THE RELATIONSHIPS AMONG A READING GUIDANCE PROGRAM AND THE READING ATTITUDES, READING ACHIEVEMENT, AND READING BEHAVIOR OF FIFTH GRADE CHILDREN IN A NORTH LOUISIANA SCHOOL

DISSERTATION

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

For the Degree of

DOCTOR OF PHILOSOPHY

By

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Denton, Texas
August, 1986
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The purpose of this study was to determine whether or not the introduction of a regular librarian-centered reading guidance program as an integral part of the entire school program would improve the reading attitudes and habits of elementary school students and increase the reading achievement scores on a standardized test of elementary school students. In addition, the reading attitudes of students were compared with reading achievement scores to assess any relationship between the two. Fifth grade students in a North Louisiana elementary school who attended a regular librarian-centered reading guidance program were compared with fifth grade students who did not attend such a program. The experimental program was administered and data collected for the study over a five month period. The research hypotheses and other questions regarding these relationships were tested using a pretest-posttest experimental design. The dependent measures were defined as scores from the Gates-MacGinitie Reading Achievement Tests,
scores from the "Estes Reading Attitude Scale," and the number of books charged by the students from the school library.

Major findings in the study were that the experimental treatment was positively related to reading achievement scores of students participating in the study; the experimental treatment was positively related to reading attitude scores of students participating in the study; the experimental treatment was positively related to the number of books charged from the school library by students participating in the study; the reading attitude scores of students participating in the study were positively associated with their reading achievement scores. These findings suggest that such a librarian-centered reading guidance program can make a difference in terms of reading achievement and attitude toward reading on the part of elementary children.
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CHAPTER I

INTRODUCTION

No other area of education seems to generate more interest and investigation of its methodology than reading does. And yet we are told that "if the teaching of reading continues to be directed solely to the development of reading skills, and no attempt is made to influence children's reading attitudes and interest," (13, p. 66) we will have another generation of what Charlotte Huck (7) calls "illiterate literates": people who can read but choose not to. Terry Ley in Media and Methods reports: "10 per cent of the reading public is reading 80 per cent of the books . . . One-half of the adult population never reads a book through" (8, p. 224).

Why are people not reading? Is it because children are taught the basic decoding skills but not taught comprehension? In a study by Tovey (14) seventy-two percent of the children failed to recognize meaning as the sole purpose for reading; they listed such skills as word recognition and grammatical construction. Durkin (5) concluded there is little teaching of comprehension in classrooms and that little space in basic readers is devoted to comprehension instruction. Adrian Sandford (10) points
Motivation and purpose are essential ingredients for successful comprehension. The attitude held by the reader toward his reading matter governs his comprehension. A positive attitude toward reading seems essential to becoming a successful reader. Frank Smith says it most succinctly: "Children learn to read only by reading" (11, p. 195).

Reading strategies do not develop in isolation from their purposes.

Where can children gain the reading experiences necessary to develop an interest in and the ability to enjoy reading? One logical place would seem to be the school library. It has been widely accepted in library literature that school libraries contribute to the school curriculum and should be central to the school goals and objectives. As Davies notes: "The school library media program becomes an instructional source and force for excellence only when it functions as an integral support component of the total teaching-learning enterprise" (3, p. 13). National guidelines in the field also advocate a wealth and variety of library materials as part of the entire school program (9).

Generally, however, schools that have libraries treat them as auxiliary areas, and the library programs themselves are often fragmented, so that they are not sequential in terms of the curriculum nor developmental in terms of the child's intellectual and psychological development. The role of the
school librarian has accordingly not been fully realized. The librarian is too often regarded as a media expert, a selection expert, and an organizer of materials, but not a full-fledged member of the instructional staff.

The best library services should contribute to and reinforce learning experiences in all curriculum areas. In particular, the library program should be integrated with the reading program. As Baker observes: "Working together, the reading teacher and the library-media specialist should discuss book selection, plan joint programs to promote interest in reading, involve parents in reading with children at home, and convince administrators to place special emphasis on reading within the school" (2, p. 163).

Researchers and experts in the field of reading have frequently stressed the primary importance of the library media program to the success of the school's reading program. Zintz (16), for example, maintains that the basic purposes of the library are to expose children to literature and to develop permanent interests in reading from a wide variety of materials. He also stresses the teacher's reliance on a centralized library to find materials to accommodate the wide range of abilities in any class. Duker devotes an entire chapter to the role of the library in his book on individualized reading, and he states that "the most helpful source of information is a trained librarian" (4, p. 78). In Stauffer's Directing Reading
Maturity as a Cognitive Process, emphasis is again placed on relating libraries to reading development (12). Davies (3) states further that the ultimate goal of the reading program is the development of an enthusiastic and ever-broadening interest in reading. The classroom teacher should plan with the library media specialist for scheduled class or group reading experiences. Most recently in Alliance for Excellence: Librarians Respond to a Nation at Risk, the place of the library as an integral part of the school is again stressed: "Because of the phenomenal explosion of knowledge, because of the value given increasingly to resources other than books, because of the stern necessity for students to learn how to find and apply information, the library media center should become a magnet for teacher and student alike" (15, p. 9). School libraries should serve as learner-oriented laboratories which support, extend, and individualize the school's curriculum according to Realities (1), a statement by the ALA Task Force of Excellence in Education.

Widespread support thus exists for the concept of library media resources and personnel being not only helpful, but also essential components of the total learning process and an integral part of the reading program. The question becomes one of the provision of empirical evidence to support this widely held belief.
Statement of the Problem

The present study was concerned with the investigation of the possible influence of a special reading guidance program on the reading achievement, reading attitudes, and reading habits of selected fifth grade students in a North Louisiana elementary school. Students who attended a regular librarian-centered reading guidance program were compared on these variables with fifth grade students who did not attend such a program.

Purpose of the Study

The purpose of this study was to investigate whether or not the provision of a regular sequential librarian-centered reading guidance program as an integral part of the entire school program would (1) improve the reading attitudes and habits of elementary school students and (2) increase the reading achievement scores on a standardized test of elementary school students. In addition, the reading attitudes of students were examined for their possible relationship to the reading achievement scores of students.

Hypotheses

The major hypotheses of this study were as follows.

H 1: Fifth grade elementary school students who attend a regular librarian-centered reading guidance program will score significantly higher on reading achievement tests than those who do not attend such a program.

H 2: Fifth grade elementary school students who attend a regular librarian-centered reading guidance program
will have a significantly better attitude toward reading as measured by a reading attitude scale than those who do not attend such a program.

H 3: Fifth grade elementary school students who attend a regular librarian-centered reading guidance program will charge more books from the school library as shown by circulation records than those students who do not attend such a program.

H 4: A positive relationship exists between the reading attitude scores of fifth grade elementary school students and their reading achievement scores.

Questions To Be Examined

In addition to these main hypotheses, a number of related research questions were also considered. These questions included the following.

1. Does the individual teacher have an effect on reading achievement and reading attitude scores of the students?
2. Is there a relationship between the sex of the students and their scores on reading achievement and reading attitude tests?
3. Is there a relationship between the race of the students and their scores on reading achievement and reading attitude tests?
4. Is there a relationship between certain socio-economic factors (including place of residence, occupation of parents, and education of parents) and the scores of the students on reading achievement and reading attitude tests?
5. Is there a relationship between the previous schools attended by students and their scores on reading attitude and reading achievement tests?
6. Is there a relationship between previous school library use and public library use on the part of the students and their scores on reading attitude and reading achievement tests?

7. Is there a relationship between parental encouragement of reading and the students' scores on reading attitude and reading achievement tests?

8. Is there a relationship between the reading habits of the students' parents and the scores of the students on reading achievement and reading attitude tests?

9. Is there a relationship between the amount of time the students spend in leisure reading and their scores on reading achievement and reading attitude tests?

10. Is there a relationship between the amount of time the students spend viewing television and their scores on reading achievement and reading attitude tests?

Significance of the Study

The present study focused upon the reading achievement, reading attitudes, and reading habits of elementary school children and upon the possible relationships of these variables to the provision of a regular, sequential librarian-centered reading guidance program. It was judged that the hypotheses and related research questions could be of intrinsic interest to professionals in the field and that the results of the study could have significant implications in planning and providing library services for elementary
school children and particularly so in providing a rationale for the provision of regular, sequential librarian-centered reading guidance programs.

Definition of Terms

The following terms are defined according to their usage in this study.

**Reading Achievement**

"Attainment in any of a number of reading skills, habits and attitudes; usually established by performance on some criterion measure such as formal or informal reading tests, or by reading grade levels" (6, p. 7). In the present study, reading achievement is assessed by the Gates-MacGinitie Reading Tests.

**Reading Attitudes**

Mental or emotional pattern of likes and dislikes toward reading. In the present study, reading attitudes are assessed by the "Estes Reading Attitude Scale."

**Reading Behavior**

In the present study reading behavior refers only to the amount of student reading as indicated by the number of books circulated from the school library. The use of materials from other sources is not reflected.
Reading Comprehension

The act of understanding the meaning of the printed word as contrasted with the ability to perceive and pronounce words without reference to their meaning. Comprehension is one area of reading achievement. In the present study, reading comprehension is assessed by the Gates-MacGinitie Reading Tests.

Reading Guidance

One of the school library's programs of service: directing and aiding in the choice of books by readers in accordance with their interests and abilities through group and individual assistance.

Reading Program

A planned instructional program in reading, the traditional basal reader approach in the classroom, which may include phonics, linguistics, and levels grouping.

Limitations of the Study

The limitations of the present investigation include the following.

1. This study was limited to four selected fifth grade classes consisting of a total of seventy-five students in a Northwest Louisiana neighborhood elementary school.

2. No formal sampling was made from a larger population.
3. The findings of the study are accordingly limited to the particular subjects and setting investigated. However, it is believed that these were not unusual and that many similarities may be noted with other elementary school children in other middle-class, neighborhood schools.

4. The study did not seek to consider other educational, social, or psychological aspects of reading except those examined specifically in the present study.

**Basic Assumptions**

In designing and conducting this study, the following basic assumptions were made.

1. Student performance on standardized reading achievement tests is a valid indicator of the reading abilities of students at the time the test was taken.

2. The "Estes Reading Attitude Scale" is a valid indicator of the reading attitude of students at the time the test was taken.

3. The survey instruments provided appropriate information for testing the hypotheses and answering the related research questions identified in this study.

**Summary**

This chapter has outlined the rationale for this study, identified the hypotheses which guided the work, presented the definitions used, and stated the principal limitations and assumptions. Other research related to the topic is
reviewed in Chapter II. The methods and procedures used in conducting the study are described in Chapter III. The collected data are presented and analyzed in Chapter IV. The findings are summarized and conclusions are stated in Chapter V together with implications and recommendations for further study.
CHAPTER BIBLIOGRAPHY


8. Ley, Terry, "Getting Kids into Books: The Importance of Individualized Reading," Media and Methods, XV (March, 1979), 224.


14. Tovey, Duane R., "Children's Perception of Reading." The Reading Teacher, XXIX (March, 1976), 536-540.


CHAPTER II

REVIEW OF THE RELATED LITERATURE

Various sources were utilized in the search for related literature. These sources included the following: Library Literature, Education Index, Dissertation Abstracts International, Current Index to Journals in Education, Educational Resources Information Center (ERIC), and the Encyclopedia of Educational Research. Computerized searches were made of the databases of the Educational Resources Information Center through the Lockheed Dialog Search Service and also of the Comprehensive Dissertation Database through the University Microfilms International Datrix II service. The literature search covered a period beginning in 1962 and including material published in 1984.

