	.145	.218	.133
	p=.226	p=.128	p=.246

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