The main subject areas searched included the topics of library services, school library use, individualized reading, reading achievement, reading attitudes, reading comprehension, reading programs, and recreational reading. Reading or reader guidance was not found to be a productive search term. Relevant materials were located under the headings of reading development, reading habits, reading instruction, and reading interests. Journals in the fields of reading and library science were fruitful sources.
Foreign language periodicals were not consulted, though publications from Great Britain and Australia were covered.

Three main groups of studies were identified as pertinent to the present investigation. The first group included studies of reading and the relationship of library media programs to student reading achievement and attitudes toward reading. The second group included investigations which focused on the relationship between recreational reading and reading achievement and reading attitudes. A third group was concerned primarily with reader guidance in the classroom, rather than in the library, and included studies of individualized reading. Even though individualized reading studies usually did not directly concern library programs, some of the findings were pertinent to the present study.

Studies Involving Library Programs

There have been a number of studies concerning the impact of library programs on student achievement and attitude toward reading. These studies can be divided into the following general categories:

(1) studies concerned with the effect that the presence of a library and/or librarian has on student achievement as measured by standardized tests;

(2) studies concerned with the effect that the presence of a library and/or librarian has on attitudes toward the library and attitudes toward reading;
(3) studies concerned with the effect that the presence of a library and/or librarian has on both educational gains and student attitudes toward the library and reading;
(4) studies concerned with perceptions of the library or librarian as seen by faculty, administrators, and/or students.

In 1962 researchers at Harvard University conducted one of the most comprehensive surveys ever made of the content and practices of school reading programs in this country. This survey analyzed reading programs in 1,023 school systems and involved over six million students. In the survey report the school library program was identified as an important element in the total reading program:

The extent to which a successful library program will substantially improve the total reading program cannot be overestimated. Children who can choose from a wide range of carefully selected books, and who receive instruction in library and reference skills from a trained teacher-librarian are likely to become more interested and capable readers than are others without these advantages (3, p. 232).

A landmark reading study was conducted by Gaver in 1963 (13). Abilities and achievement in reading and other related skills of elementary school children who had access to centralized library services were compared with those who did not. Sixth grade children at six schools with different types of library services were investigated. The library services included (1) classroom collections only, (2) centralized collections not staffed by a qualified
librarian, and (3) school libraries staffed by a qualified librarian. Measures were developed and applied to factors such as (1) provision of library-related materials and activities, (2) accessibility of resources, (3) mastery of library skills, and (4) amount and kind of reading done by children. Educational achievement was assessed as measured by scores in five basic curricular areas derived from a standardized test (The Iowa Test of Basic Skills). Gaver found that higher educational gain was associated with schools that had libraries. The measures differentiated in favor of the school-library-use category in nearly every case.

A study conducted in 1967-68 for a period of thirty-six weeks in an elementary school in Florida focused on the relationship between the teaching of reading, reading achievement, and a librarian-centered reading guidance program (8). Seventy-nine fifth graders in a rural school were divided into three matched groups: two experimental and one control, and an effort was made to control contaminating variables. Experimental Group A was provided a scheduled librarian-centered reading guidance program. Group B was provided the more traditional scheduled type of library experience. Control Group C had no scheduled period in the library, but all three groups had free access to the library one day a week for circulation privileges. A battery of
pre-tests in reading achievement were given in September and post-tests in reading achievement were given in May.

The mean improvement for Group A was greater than Groups B and C in the following subtest areas: speed, accuracy, and word recognition, although the .05 level of significance was not reached. Reading inventories and study forms also showed marked positive gains for Group A in attitudes toward reading and toward the library. At the close of the study, participants in Group B, the traditional library group, showed no statistically significant gains in reading skills and reading habits. In fact, in some of the sub-areas studied, negative reactions to the library and to reading were revealed. Group B's library experience was the least effective of the three groups. The study concluded:

1. the traditional library period was ineffective.
2. that librarian-centered developmental reading guidance programs (K-6) were needed.
3. that reading efficiency must be improved (pp. 47-50).

A 1968 ESEA Title III library program was designed to motivate the reading of elementary school children in St. Louis (26). Main features of the program were the establishment of a library services center, centralized processing of materials, and the establishment of libraries in overcrowded schools. A questionnaire completed by principals and faculty of participating schools showed a favorable, though subjective, response to the program.

Studies were later conducted in nine ESEA Title II schools in Cleveland, Buffalo, and Los Angeles to determine
whether the introduction of media services and materials in elementary schools had a significant impact on instructional programs within the school (32). Interviewed teachers indicated the greatest benefit provided by the media center was the accessibility of materials. Ninety-nine per cent of the students "enjoyed" going to the center. No appreciable differences in reading scores on achievement tests were found between students in the program and other students. The participating classes went to the library once a week. No media skills were taught; no reference materials were discussed; and no work was done with teachers to integrate materials with units of study or with individual independent study.

A junior high school in Oregon was the setting for a 1971 survey by Adams (1) in which library attitudes, skills and knowledge were studied in relation to library instruction classes and reading achievement level of 401 seventh, eighth, and ninth graders. Students who had taken library instruction classes were found to be more studious. Skill in using reference books was found to be increased by taking a formal library instruction course.

In a 1971 report on a summer junior high school reading program in New York City (2), reading classes composed of 25 students each participated in traditional learning activities as well as directed and free reading. A circulating library was "integral" to the program. Approximately 80 per cent of
the 1400 students showed improvement on the Metropolitan Achievement Tests; however, the effect of library usage was not separately assessed.

Becker (4) attempted to determine whether or not social studies achievement was affected by the presence of libraries in a school. He defined social studies achievement as information-gathering skills, map and globe reading, chart and graph interpretation, and knowledge of selected content material. Using experimental and control groups of fifth graders in schools with and without libraries, Becker found that "the presence of a librarian and the guidance function of a librarian appeared to exert significant influence on pupil achievement in information-gathering skills and in the reading of charts and graphs" (p. 2411-A).

DeBlauw (11) investigated the effects of a three year multi-media program on student achievement and library attitude in 1973. Instructional materials centers were developed in three schools from kindergarten to twelfth grade. In the first and second grades significant gains in achievement were found in the areas of vocabulary and word study skills. Significant gains were found in word study skills and arithmetic in grades three through eight. No significant gains were found for high school students in achievement. Attitudes were positive across all grades though not at a significant level.
The relationship between the accessibility of library services and the academic achievement of high school seniors was explored by Greve (15) in 1974. The Iowa Tests of Educational Development were administered to 232 Iowa seniors to measure achievement. Levels of library service were measured by an index based on the number of volumes per pupil per capita in the school and in public libraries and on per pupil per capita expenditures in each library. Greve found a positive correlation between academic achievement and the level of library services available. The number of volumes in the high school library was the best predictor of high achievement on the tests.

In 1972 McConnaha (21) reported a study of the effect of an elementary school library program on ninth graders' performance on a test of library skills. Significantly higher scores were found for students who had attended an elementary school with a library and a librarian who provided instruction.

A study by Blazek (6) in 1975 investigated whether teacher utilization of library materials in a junior high school mathematics class would increase student library use. Circulation statistics indicated that the experimental class did check out more materials. Interviews with students indicated that they had used the materials because of teacher recommendations and because they respected those recommendations.
Leeper (19) conducted a comparative study in 1976 of the structural design of elementary school libraries. His findings indicated that school personnel, particularly the principal and library media specialist, were more important variables in determining the quality and quantity of media center use than physical facilities.

In a 1976 study of twenty-four middle and junior high schools in Indiana, Stroud (29) examined user perceptions of library media staff and media centers. Students, teachers, and media staff members were surveyed, and responses were compared between and within groups. Media specialists were not considered to be an integral part of curriculum planning or instructional development according to the survey. The media staff were apparently viewed as having relatively passive and peripheral roles in the schools. Only one-third of the media specialists were found to be involved in any curriculum planning or instructional development.

A descriptive study of the leisure reading component of the school library program in a Southern California suburban district of 25,000 students was conducted by Pointer in 1979 (24). The library program in this district was based upon a design reflecting Hunt's theory of sustained silent reading, Fader's philosophy of saturating the environment with interesting reading materials, and Veatch's individualized reading system. The study measured student attitudes toward reading, took an inventory of their
interests, and assessed the amount, variety, and difficulty of their leisure reading.

The subjects in the study included students in all fifth grade classes at two elementary schools. The students were considered representative of the district in terms of reading achievement, socio-economic status, and boy-girl ratio. No significant change was observed in the subjects' attitude toward reading from September to March. Attitude toward school did improve slightly. There was a slight increase in the number of books read during the final two-month period of the study. Of the four variables considered, sex difference seemed most closely related to reading attitudes and interests, though the evidence was inconclusive.

In 1982 Didier (12) reported a study of the relationship between the achievement of elementary school students in reading and such factors as ratio and education of library personnel, curricular role of media personnel, and student access to the media center. Summaries of fourth and seventh grade scores on the reading section of the Michigan Educational Assessment Program were compiled for ninety-four school districts. A comparison was then made using information gathered from a survey of public school library media programs in Michigan. A significant relationship was found between student achievement in reading and study skills at the seventh grade level and schools with library personnel. The education of the media specialist was found to be
inversely related to curricular role, to overall student achievement in reading at the fourth grade level, and to student access at both grade levels. A positive correlation was found between the district State Equalized Valuation and expenditures for each pupil.

In a 1980 study involving teacher perception and attitudes toward the library media center, Griffin (16) found that teachers under age thirty had a more positive attitude toward the library than did older teachers. Teachers who had completed six or more semester hours of library science or audio-visual education utilized more sophisticated services and worked more closely with the media specialist. Library instructional support services were found to be utilized more in nongraded, informal, student-oriented settings than in the traditional classroom setting. The study involved ninety-three subjects in six school districts in the District of Columbia Public School System.

A study by Lowery (20) in 1983 considered the relationship between reading preferences of elementary school children and their socio-economic level. Circulation records from two elementary schools, one with children of high socio-economic status and one with children of low socio-economic status, were examined. The circulation figures were adjusted to compensate for the difference in the number of students in each school. Multivariate
analysis of variance was used to test for differences based on the adjusted circulation figures.

Lowery found that students of low socio-economic status preferred imaginative easy literature, while students of high socio-economic status preferred imaginative non-fiction books. Significant difference were found between the groups in their preferences for content books, imaginative literature, realistic fiction, and easy books. The children of low socio-economic status showed a preference for books that had anthropomorphic animal characters and simple vocabulary, while the children of high socio-economic status showed a preference for books of riddles.

In 1984 Schon, Hopkins, Everett, and Hopkins (27) reported an investigation of a special program on library use, library attitudes, and reading attitudes of elementary school children in the Phoenix, Arizona area. Eleven schools, out of forty which were asked, participated. Three of the schools were in a high income area, five in a middle income area, and three in a low income area. A program of specific activities for each of the twenty weeks of the study was implemented independently by each of the eleven school librarians. Each week the experimental subjects were given thirty minutes of the special treatment pertaining to library topics. Approximately 300 sixth graders were assigned randomly to the experimental group and to the control group. The control group had no exposure to the special library program.
The four principal outcome measures of the study were (1) classroom related library use during the twenty week treatment period, (2) nonclassroom related use during the treatment period, (3) attitude toward the school library/librarian, and (4) reading attitude. The first two dependent measures were obtained by having each student sign in each time the library-media center was used and mark the purpose of the visit. The other two measures were obtained by having students respond anonymously to thirty-eight attitude questions. Both the library attitude and the reading attitude scales were developed by the authors with high reliability scores on both scales.

Significant treatment effects were obtained on both library use measures and both attitude measures when schools were viewed as a fixed factor in an analysis of variance. The results indicated that the experimental group exceeded the control group on both library media-center measures. Attitudes of the students toward the school library/librarian and toward reading improved as a result of the program. Girls made greater use of the library and tended to have more favorable reading attitudes, though in terms of treatment the effect seemed equal for both sexes. The participating librarians were favorable in their evaluation of the program.
Recreational Reading

Many benefits from recreational reading programs are cited in education and library literature, and numerous studies of recreational reading have been reported. However, relatively little empirical evidence has been accumulated to establish that recreational reading actually has positive effects on children's reading achievement or their attitudes toward reading.

Towner and Evans (31) have commented on difficulties in this regard in seeking to assess the efforts of recreational reading programs. These authors note that in studies of sustained silent reading (SSR) most of the positive findings reflect primarily the subjective judgments of those involved. Studies which seek to compare recreational reading with other procedures are largely lacking, and proponents of recreational reading have sought, as a rule, only to collect favorable subjective data, such as positive comments from students or from teachers who have used SSR. However, some studies of recreational reading programs have taken a more objective approach.

In an earlier two year study reported by Pfau (23) in 1966, an experimental group of second grade students scored significantly higher in sight vocabulary and on a measure of language fluency after attending a supplementary recreational reading program. However, there were no significant differences in comprehension or word analysis
measures. In the area of reading interest the experimental group was significantly superior.

In 1968 Cohen (10) also found significantly greater comprehension and vocabulary gains among second grade students whose teacher read recreational materials to them than among similar students in a control group. Similarly, in a 1979 study of an experimental group in the Philadelphia school system (17) a positive relationship was found between independent recreational reading and the reading achievement scores for fourth grade students.

In 1978 Langford (18) evaluated a sustained silent reading program in which 250 fifth and sixth graders participated for six months. The experimental group in this study had a more positive attitude toward reading on one of three attitude scales and performed significantly higher on the Slosson Oral Reading Test than did the control group.

Some empirical studies have failed to find significant effects from recreational reading on reading achievement but have found positive effects on other variables. For example, better attitudes toward reading were reported by Wilmot (33) in 1975 in an eight month study involving second, fourth, and sixth grade students. The experimental group scored higher than the control group in attitude, but the control group scored significantly better on the comprehension measure.

Cline and Kretka (9) compared two groups of junior high school students in 1979 using a sustained silent reading
program for the experimental group. Four attitude items showed a significant difference in favor of the experimental group. No difference, however, was found in reading achievement between the two groups.

Other studies have found no significant differences between groups engaged in recreational reading programs and groups engaged in other types of activities. In 1975 Towner and Evans (31) compared the reading achievement of students using sustained silent reading to that of students using workbooks commercially produced, such as Reader's Digest and SRA. No significant differences between the two groups were found using the Metropolitan Achievement Test as a dependent measure. In another study by Reed (25) in 1978, high school students who had one period of sustained silent reading for five and a half months did not differ significantly on comprehension and attitude measures from students who did not have such a period.

In summary, note may be taken of a 1980 review of research by Moore, Jones and Miller (22). These authors conclude that studies in recreational reading are in general supportive of the views that

1. SSR has a positive effect on student attitude toward reading.
2. SSR has a positive effect on reading ability when combined with a regular program of reading instruction (p. 448).
Individualized Reading

Individualized reading refers to a program in which students choose their own books and read at their own pace. Student-teacher conferences are part of the program. The teacher discusses the selection, listens to oral reading, teaches skills for word analysis and comprehension, helps each student to appreciate the qualities of good literature, and tries to interest each student in further reading. The present study is not a study concerning individualized reading, but much of the research in individualized reading does have a relationship to it. Much of the literature in individualized reading is similar to the recreational reading literature in its subjectivity and testimonial nature, but there are some empirical studies of interest here.

In 1970 Gleason (14) reported on study that lasted three years. Twenty-eight first grade classrooms were paired: individualized reading instruction to basal reading instruction. Students remained together in their treatment groups, but teachers changed yearly. Results on two different achievement tests showed that students in the individualized groups scored significantly higher than did the basal group students on eight of thirteen standardized achievement tests. There were no significant differences between the groups in social adjustment or in attitudes toward reading. Parents of the individualized group had more
positive attitudes toward their children's reading programs than did parents of the basal group.

In a 1971 study, Birlem (5) randomly assigned one hundred summer school children either to an experimental individualized reading program or to a control skills-oriented program. Attitude and ability were measured in pre-tests and post-tests. Students were found to differ significantly in attitude toward reading after treatment, but no difference was found in ability.

In a two year study reported by Teigland in 1971 (30), children in three schools were randomly assigned to either an individualized reading program or a basal reading program. The California Reading Test was administered at the end of the second grade with the individualized group having significantly higher scores on comprehension. No significant differences were found in reading attitude. Girls made significantly higher scores than boys in all areas of comprehension, vocabulary, and attitude.

In 1972 Schwartz (28) compared an individualized reading program with a traditional reading program in terms of the number of books read and the readability of books selected. One hundred fifty-two eighth grade students were the subjects. Children in the individualized group read more books than children in the traditional group. Boys in the individualized group read the most, while boys in the traditional group read the least.
In a study reported by Ciampoli in 1977 (7), individualized reading was compared to a directed reading approach in terms of reading achievement as measured by the California Achievement Test and attitude toward reading as measured by the "Estes Reading Attitude Scale." The sample consisted of 119 eighth grade inner city students in four classes and lasted seven months. The individualized reading approach was found to be significantly more effective than the directed reading approach in improving comprehension and stimulating outside reading.

Reading achievement is clearly a popular topic for study, and it has been related to a variety of factors in recent years. Other topics to which reading achievement has been related include self-concept, teacher effort, and the effect of team teaching upon achievement. The effect of family environment on elementary school children's reading achievement has also been examined, as well as peer influence and socio-economic status. These factors were not considered in the present study beyond their assessment as possible control variables.

Summary

Numerous studies may be identified which concern different aspects of the relationships among reading achievement, reading attitude, and library or reading programs. Studies reported over the last twenty years
generally indicate a positive relationship between educational gains (usually measured by standardized achievement tests) and the presence of a library and/or librarian in the school. Student attitudes toward libraries and/or librarians and/or reading are also generally improved in the presence of a library and/or librarian.

While many studies of recreational reading rely primarily on subjective data, objective evidence has been reported for the positive effects of recreational reading on children's reading achievement or their attitude toward reading. Similar observations may be made concerning studies of sustained silent reading.

Studies of individualized reading have also tended to use subjective data; however, the evidence from a number of empirical studies indicates a positive relationship between an individualized reading approach and reading achievement scores in areas of vocabulary and comprehension. At the same time few significant differences between individualized reading groups and regular reading classes in terms of attitude toward reading have been found.

In general, the review of the literature found numerous studies that were concerned with reading achievement and attitude toward reading as they relate to the presence and use of libraries and to the provision of various types of special programs such as individualized reading or recreational reading. With one exception, no prior studies
were found which sought to consider reading achievement and attitude toward reading in relation to the provision of a librarian-centered reading guidance program. The present investigation is addressed to this need.
CHAPTER BIBLIOGRAPHY


22. Moore, Jesse C., Jones, Clarence J., and Miller, Douglas C., "What We Know After a Decade of Sustained Silent Reading," Reading Teacher, XXXIII (January, 1980), 445-450.


29. Stroud, Janet Gossard, "Evaluation of Media Center Services by Media Staff, Teachers and Students in Indiana Middle and Junior High Schools," unpublished doctoral dissertation, Purdue University, 1976.


31. Towner, J. C., and Evans, Howard M., "The SS Reading: Does it Float?," Reading Horizons, XV (Winter, 1975), 83-86.


CHAPTER III

METHODS AND PROCEDURES

The methods and procedures of the study are presented in this chapter. Separate sections are devoted to the following topics which are considered in the order indicated: (1) research design, (2) setting of the study, (3) population, (4) collection of data, (5) instruments, and (6) data analysis.

Research Design

The purpose of this study was to investigate the relationship between a regular sequential librarian-centered reading guidance program and the reading attitudes and reading achievement of elementary school students. In addition, reading attitudes of students were compared with reading achievement scores to assess any relationship between the two.

The main hypotheses and related research questions were investigated using a pretest-posttest experimental design with four intact groups or classes. Two intact classes were randomly designated as the experimental or treatment group, and the other two intact classes thus became the control group. Both groups were measured on the dependent variables prior to the manipulation of the independent variable which
consisted of providing a librarian-centered reading guidance program for the experimental group. After the completion of the treatment procedures, both groups were again measured on the dependent variables. The design may be diagrammed as follows, using the notation of Campbell and Stanley (4, p.13).

\[
\begin{array}{c}
(R) \\
0_1 \\
X \\
0_2 \\
(R) \\
0_3 \\
0_4
\end{array}
\]

where (R) = random assignment of groups
0 = observation
X = treatment

As recommended by Campbell and Stanley (4, p. 13), analysis of covariance was used in comparing adjusted dependent measures, since circumstances required the random selection of intact groups and did not permit the random assignment of individual students to the experimental and control groups.

In the design the main dependent measures were defined as scores on the Gates-MacGinitie Reading Achievement Tests and scores on the "Estes Reading Attitude Scale." The number of books circulated to the students from the school library was also subsequently analyzed as a dependent variable; however, no pretest scores were available for this variable.

Setting of the Study

The participating school was selected for several reasons. The school was judged to be typical of many schools in the northwest Louisiana area, especially in regard to its
racial make-up, the socio-economic levels of the children, and its location in a suburban area. The interest and cooperation of the administration were also factors, as were the adequacy of the library collection and the available services of a librarian.

The participating school is located in Bossier City, which is part of the greater Shreveport metropolitan population and business area. Bossier City is the ninth largest city in the state of Louisiana with a population of 51,817 according to the 1980 census (29). It is situated on the banks of the Red River and encompasses over thirty-five square miles. Most of Bossier City's population is white and middle class. The median income of residents is $17,328 and the median price of a home in Bossier City is $39,900. Fifty-nine percent of the population own their own homes (29, p. 89). Bossier City has remained largely a "bedroom suburb" of its sister city Shreveport until fairly recently.

Bossier City is the largest city in Bossier Parish (county), which has experienced one of the largest parish population growths in Louisiana over the past few years (26). Much of Bossier City's and Bossier Parish's growth can be attributed to Barksdale Air Force Base, which became a key Strategic Air Command base in the 1950's. In 1978, this base had an estimated economic impact of 150 million dollars on the surrounding area. Nearly 6000 military and 1000 civilian personnel work on the base (24). Other factors
influencing Bossier City's growth have been the multi-million dollar Louisiana Downs racetrack that opened in 1974 and an increased industrialization of the area. Outside the city cattle ranching, pine lumber production, and farming are important parish industries.

During the last ten years, housing construction starts amounted to nearly 8000 residences as the city has expanded north and southward (27). Many of the houses are owned by military and retired military families, but others have also moved in from surrounding areas.

According to census records, the neighborhood surrounding the school had a median income of $20,417. In the four occupational levels in the census report, twenty per cent of the population in that area listed their occupations as managerial and professional, thirty-five per cent as technical and sales, thirty per cent as craft and repair, and approximately fifteen per cent as laborers (29, p. 90). The mean family income with children under eighteen was $27,845 and the median value of owner-occupied housing was $36,600. Seventy-four per cent owned their own homes (29, p. H2).

The schools in Bossier City are part of the Bossier Parish School District, which includes all of the public schools in the parish. Several other townships and rural areas are served by this system along with Bossier City.
The entire district includes approximately 18,000 students with the largest concentration being in Bossier City.

According to a recent Bossier Parish School District report (25) there were 13,197 white, 4,028 blacks, 180 Spanish-American, 140 Oriental, and 27 American Indian students in the system. Full-time teachers included 878 white and 140 black.

Bossier City is also served by the Bossier Parish Library System, which is tax supported. Bossier City has two branch libraries, one with 43,696 volumes (2) and a smaller one that serves the southern part of the city. The latter branch, with holdings of 13,810 volumes including 4,932 juvenile (2), is located in the center of a residential area approximately four miles from the participating school.

The Population

The total subject population consisted of fifth grade students in four intact classes at a grades five and six neighborhood school in Bossier City, Louisiana. Bossier City public schools are organized by a neighborhood concept. Also, instead of the traditional kindergarten through sixth grade concept, Bossier City elementary schools are divided into two grade categories: kindergarten through fourth grade and grades five and six. Junior high school includes grades seven and eight, and high school includes grades nine through twelve.
The participating school, Curtis Elementary School, opened in 1959. It is in the southern part of the city and serves both city and rural children. The total population of the school was 516 students during the spring 1984 term with 223 in the fifth grade and 293 in the sixth grade. The total of 513 students included 470 white students, 39 black students, 5 Spanish-American students, and 2 Oriental students. Teachers at Curtis included 25 white and 3 black.

There were eleven fifth grade reading classes at the school for the 1983-84 school year. One class of 22 students was reading above grade level and was assigned to a special enriched program called the AIM (Activating Inquisitive Minds) program. Another class (18 in number) consisted of special education children reading below grade level. The other nine fifth grade reading classes ranged from 12 to 24 students with an average of 20.3 students per reading class. Students, other than the above grade level and the special education classes, were assigned at random to reading classes and teachers.

Several reading teachers at the school had two sections of fifth grade on-level students. Two teachers were selected for the study. One class from each teacher was randomly assigned to the experimental group and one to the control group. Forty-one students were thus assigned to the experimental group and thirty-two students to the control group.
Collection of Data

The data collected for each student included socio-economic status, race, sex, age, and grade in his or her reading class. A student questionnaire (Appendix D) was used for this purpose as well as school cumulative records.

The experimental programs were administered, and the data for students were collected during the spring school term of 1984. The library program was administered from January 5, 1984 to May 15, 1984.

Signed permission was requested from the parents of all of the children in the class by letter from the researcher. Only one child was not given permission to participate in the study. Letters granting permission were kept on file in the principal's office. (See Appendix A for a copy of the letter to parents.)

Over the initial two week period of the study each child in the four fifth-grade classes selected was administered the "Estes Reading Attitude Scale" and the Gates-MacGinitie Reading Achievement Tests. After completion of the testing the subjects in the experimental group began their structured librarian-centered reading guidance program on a weekly basis. The reading guidance program lasted fifteen weeks to minimize novelty. Students in the control group continued with their regular school program but were able to go to the library before school, after school, at lunch, and at recess as were those in the experimental group.
Two weeks before the end of the school term in May, each child in both experimental groups and each child in both control groups was again administered the "Estes Reading Attitude Scale" and the Gates-MacGinitie Reading Tests.

Mid-way through the spring term, a questionnaire was administered to all the children in the study in order to collect data on socio-economic status, race, sex, age, and previous library use. Summaries of this questionnaire can be found in Table XXV. A copy of the questionnaire is found in Appendix D.

The two classes in the experimental group had a regular weekly library program of guidance and instruction conducted by the researcher. The school librarian and the two teachers assisted in planning programs and establishing formats to follow closely the reading program set up by the school. This weekly program lasted approximately forty minutes per week for each class. The program content was designed differently for each class in order to fit the particular sequence of topics for that class in the school reading program, since the classes were not at the same sequence in the reading program. There were deliberate variations in the program content in order to stimulate the interest of the subjects. The actual program lasted around thirty minutes with ten to fifteen more minutes allotted for the charging of books.
Presentations were planned on a weekly sequential basis and closely followed the fifth grade reading syllabus. This integration of the library program with the reading program included the following areas:

1. Promoting the study of literature through book talks, discussion, choral readings, dramatics and the use of audio-visual materials;
2. Promoting the appreciation of books and their authors and illustrators through presentations, reviews, and discussions;
3. Providing for the development of library skills and knowledge of library resources through lessons and follow-up activities;
4. Enriching and extending classroom experiences through the introduction of related learning materials.

The experimental group had the opportunity to charge library materials during the regular weekly library period. They also had the opportunity to go to the library before and after school and during recess or from other classes. Appendix F presents a detailed documentation of the library program.

The control group students had no regular weekly library program. They did have the opportunity to go to the library before and after school and during recess. This is the normal pattern of elementary school library use in
Bossier City. Members of the control group could go to the library from their classes for assignments or remedial reading work.

After the final testing, however, the control group also attended several sessions of library programs conducted by the researcher. The researcher felt that these non-experimental programs would help compensate for the control group's deprivation of library experiences throughout the semester.

Data Collection Instruments

In addition to the questionnaire on student backgrounds, three different instruments were used to gather data for the present study: a reading achievement test, an attitude toward reading scale, and a record of books circulated. Circulation statistics were recorded by regular school library charging procedures, and students also kept a personal record of the books they had read as verification.

Since many instruments were already available for testing reading achievement, the researcher chose to use one of the nationally recognized standardized tests. Several were examined, including the Gates-MacGinitie Reading Tests, the Wide Range Achievement Test (WRAT) and the "Reading Subtest" of the SRA Achievement Series. Many aspects were considered in choosing an appropriate test, including validity, reliability, and ease of administration and scoring. The Gates-MacGinitie Reading Tests were eventually preferred
for use in the present study. For reference and comparison purposes, however, a discussion of the three principal reading achievement tests considered by the researcher follows.

**Reading Tests**

The **Wide Range Achievement Test (WRAT)**.--This test was first standardized in 1936 as a convenient tool for the study of the basic school subjects of reading, word recognition and pronunciation, written spelling, and arithmetic computation. It was designed as an adjunct to tests of intelligence and behavior adjustment. The WRAT has undergone four revisions in its nearly fifty year history, the latest in 1978 (13).

The **Wide Range Achievement Test** was developed by Joseph F. and Sarah Jastak and is available on two levels. Level 1 is for ages five through eleven and measures (1) reading, in terms of recognizing and naming letters and pronouncing words out of context; (2) spelling in terms of copying marks resembling letters, writing the name, and writing single words to dictation; and (3) arithmetic in terms of counting, reading number symbols, solving oral problems, and performing written computations. Level 2 is designed for individuals from age twelve to adult for the same three measures of achievement at a higher level of difficulty. The reading subtest is administered individually and includes the
identification of letters at the pre-reading level; at the reading level it includes the pronunciation of seventy-five words.

The raw score for each subtest, one point for each correct item response, is converted to a grade rating. The grade ratings are compared with age norm tables to obtain standard scores and percentiles. The obtained results are used to determine whether a student is achieving at below average, average, or above average for the student's chronological age.

The revised 1978 WRAT was administered to children and adults in a number of states: Delaware, Pennsylvania, New Jersey, Maryland, Florida, Washington, and California. No attempt was made to obtain a representative national sampling. According to the manual, the groups were not restricted to any economic, intellectual, or racial populations. Samples of each age group contained numbers of cases ranging from 400 to 600 with each group half male and half female. The males and females were selected separately according to mental ability criteria in such a way as to represent appropriate proportions of average, superior, and inferior persons. The majority of subjects in the norms were examined with the Wechsler Intelligence Scale for Children and the Wechsler Adult Intelligence Scale. A minority had scores from such tests as the Lorge-Thorndike, the Stanford-Binet, and the California Mental Maturity Test.
The WRAT was administered to each age division of the norming groups, and scores were used to compute means and standard deviations. Results were used to develop comparison norm tables for grade ratings, standard scores, and percentiles.

Paul Douglas Courtney (6, p. 46) states that the WRAT seems to have "adequate face value" as a coarse screening device in three narrow areas. The number of items per grade is limited, and the number of pupils per grade on which it has been standardized is relatively small. Content validity for the component items of the test is not mentioned by the authors at any point in the WRAT manual. In terms of concurrent validity, R. F. Wagner of Richmond and Fred McCoy of the Mobile Psychiatric Clinic compared the WRAT reading test to the Woody-Sangren Silent Reading Test and the New Stanford Reading Test. Wagner's coefficient for 29 children was .78. McCoy's coefficient for 57 children was .74 with the Woody-Sangren and .80 for 47 children with the New Stanford Reading Test. All three coefficients were significant beyond the .01 level of confidence (13, p. 50).

In a comparison of WRAT standard scores with California Mental Maturity IQ's the correlation coefficient was .81. With other intelligence achievement tests the coefficients ranged from .78 to .87 for the WRAT reading subtest.

In terms of internal consistency, correlation coefficients were calculated among the test scores of the reading, spelling, and arithmetic subtests for all age
levels included in the sample. These intercorrelations ranged from .691 at age eight for reading versus arithmetic to .938 at age ten for reading versus spelling.

The WRAT would appear to satisfy requirements for statistical reliability. In correlating split-half forms of the test, the coefficient for the reading test for ages five to eleven was .98 with a standard error of measurement of 1.05 to 1.39. A comparison was also made between the 1946 and the 1965 revisions of the WRAT. The correlations between the 1946 and the 1965 tests were: (1) reading, .88; (2) spelling, .86; (3) arithmetic, .83.

A principal disadvantage of the WRAT for the present researcher was posed by the need to administer the test individually, which would require some ten to fifteen minutes per subject. Another disadvantage was posed by the lack of any measurement of comprehension or vocabulary skills. Simple recognition ability is all that is measured by the test.

The SRA Achievement Series.—This instrument consists of a battery of tests for grades kindergarten through twelve (23). The battery is on eight different levels with two forms available for each level. The series is designed to provide information about student achievement through a battery of subtests at different levels. The subtests include (1) "Reading: vocabulary and comprehension;"
(2) "Mathematics: concepts, computation, problem solving;"
(3) "Language arts: mechanics, usage, spelling;"
(4) "Reference materials;" (5) "Social studies;" and
(6) "Science." The series is intended to provide a continuous evaluation of student progress throughout the school years.

Reading is only one of the areas included by the series. Like the rest of the tests in the series, the reading test has three separate tests that are used at different grade levels. Each test consists of five stories of graduated difficulty. Following each story are two types of questions which yield the two test scores. The first score is for reading comprehension, and the items contributing to this score require the reader to (a) locate specific information and overall meaning; (b) locate information in several places and compare the information in order to select a correct response; (c) locate information and draw logical conclusions or inferences from it. The second score is reading vocabulary, and items contributing to it refer to underlined words in the story. The items require the reader to either (a) select the literal meaning of a specific word, or (b) select the correct meaning of the word as it is used in the story.

While the difficulty level of the stories is not given, the SRA Technical Manual indicates that the difficulty was controlled by regulating sentence length, sentence complexity
and concept load, as well as by using standard vocabulary lists. It would appear likely that the difficulty of the first story in each test is slightly below the minimum grade level for which the test is supposed to be appropriate. Items are included that are above the highest grade level for which the test is designed (3, p. 742).

The SRA tests differ from many reading tests in two respects. First, the reading selections are relatively long, about twice the length of the passages in most reading tests; second, all vocabulary items are based on words in the selections. The vocabulary subtest and the comprehension subtest therefore seem to be measuring much the same thing. The tests are relatively unspeeded and require two class periods to administer.

Normative scores (normal curve equivalent, percentile ranks, stanines, grade equivalents) are provided for the vocabulary, comprehension, and the total scores for all levels. Normative data for the SRA Achievement Series were obtained during two national standardizations conducted in the spring and fall of 1978. Each school district in the country was identified by a geographic census region. These districts were randomly selected from each region.

Reliabilities are reported only for Form A. There is no direct evidence in the manual that a student making a particular score on Form A would make a similar score on
Form B. Evidence does show that both forms give the same general distribution of scores.

According to the SRA Technical Manual (23), there were four steps in the development of each test: content planning, item writing, item pretesting, and item analysis and selection. The tests are designed to measure reading ability, and this is further defined as comprehension and vocabulary. Reading speed is one aspect of reading that is not evaluated. Flexibility in adjusting speed and technique to suit the purpose of reading and the difficulty of the material being read is another aspect which is not covered. The task of reading comprehension is generally one of reading and understanding the material at the time. When a student is allowed to go back and seek the answer to a question, a different variable is added. To the extent that scanning or rereading contributes to the test score, the test is less valid as a measure of reading comprehension. The validity of the reading vocabulary subtest seems to be related to the understanding of both the literal meaning and shades of meaning of words in context. Here again, the testing situation, which supplies directions for rereading, tends to produce a variation from the normal reading situation.

As stated previously, there is apparently much overlap between vocabulary and comprehension scores on the SRA. Product-moment correlations between vocabulary and
comprehension range from .75 to .81 for various grade levels between the second and ninth grades. Probably much of this is due to the "holistic" approach in which the comprehension and the vocabulary questions come from the same paragraph.

The SRA Achievement Series are intended to give an overall view of achievement in all school areas; therefore the reading achievement is more meaningful in context with the other scores. Scoring is difficult on a manual level. In fact, one reviewer, despite recommending the test as highly relevant, described the SRA format as poor and the hand scoring of the test as "impossible" (1, p. 6).

The Gates-MacGinitie Reading Tests.—These tests are standardized silent reading tests for use in elementary school. The tests are graduated in different difficulty levels and can be used with separate answer sheets for easier scoring by teachers. The second edition is the most recent in a tradition of testing that was initiated by the late Arthur I. Gates. The Gates Silent Reading Test and the Gates Primary Reading Tests, two of the first widely used tests in reading, were first published in 1926. In 1960 Walter H. MacGinitie began working with Gates, and in 1965 they published a completely revised series: the Gates-MacGinitie Reading Tests. MacGinitie served as professor of psychology and education at Teachers College, Columbia University.
The Gates-MacGinitie Tests, second edition, 1978 (9), consist of a vocabulary test and a comprehension test. The vocabulary test is primarily a test of word knowledge (not decoding). The comprehension test contains passages of varying lengths and difficulty with questions after each passage. The tests are timed, twenty minutes for vocabulary and thirty-five minutes for comprehension. The students take the test that is appropriate to their grade level. There are seven levels of tests: level D is for grades four, five, and six. All items are multiple choice.

Normative scores (normal curve equivalent, percentile ranks, stanines, grade equivalents) are provided for the vocabulary, comprehension and the total scores for all levels. Standardization for the Gates was carried out in October, 1976, and in February and May, 1977. The sampling plan was based on the 1970 U.S. Census, which gives data on the basis of school district boundaries. The districts were stratified according to (1) geographic region, (2) district enrollment size, and (3) district socio-economic characteristics such as median family income and median years of schooling completed by adults. Districts were selected to produce within each region a representative proportion of black and Hispanic students. A total of eighty-six school districts including parochial schools participated in the norming. The norming sample included approximately 5,000 students per grade.
According to the publisher of the Gates-MacGinitie, the following steps were taken to assure test validity for most school reading programs.

1. Vocabulary words were selected from a special study of words in sixteen commonly used reading series for grades one, two, and three, and from recognized lists of works frequently used in school reading materials.

2. Vocabulary words were chosen on the basis of their general usefulness; nonsense words are not used.

3. Content of comprehension passages was chosen according to a plan that specified the proportion of natural science, social science, humanities, and narrative material for each test.

4. Passages were chosen from published sources that represent the wide range of materials such students encounter in their reading. All passages are in standard written English.

5. Both literal and inferential questions were written to test understanding of the passages.

6. Approximately twice the number of items needed for the test were developed for a national tryout.

Alternate-forms and Kuder-Richarson Formula 20 reliability coefficients were computed for each test level of the Gates-MacGinitie. The K-R 20 coefficients ranged from .90 to .95 for vocabulary and from .88 to .94 for comprehension (9).
William R. Powell states that the Gates-MacGinitie "provides usable data on achievement in comprehension, vocabulary and speed" (19, p. 1983). In evaluating and comparing these three instruments for testing reading achievement, it was felt that the Gates-MacGinitie Reading Tests project a more accurate picture of the actual reading ability of a child. They yield two scores for reading achievement, vocabulary and comprehension, that more accurately reflect the abilities to be considered in the present study. The Gates-MacGinitie Reading Tests were found to be easier to score than the other two tests. Tests could be administered to a group using self-scoring sheets available from the testing service. The self-scoring sheets made the actual scoring more accurate and less time consuming for the researcher.

Reading Attitude Scales

The next instrument considered was one to measure reading attitude. How students feel about reading may be as important as ability to read. An adequate instrument for this area was more difficult to choose.

The assessment of reading attitude is a challenging task, and no commercial reading attitude scales were found to be available. A major problem with most such scales is that of external validity. The attitude test given as a pretest may influence the subject's responses on a posttest. A
related complication may be the reader's personality predispositions and susceptibility to suggestion. Subjects with more rigid personalities may also be unable to change from previously developed or expressed attitudes (22).

In evaluating attitude scales, Kerlinger (15) notes that a summated rating scale may be the most useful in behavioral research. In a summated scale the universe of items is conceived to be a set of items of equal attitude value. Summated rating scales may reflect an intensity of attitude expression and show a wide variation. They are often preferred for their relative simplicity over the equal-appearing interval scale and the cumulative or "Guttman" scale for measuring attitude.

Among the reading attitude instruments available to educators are the "Estes Reading Attitude Scale," Heathington and Alexander's "Observation Checklist to Assess Reading Attitudes," and Rowell's "Scale of Reading Attitude Based on Behavior." "The Estes Reading Attitude Scale" was finally preferred for use in the present study. For reference and comparison purposes, however, a discussion of each of these attitude scales follows.

Rowell's scale.---A "Scale of Reading Attitude Based on Behavior" was developed by Rowell in 1972 (21). It was originally devised to measure reading attitudes of children who have critical problems in reading. The author's first
step in developing the scale was to select situations in reading that are representative of how children feel toward reading. Three categories of reading were selected which included reading for pleasure, reading in the content areas, and reading as it takes place in reading classes. A summated rating design or "Likert" design was chosen with item response options ranging from very negative to very positive. The sixteen items on the scale are to be scored by an observer of the child and to be used in circumstances where the observer would have a period of time to observe and to record a child's behavior in various reading situations.

The scale's interrater reliability was found to be high with the average of four product-moment correlation coefficients being .88. The validity of the reading attitude scale was determined by comparing the attitude scores to scores obtained from teacher observations. Coefficients of correlation were obtained between these scores and the reading attitude scores given to each child from the Rowell scale. Validity coefficients obtained in this way averaged .70. An individual item analysis was also conducted. It was decided that each item was properly worded and was free of ambiguous wording.

The Rowell scale seems satisfactory, but it should be used in situations where the observer can be with children over a prolonged period of time. It, therefore, was judged unsatisfactory for use in the present study.
Heathington and Alexander's scale.--Another reading attitude scale recommended in the literature is one devised by Heathington and Alexander in 1978 (11). This scale is an observation checklist to assess attitudes toward reading. The value of using an observation scale lies in its comprehensiveness, according to the authors, since children's behaviors and comments can be viewed over a period of time and in many reading situations.

The authors interviewed sixty children in grades one through six in order to determine items for the checklist. Each of the ten items on the checklist is to be answered "yes" or "no" by the observer, usually the teacher. The observations included such items as "being happy while reading," "desiring to read aloud," and "reading many books." This assessment checklist would be beneficial to the classroom teacher because it is concise and easy to use, and examines reading in different environments. It would require sufficient time to observe the child in the situation brought out in the checklist. Apparently, the authors of the observation checklist made no attempt to assess the validity or reliability of the instrument.

The Estes Reading Attitude Scale.--This scale was introduced by Thomas Estes in 1971 (7). Of the several types of attitude scales which could have been designed, the "Likert" or summated ratings type was chosen because of its
ease of use and generally high accuracy. The Estes scale is composed of a list of statements to which the examinee is asked to answer on a one to five point scale from "strongly agree" to "strongly disagree." Each of the statements is worded in such a way as to relate always to reading. A summation of the values of student responses on the scale yields a quantitative indication of the student's attitude toward reading. (The scale itself is reproduced in Appendix C).

The first step that Estes took in the construction of the scale was to secure a pool of statements from which could be selected approximately thirty for a "try-out" scale. Twenty-seven high school and elementary teachers in the Charlottesville, Virginia, area were asked to contribute to the pool. Criteria for attitude scale item formulation and selection were provided for the teachers and were utilized in the selection of items.

The initial scale consisted of 28 items administered to 283 pupils in grades 3 to 12. The classes were chosen for their heterogeneous nature. The data from the initial administration were analyzed in a two-stage procedure. First, an estimate of the scale's general performance was secured through computation of the mean, standard deviation, and reliability data. Second, an individual analysis of each item was made in terms of its ability to separate a group of students on the basis of their attitude toward reading.
Each pupil could rank each of the 28 items on a 1 to 5 scale. The theoretically possible range of scores was 28 to 140. The range of scores and the means and standard deviations for each of Estes' groups of pupils are reproduced in Table I.

**TABLE I**

RANGES, MEANS, STANDARD DEVIATIONS, AND RELIABILITIES FOR GRADES 3-6, GRADES 7-12, AND THE TOTAL GROUP, WITH ACCOMPANYING t-TEST FOR ESTES (7).

<table>
<thead>
<tr>
<th>Source of data</th>
<th>Range</th>
<th>X</th>
<th>s.d.</th>
<th>rel.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 3-6</td>
<td>57-138</td>
<td>106*</td>
<td>16.4</td>
<td>.92</td>
</tr>
<tr>
<td>Grades 7-12</td>
<td>55-127</td>
<td>98*</td>
<td>17.1</td>
<td>.96</td>
</tr>
<tr>
<td>Total Group</td>
<td>55-138</td>
<td>102</td>
<td>17.1</td>
<td>.94</td>
</tr>
</tbody>
</table>

As might have been expected, the younger pupils in this sample revealed more positive attitudes toward reading. The neutral response is always 3 on such a 5 point scale, so a neutral score would be 84 on this scale.

The wide standard deviations suggest that a wide variety of attitudes toward reading was represented in the sample. The reliability data for the scale were computed by the split-half method. The substantial reliability values suggest that in its tryout form the scale was performing with good consistency.

The second stage of data analysis involved item discrimination analysis. This was done by analyzing each
item for its discrimination of high scorers from low scorers on the scale. The items retained were those on which pupils with a positive attitude are likely to respond with a high scoring response and those on which those pupils with a negative attitude are likely to respond with a low scoring response. After item discrimination analysis, the "Estes Reading Attitude Scale" was left with twenty items with the theoretically possible range of scores from 20 to 100. A neutral score would be 60 on this scale.

The "Estes Reading Attitude Scale" has received wide usage in reading experimentation. For example, Ciampoli (5) used it in a 1977 study comparing an individualized reading program to a directed reading program. Golicz (10) used it in an experimental study with gifted underachievers in 1982. The scale has also been validated in a study by Summers (28) in which he states that the 'Estes Reading Attitude Scale' evidences good internal consistency and solid convergent validity. [It is] a useful global reactive assessment of school oriented attitude toward reading in the intermediate grades" (28, pp. 36-43). Plake (18) also found the scale a valid measure in a study examining ethnic group membership and reading attitude.

Roettger (20) analyzed the Estes scale in a reading study investigating high achievement-low attitude and low achievement-high attitude children. Seventy-five fifth and sixth graders were interviewed concerning their responses
to the "Estes Reading Attitude Scale" the year before.
Responses from both groups of students could be grouped into identical categories with high interrater reliability. All of the reliability coefficients were in the .90's.

Of the reading attitude scales examined by the present researcher, the Estes scale seemed the most efficient and useful in the present study. It was also found to be relatively simple to administer and score.

Data Analysis

Data from this study were analyzed using the statistical technique of analysis of covariance for the first two hypotheses. The third hypothesis concerning books circulated was tested by the use of the t test for two independent samples. The fourth hypothesis was tested by the use of the Pearson product moment correlation coefficient.

Analysis of Covariance

Analysis of covariance has been suggested as the statistical analysis of choice when one utilizes a pretest-posttest design with intact groups (4; 12; 14). Campbell and Stanley recommend the analysis of covariance with pretest scores as the covariate as being preferable to simple gain-score comparisons (4). Kenny also recommends the analysis of covariance as "not only appropriate but necessary" (14, p. 350) in such designs.
Huck and McLean additionally note that analysis of covariance is a more powerful technique than gain score analysis or simple analysis of variance (12, p. 516). In gain score analysis a pretest score is subtracted from a posttest score to generate a "gain" score for each subject. These gain scores are then compared, using a t test when there are only two groups, or using one way analysis of variance when there are more than two groups.

The analysis of covariance differs from simple analysis of variance in that the dependent measures are adjusted before comparisons are made. Regression procedures are used to remove the effect of one or more covariates from the dependent variable so that actual treatment effects can be more accurately assessed. Technically, the dependent variable is thus regressed on the covariates, and an analysis of variance is then formed on the residuals from the regression (14). An example would be the case of a researcher interested in studying the effects of a specialized program in mathematics achievement. In this case, IQ could influence the mathematics achievement scores and mask the treatment effects of the specialized program. By statistically removing the effect of IQ, one would then be able to measure the treatment effects more accurately. Ferguson (8) and Winer (30) give other examples and uses for analysis of covariance. In a pretest-posttest design such as the present study, the pretest can be regarded as an influence on the
posttest scores, and analysis of covariance can be used to
discount this influence (12; 14).

Winer notes additionally that covariance analysis may
serve "to remove potential sources of bias in the experiment"
(30, p. 752). A major source of bias in the present
experiment could be the individual's starting point with
regard to scores on the Gates-MacGinitie vocabulary,
comprehension, and combined score totals. For example, a
person who scores low may have more room for improvement,
and treatment may affect this person differently. The
analysis of covariance was used accordingly to control for
such potential bias and also to improve the sensitivity of
the comparisons for treatment effects.

Other Statistical Tests

The Pearson product moment correlation coefficient was
used to test for a possible relationship between the reading
achievement and reading attitude scores. The Pearson
coefficient was also used in considering other possible
relationships involving background variables as discussed
in Chapter IV. In addition, the t-test was used to compare
the means between the two groups of students in terms of
books circulated and also to test for teacher effect.
Multiple regression analysis was employed in considering
relationships involving the demographic variables.
The "Eta" statistic was also used to assess the relationship between nominal level demographic variables and the test scores. This statistic is similar to the Pearson coefficient and eta squared can be interpreted as $r^2$ to identify the proportion of explained variance (16).

The analysis of covariance and other statistical analyses were computed using the Statistical Package for the Social Sciences, Version 7.2 (16). The actual computation of the multiple regression was done using the Statistical Package for the Social Sciences: SPSS$^x$ (17).

Summary

In this chapter attention has been devoted to the data sources and methodologies used in conducting this study. Descriptions and discussion have been provided regarding the research design, the selection of the sample, the collection of data, the selection of instruments, and the statistical procedures employed. The analysis of the data and the research findings are reported next in Chapter IV.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

Introduction

The findings of this study concerning the relationship between a regular sequential librarian-centered reading guidance program and the reading attitudes and reading achievement of fifth grade elementary school students are presented in this chapter. Three hypotheses were formulated concerning these relationships. In addition, a fourth hypothesis concerning the relationship, if any, between reading attitude and reading achievement was tested. Research questions concerning the relationship of demographic variables to reading achievement and reading attitude scores were also considered.

Hypotheses

The hypotheses of the study are restated below, together with the statistical technique used in testing each hypothesis. The results of the test are then discussed.

Hypothesis 1

The first hypothesis states that fifth grade elementary school students who attend a regular librarian-centered reading guidance program will score significantly higher on
reading achievement tests than those who do not attend such a program. One-way analysis of covariance was the procedure used in testing this hypothesis for statistical significance. The pretests of the Gates-MacGinitie Reading Tests were used as covariates.

**Hypothesis II**

The second hypothesis states that fifth grade elementary school students who attend a regular librarian-centered reading guidance program will have a significantly better attitude toward reading as measured by a reading attitude scale than those who do not attend such a program. One-way analysis of covariance was the procedure used in testing this hypothesis for significance. The pretest of the "Estes Reading Attitude Scale" was used as the covariate.

**Hypothesis III**

The third hypothesis states that fifth grade elementary school students who attend a regular librarian-centered reading guidance program will charge more books from the school library as shown by circulation records than those who do not attend such a program. This hypothesis was tested for statistical significance using the t test for two independent samples since a pretest score was unavailable.

**Hypothesis IV**

The fourth hypothesis states that a positive relationship exists between the reading attitude scores of fifth
grade elementary school students and their reading achievement scores. This hypothesis was tested for statistical significance using the Pearson product-moment correlation coefficient.

Results

As noted above, the analysis of covariance was used to test the first two hypotheses. One point should be noted before reporting the results of these tests. The Gates-MacGinitie Reading Tests were scored so that they yielded raw scores, NCE (normal curve equivalent) scores, percentile scores, and grade equivalent scores. For interpretation purposes it was judged appropriate to use some score other than the raw score as the measure of the dependent variable. In choosing among the other three scores, analyses were first performed to determine whether the correlations between the scores were sufficiently high so that the results of using one variable would be essentially the same as using one of the other variables. As presented in Tables II through VII, all the correlations among the variables were found to exceed .97, and most exceeded .99. These analyses were judged to indicate that the alternative posttest scores might be regarded as virtually equivalent. The choice of the particular alternative score for the dependent variable (and covariate) was thus decided as a matter of usefulness in interpretation.
TABLE II
INTERCORRELATIONS AMONG THE GATES-MACGINITIE PRETEST VOCABULARY SCORES

<table>
<thead>
<tr>
<th>Test Scores</th>
<th>PreVocl</th>
<th>PreVoc2</th>
<th>PreVoc3</th>
<th>PreVoc4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PreVocl (Raw)</td>
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<td>.9745</td>
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<td>.9891</td>
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<tr>
<td>PreVoc2 (NCE)</td>
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<td>.9754</td>
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<tr>
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<td>1.00</td>
<td>.9833</td>
</tr>
<tr>
<td>PreVoc4 (G.E.)</td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

TABLE III
INTERCORRELATIONS AMONG THE GATES-MACGINITIE POSTTEST VOCABULARY SCORES

<table>
<thead>
<tr>
<th>Test Scores</th>
<th>PostVocl</th>
<th>PostVoc2</th>
<th>PostVoc3</th>
<th>PostVoc4</th>
</tr>
</thead>
<tbody>
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<tr>
<td>PostVoc3 (Percent.)</td>
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<td>1.00</td>
<td>.9902</td>
</tr>
<tr>
<td>PostVoc4 (G.E.)</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
### TABLE IV
**INTERCORRELATIONS AMONG THE GATES-MACGINITIE PRETEST COMPREHENSION SCORES**

<table>
<thead>
<tr>
<th>Test Scores</th>
<th>PreCom1</th>
<th>PreCom2</th>
<th>PreCom3</th>
<th>PreCom4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PreCom1 (Raw)</td>
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<td>.9955</td>
<td>.9940</td>
<td>.9952</td>
</tr>
<tr>
<td>PreCom2 (NCE)</td>
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<td>1.00</td>
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<td>.9889</td>
</tr>
<tr>
<td>PreCom3 (Percent.)</td>
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<td>1.00</td>
<td>.9971</td>
<td></td>
</tr>
<tr>
<td>PreCom4 (G.E.)</td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE V
**INTERCORRELATIONS AMONG THE GATES-MACGINITIE POSTTEST COMPREHENSION SCORES**

<table>
<thead>
<tr>
<th>Test Scores</th>
<th>PostCom1</th>
<th>PostCom2</th>
<th>PostCom3</th>
<th>PostCom4</th>
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<tbody>
<tr>
<td>PostCom1 (Raw)</td>
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<td>.9955</td>
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<td>.9914</td>
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<tr>
<td>PostCom2 (NCE)</td>
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<td>1.00</td>
<td>.9905</td>
<td>.9892</td>
</tr>
<tr>
<td>PostCom3 (Percent.)</td>
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<td>1.00</td>
<td>.9945</td>
<td></td>
</tr>
<tr>
<td>PostCom4 (G.E.)</td>
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</table>
TABLE VI

INTERCORRELATIONS AMONG THE GATES-MACGINITIE
PRETEST TOTAL SCORES

<table>
<thead>
<tr>
<th>Test Scores</th>
<th>PreTot1</th>
<th>PreTot2</th>
<th>PreTot3</th>
<th>PreTot4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PreTot1 (Raw)</td>
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<td>.9987</td>
<td>.9977</td>
<td>.9956</td>
</tr>
<tr>
<td>PreTot2 (NCE)</td>
<td>.9987</td>
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<td>.9964</td>
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<tr>
<td>PreTot3 (Percent.)</td>
<td>.9977</td>
<td>.9970</td>
<td>1.00</td>
<td>.9970</td>
</tr>
<tr>
<td>PreTot4 (G.E.)</td>
<td>.9956</td>
<td>.9964</td>
<td>.9970</td>
<td>1.00</td>
</tr>
</tbody>
</table>

TABLE VII

INTERCORRELATIONS AMONG THE GATES-MACGINITIE
POSTTEST TOTAL SCORES

<table>
<thead>
<tr>
<th>Test Scores</th>
<th>PostTot1</th>
<th>PostTot2</th>
<th>PostTot3</th>
<th>PostTot4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PostTot1 (Raw)</td>
<td>1.00</td>
<td>.9961</td>
<td>.9977</td>
<td>.9837</td>
</tr>
<tr>
<td>PostTot2 (NCE)</td>
<td>.9961</td>
<td>1.00</td>
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<td>.9941</td>
</tr>
<tr>
<td>PostTot3 (Percent.)</td>
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<td>.9967</td>
<td>1.00</td>
<td>.9863</td>
</tr>
<tr>
<td>PostTot4 (G.E.)</td>
<td>.9837</td>
<td>.9941</td>
<td>.9863</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Since a school-based study was being conducted and since most educators are familiar with and concerned with grade equivalent scores, the latter scores were chosen as the measure of the dependent variable for reporting and discussion purposes. At the same time it may be noted that an analysis of covariance was performed for the raw scores, NCE scores, and percentile scores with the results being the same for each analysis. The summary tables for these three analyses are presented in Appendix I.

As shown by Tables VIII through X, high correlations (.66 to .85) were also found between pretest and posttest scores. These high correlations were expected and were considered indicative of the need for using analysis of covariance in the present study.

In testing the first hypothesis, three analyses of covariance were performed to determine if attendance at a regular librarian-centered reading guidance program was significantly associated with increases in vocabulary, comprehension, and composite scores on the Gates-MacGinitie Reading Tests.

In testing the second hypothesis, an analysis of covariance was also performed to determine if attendance at a regular librarian-centered reading guidance program was significantly associated with improvement in attitude toward reading as measured by the "Estes Reading Attitude Scale."
### TABLE VIII
CORRELATIONS BETWEEN GATES-MACGINITIE VOCABULARY PRETEST SCORES AND POSTTEST SCORES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>PreVoc1 (Raw)</td>
<td>.7524</td>
<td>.7563</td>
<td>.7540</td>
<td>.7621</td>
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<tr>
<td>PreVoc2 (NCE)</td>
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<td>.7360</td>
<td>.7321</td>
<td>.7461</td>
</tr>
<tr>
<td>PreVoc3 (Percent.)</td>
<td>.7407</td>
<td>.7476</td>
<td>.7457</td>
<td>.7553</td>
</tr>
<tr>
<td>PreVoc4 (G.E.)</td>
<td>.7517</td>
<td>.7636</td>
<td>.7575</td>
<td>.7753</td>
</tr>
</tbody>
</table>

### TABLE IX
CORRELATIONS BETWEEN GATES-MACGINITIE COMPREHENSION PRETEST SCORES AND POSTTEST SCORES

<table>
<thead>
<tr>
<th></th>
<th>PostCom1 (Raw)</th>
<th>PostCom2 (NCE)</th>
<th>PostCom3 (Percent.)</th>
<th>PostCom4 (G.E.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PreCom1 (Raw)</td>
<td>.6877</td>
<td>.6936</td>
<td>.7060</td>
<td>.6861</td>
</tr>
<tr>
<td>PreCom2 (NCE)</td>
<td>.6752</td>
<td>.6804</td>
<td>.6925</td>
<td>.6715</td>
</tr>
<tr>
<td>PreCom3 (Percent.)</td>
<td>.6896</td>
<td>.6950</td>
<td>.7092</td>
<td>.6902</td>
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<tr>
<td>PreCom (G.E.)</td>
<td>.6995</td>
<td>.7048</td>
<td>.7187</td>
<td>.7001</td>
</tr>
</tbody>
</table>
TABLE X

CORRELATIONS BETWEEN GATES-MACGINITIE TOTAL PRETEST SCORES AND POSTTEST SCORES

<table>
<thead>
<tr>
<th></th>
<th>PostTot1 (Raw)</th>
<th>PostTot2 (NCE)</th>
<th>PostTot3 (Percent.)</th>
<th>PostTot4 (G.E.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PreTot1 (Raw)</td>
<td>.8467</td>
<td>.8499</td>
<td>.8494</td>
<td>.8413</td>
</tr>
<tr>
<td>PreTot2 (NCE)</td>
<td>.8479</td>
<td>.8525</td>
<td>.8504</td>
<td>.8456</td>
</tr>
<tr>
<td>PreTot3 (G.E.)</td>
<td>.8522</td>
<td>.8576</td>
<td>.8573</td>
<td>.8518</td>
</tr>
<tr>
<td>PreTot4 (Percent.)</td>
<td>.8465</td>
<td>.8539</td>
<td>.8515</td>
<td>.8514</td>
</tr>
</tbody>
</table>

For each analysis of covariance, the pretest score was employed as the covariate and the posttest score was the dependent variable. The analyses were performed using the Statistical Package for the Social Sciences, Version 7.2 (4).

The means and standard deviations for the pretest and posttest scores on the Gates-MacGinitie Tests are reported in Table XI. The mean for each posttest section of the Gates-MacGinitie Tests was found to be higher than the equivalent pretest section when all four classes were grouped together.

The means and standard deviations on the "Estes Attitude Scale" are reported in Table XII.
## TABLE XI

MEANS AND STANDARD DEVIATIONS FOR THE GATES-MACGINITIE PRETEST AND POSTTEST GRADE EQUIVALENT SCORES

<table>
<thead>
<tr>
<th>Test Section</th>
<th>Mean</th>
<th>S.D.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary Pretest</td>
<td>5.62</td>
<td>1.22</td>
<td>73</td>
</tr>
<tr>
<td>Vocabulary Posttest</td>
<td>6.02</td>
<td>1.35</td>
<td>70</td>
</tr>
<tr>
<td>Comprehension Pretest</td>
<td>4.90</td>
<td>1.49</td>
<td>73</td>
</tr>
<tr>
<td>Comprehension Posttest</td>
<td>5.46</td>
<td>1.77</td>
<td>70</td>
</tr>
<tr>
<td>Total Pretest</td>
<td>5.29</td>
<td>1.13</td>
<td>73</td>
</tr>
<tr>
<td>Total Posttest</td>
<td>5.79</td>
<td>1.44</td>
<td>70</td>
</tr>
</tbody>
</table>

## TABLE XII

MEANS AND STANDARD DEVIATIONS FOR THE ESTES PRETEST AND POSTTEST SCORES

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean</th>
<th>S.D.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estes Pretest</td>
<td>79.29</td>
<td>11.06</td>
<td>73</td>
</tr>
<tr>
<td>Estes Posttest</td>
<td>79.14</td>
<td>10.51</td>
<td>70</td>
</tr>
</tbody>
</table>

The mean for the "Estes Reading Attitude Scale" posttest was found to be lower when all four classes were grouped together. Before discussing the specific results of the analysis of covariance, an explanation is needed regarding the handling of the teacher variable. When the study was
originally designed, two experimental groups and two control groups were identified to provide control for the possible effect of the teacher variable on student achievement and student attitude. Two teachers were used in the study. Each teacher had one control group and one experimental group. Teacher No. 1 had twenty-three students in the experimental group and eleven in the control group by the end of the experiment. Teacher No. 2 had eighteen in the experimental group and twenty-one in the control group.

To assess any differences between the teachers, \( t \)-tests were used to compare the means on the posttest measures. The results showed that there were no significant differences on the vocabulary, comprehension, or composite scores: \( t(68) = .81, p > .05; t(68) = .94, p > .05; t(68) = .99, p > .05; \) respectively, between the teachers. Since the teacher variable was not significant, the experimental groups and the control groups were combined for the analysis of covariance which made a total of forty-one subjects for the experimental group and thirty-two for the control group.

**Specific Results of the Analyses of Covariance**

The first three analyses of covariance, relating to Hypothesis I, indicated significant treatment effects. The first analysis of covariance found significant treatment effects on the vocabulary scores of the [Gates-MacGinitie Reading Tests](https://www.gatesmacgraw.com) that were used as the dependent variable. These results are summarized in Table XIII.
TABLE XIII

SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE
POSTTEST "GRADE EQUIVALENT" VOCABULARY SCORES
ON GATES-MACGINITIE READING TESTS

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (Pretest G.E. Scores)</td>
<td>75.88</td>
<td>1</td>
<td>75.88</td>
<td>118.06</td>
<td>.0001</td>
</tr>
<tr>
<td>Treatment</td>
<td>7.30</td>
<td>1</td>
<td>7.30</td>
<td>11.36</td>
<td>.0006</td>
</tr>
<tr>
<td>Error</td>
<td>43.06</td>
<td>67</td>
<td>.64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As may be noted, the treatment, or experimental group, scored significantly higher on the dependent variable. The adjusted and unadjusted means for the vocabulary scores for the experimental and the control groups are shown in Table XIV.

TABLE XIV

UNADJUSTED AND ADJUSTED MEANS FOR VOCABULARY SCORES

<table>
<thead>
<tr>
<th></th>
<th>Unadjusted Means for Post G.E Scores</th>
<th>Adjusted Means for Post G.E Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>6.60</td>
<td>6.33</td>
</tr>
<tr>
<td>Control</td>
<td>5.29</td>
<td>5.64</td>
</tr>
</tbody>
</table>

The covariate beta weight used in calculating the adjusted mean was .88.
The second analysis of covariance found significant treatment effects on the comprehension scores of the *Gates-MacGinitie Reading Tests* that were used as the dependent variable. These results are summarized in Table XV.

**TABLE XV**

**SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE POSTTEST "GRADE EQUIVALENT" COMPREHENSION SCORES ON GATES-MACGINITIE READING TESTS**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (Pretest G.E. Scores)</td>
<td>105.91</td>
<td>1</td>
<td>105.91</td>
<td>67.86</td>
<td>.0001</td>
</tr>
<tr>
<td>Treatment</td>
<td>5.61</td>
<td>1</td>
<td>5.61</td>
<td>3.59</td>
<td>.0312</td>
</tr>
<tr>
<td>Error</td>
<td>104.57</td>
<td>67</td>
<td>1.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As may be noted, the treatment, or experimental group, again scored higher on the dependent variable. The adjusted and unadjusted means for the comprehension scores for both the experimental and control groups are shown in Table XVI.

**TABLE XVI**

**UNADJUSTED AND ADJUSTED MEANS FOR COMPREHENSION**

<table>
<thead>
<tr>
<th></th>
<th>Unadjusted Means for Post G.E. Scores</th>
<th>Adjusted Means for Post G.E. Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>6.09</td>
<td>5.74</td>
</tr>
<tr>
<td>Control</td>
<td>4.69</td>
<td>5.13</td>
</tr>
</tbody>
</table>
The covariate beta weight used in calculating the adjusted mean was .83.

The third analysis of covariance found significant treatment effects on the combined or total scores of the Gates-MacGinitie Reading Tests that were used as the dependent variable. These results are summarized in Table XVII.

**TABLE XVII**

**SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE POSTTEST "GRADE EQUIVALENT" TOTAL SCORES ON GATES-MACGINITIE READING TESTS**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (Pretest Total G.E. Scores)</td>
<td>103.87</td>
<td>1</td>
<td>103.87</td>
<td>191.37</td>
<td>.0001</td>
</tr>
<tr>
<td>Treatment</td>
<td>3.05</td>
<td>1</td>
<td>3.05</td>
<td>5.61</td>
<td>.0104</td>
</tr>
<tr>
<td>Error</td>
<td>36.37</td>
<td>67</td>
<td>.54</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As may be noted, the treatment, or experimental group, also scored higher on this measure of the dependent variable. The adjusted and unadjusted means for the combined or total scores for both the experimental and control groups are shown in Table XVIII. The covariate beta weight used in calculating the adjusted mean was 1.09.

Thus, in each of the preceding cases the treatment, or experimental group, scored higher on the dependent variable.
Since these higher scores are interpreted as reflecting a higher reading achievement in terms of vocabulary and comprehension, the results are regarded as support for Hypothesis I.

The fourth analysis of covariance concerning Hypothesis II found significant treatment effects on the "Estes Reading Attitude Scale" scores that were used as the dependent variable. These results are summarized in Table XIX.

### TABLE XVIII

<table>
<thead>
<tr>
<th>Unadjusted Means for Post G.E. Scores</th>
<th>Adjusted Means for Post G.E. Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>6.40</td>
</tr>
<tr>
<td>Control</td>
<td>5.04</td>
</tr>
</tbody>
</table>

### TABLE XIX

SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE POSTTEST SCORES FOR ESTES READING ATTITUDE SCALE

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (Estes Pretest)</td>
<td>4417.38</td>
<td>1</td>
<td>4417.38</td>
<td>107.83</td>
<td>.0001</td>
</tr>
<tr>
<td>Treatment</td>
<td>454.53</td>
<td>1</td>
<td>454.53</td>
<td>11.10</td>
<td>.0007</td>
</tr>
<tr>
<td>Error</td>
<td>2744.67</td>
<td>67</td>
<td>40.97</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Again, the treatment, or experimental group scored higher on the dependent variable. The adjusted and unadjusted means for the "Estes Reading Attitude Scale" scores for both the experimental and control groups are shown in Table XX.

<table>
<thead>
<tr>
<th></th>
<th>Unadjusted</th>
<th>Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>81.59</td>
<td>81.41</td>
</tr>
<tr>
<td>Control</td>
<td>76.06</td>
<td>76.28</td>
</tr>
</tbody>
</table>

The covariate beta weight used in calculating the adjusted mean was .71. Since the higher scores of the experimental group are interpreted as reflecting a higher or "better" attitude toward reading, these results are regarded as support for Hypothesis II.

Specific Results of the $t$ Test Analysis

The third hypothesis that pupils who attend a librarian-centered reading guidance program will charge more books from the library as shown by circulation records was assessed by using a simple $t$ test, since no prior records of the number of books circulated to students were available for an analysis of covariance. The $t$ test was used to compare the mean number of books circulated to the
experimental group with the mean number circulated to the control group. The results of the t test indicated that there was a significant difference between the two groups. These results are summarized in Table XXI.

TABLE XXI

COMPARISON BETWEEN GROUPS ON BOOKS CIRCULATED

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>41</td>
<td>10.756</td>
<td>3.7867</td>
<td>4.64*</td>
</tr>
<tr>
<td>Control Group</td>
<td>32</td>
<td>6.8125</td>
<td>3.3547</td>
<td></td>
</tr>
</tbody>
</table>

*p < .001

As predicted, these results provided support for Hypothesis III, namely, that children in the experimental group would circulate significantly more books than those in the control group.

It may also be noted that to provide data for this test, the librarian kept a circulation record of the number of books charged by students in all four classes. Charge cards were grouped by classes, and a weekly tally of books charged from all four classes was made. Cross checking data were also obtained by having the students keep a personal record of each book read. Each week, all four classes were reminded to write their titles on their "Reader Meters." A sample "Reader Meter" is included in Appendix E.
Specific Results of the Pearson Product-Moment Correlation Coefficient Analysis

The fourth hypothesis, that a positive relationship exists between the reading attitude scores and the reading achievement scores of fifth grade pupils, was tested by the use of the Pearson product-moment correlation coefficient. The coefficients for the relationship between the "Estes Reading Attitude Scale" scores and the Gates-MacGinitie Reading Tests scores are presented in Table XXII.

TABLE XXII

PEARSON PRODUCT-MOMENT CORRELATIONS BETWEEN ESTES READING ATTITUDE SCALE AND GATES-MACGINITIE READING TESTS

<table>
<thead>
<tr>
<th>Estes Pretest</th>
<th>Vocabulary Pretest</th>
<th>Comprehension Pretest</th>
<th>Total Reading Pretest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.10 (.19)*</td>
<td>.20 (.045)</td>
<td>.18 (.64)</td>
</tr>
<tr>
<td>Estes Posttest</td>
<td>Vocabulary Posttest</td>
<td>Comprehension Posttest</td>
<td>Total Reading Posttest</td>
</tr>
<tr>
<td></td>
<td>.16 (.08)</td>
<td>.34 (.002)</td>
<td>.29 (.007)</td>
</tr>
</tbody>
</table>

*significance level

The correlations between the variables at pretest were relatively weak, as might have been expected, and only one was statistically significant at the .05 level. Also, while the correlation ($r = .20$) between the "Estes Reading Attitude Scale" pretest and the pretest comprehension scores on the Gates-MacGinitie Reading Tests was significant, it only
accounted for 4 percent of the observed variance. With regard to the posttest measures, there were significant correlations at the .01 level between the "Estes Reading Attitude Scale" and the comprehension (r=.34) and the total (r=.29) scores of the Gates-MacGinitie Reading Tests. The magnitude of the correlations is still small (and the most variance accounted for was 12 percent); however, it may be noted that increases in correlation are all in the hypothesized direction. This pattern may be viewed accordingly as consistent with the view that changes in reading attitude may be associated with changes in reading achievement.

Related Research Questions Involving Selected Demographic Variables

Questions were also posed for the present study concerning possible relationships between selected background variables and the reading attitude and reading achievement scores of students. These demographic variables included age, sex, race, father's education, father's occupation, mother's occupation, residence rating, previous school attended, library use at previous school, public library use by student, proximity of public library to student's home, parents' reading to student, parents' encouragement of reading, amount of time student spent reading per week, amount of time student spent viewing television per week,
and parents' own reading of books, magazines, newspapers as perceived by the student.

Information on these variables was collected from two sources. Midway through the experimental study, questionnaires were answered by the students participating in the study. (A copy of the questionnaire is provided in Appendix D.) Cumulative school records of the students were also consulted and considered in conjunction with the answers given by students on the questionnaires.

The students participating in the study included forty males (55 per cent) and thirty-three females (45 per cent). An analysis of variance was performed to see if a relationship existed between the sex variable and scores on the reading achievement tests or the reading attitude tests. The only significant F value was on the posttest of the "Estes Reading Attitude Scale." These results are summarized in Table XXIII.

Information was also collected on the racial background of the subjects. Sixty-three of the children were white, eight were black, and two were of American Indian ancestry. Because of the limited number of non-white students, no analysis by race was attempted. The frequency data for the preceding two variables are summarized in Table XXIV.
## Table XXIII

**Analysis of Variance with Sex as Variable**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vocabulary Pretest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>6436</td>
<td>1</td>
<td>6436</td>
<td>4.521</td>
</tr>
<tr>
<td>Within Ss</td>
<td>101,701</td>
<td>71</td>
<td>1424</td>
<td></td>
</tr>
<tr>
<td><strong>Comprehension Pretest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>.643</td>
<td>1</td>
<td>.643</td>
<td>.287</td>
</tr>
<tr>
<td>Within Ss</td>
<td>158,997</td>
<td>71</td>
<td>2,239</td>
<td></td>
</tr>
<tr>
<td><strong>Total Reading Pretest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>2890</td>
<td>1</td>
<td>2890</td>
<td>2.301</td>
</tr>
<tr>
<td>Within Ss</td>
<td>89,185</td>
<td>71</td>
<td>1256</td>
<td></td>
</tr>
<tr>
<td><strong>Estes Pretest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>453,014</td>
<td>1</td>
<td>454,014</td>
<td>3.846</td>
</tr>
<tr>
<td>Within Ss</td>
<td>8,361,945</td>
<td>71</td>
<td>117,714</td>
<td></td>
</tr>
<tr>
<td><strong>Vocabulary Posttest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>5962</td>
<td>1</td>
<td>5962</td>
<td>3.371</td>
</tr>
<tr>
<td>Within Ss</td>
<td>120,286</td>
<td>68</td>
<td>1769</td>
<td></td>
</tr>
<tr>
<td><strong>Comprehension Posttest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>.240</td>
<td>1</td>
<td>.240</td>
<td>.075</td>
</tr>
<tr>
<td>Within Ss</td>
<td>215,847</td>
<td>68</td>
<td>3174</td>
<td></td>
</tr>
<tr>
<td><strong>Total Reading Posttest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>2047</td>
<td>1</td>
<td>2047</td>
<td>.985</td>
</tr>
<tr>
<td>Within Ss</td>
<td>141,242</td>
<td>68</td>
<td>2077</td>
<td></td>
</tr>
<tr>
<td><strong>Estes Posttest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Ss</td>
<td>727,642</td>
<td>1</td>
<td>727,642</td>
<td>7.182*</td>
</tr>
<tr>
<td>Within Ss</td>
<td>6,888,929</td>
<td>68</td>
<td>101,308</td>
<td></td>
</tr>
</tbody>
</table>

*P < .05
TABLE XXIV

FREQUENCY OF SUBJECTS BY SEX AND RACE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>40</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>33</td>
<td>45</td>
</tr>
<tr>
<td>Race</td>
<td>White</td>
<td>63</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Am. Indian</td>
<td>2</td>
<td>03</td>
</tr>
</tbody>
</table>

Scaling of Characteristics

Before discussing other analytic factors considered in the study, the scaling of selected demographic characteristics is reviewed below.

The residential scale.--This scale was based upon the Shreveport-Bossier Cole's Cross Reference Directory (1). The Cole's Directory gives a family wealth rating for all residence zones in Caddo and Bossier Parishes based upon (1) U.S. Census Bureau data, (2) block canvassing done by the Cole company, and (3) real estate evaluations. The rating of a zone is the average value of all the family residences in that zone. Addresses of students were checked in Cole's and assigned one of the following rankings:

1. Lower income residences
2. Lower middle income residences
3. Middle income residences
4. Upper middle income residences
5. Upper income residences.

The average values of residence zones in Bossier City according to the 1980 U.S. Census ranged from $30,000 to $60,000 with the median value being $39,900 (5, p. H2).

The occupational scale.—This scale was taken from the U.S. Bureau of the Census (2, p. 179) system of classifying occupations into socioeconomic groups. Modification was made by combining groups so as to provide five rather than seven occupational levels as follows:
1. Unskilled and semi-skilled workers including farm laborers
2. Skilled workers (blue collar)
3. Clerical workers (white collar)
4. Managerial occupations, lesser professionals
5. Professionals, executives, proprietors of large concerns.

The educational scale.—This simple scale was selected to reflect the standard structure of educational levels among the parents of students who participated in the study. The scale was divided into four levels.
1. Elementary school
2. High school
3. Some college (no degree)
4. College/professional training.
The frequencies and percentages of the responses to the questionnaire items concerning the preceding and other selected variables on which data were collected are presented in Table XXV. In general, the following observations may be noted.

(1) The demographic characteristics reflect predominantly middle-class, middle-income families as would be expected for students of the neighborhood school selected for the study.

(2) A high percentage of students (78%) indicated that they had used the library at their previous school in the preceding year, and most students reported charging only one or two books.

(3) Nearly half of the students indicated that they had occasionally gone to the public library, while summer use was reported somewhat more "often." Over half the subjects indicated they would have to be driven to the public library.

(4) Most of the subjects (93%) indicated that their parents read to them when they were younger, but 61 per cent indicated that their parents no longer read aloud to them.

(5) A high percentage of parents were reported to encourage reading, with "always" being indicated by 64 per cent of the students.

(6) Students reported that they devoted much less time to leisure reading than to television viewing.
### TABLE XXV

**DEMOGRAPHIC VARIABLE FREQUENCIES**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father's Education</td>
<td>1. Elementary School</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>2. High School</td>
<td>37</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>3. Some College</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>4. College</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Father's Occupation</td>
<td>0. Not Employed</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>1. Semi-Skilled</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>2. Skilled</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>3. Clerical</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>4. Managerial</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>5. Professional</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Mother's Occupation</td>
<td>0. Housewife</td>
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<td></td>
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<td>39</td>
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<tr>
<td></td>
<td>2</td>
<td>35</td>
<td>49</td>
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<td>4</td>
<td>6</td>
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<tr>
<td></td>
<td>4</td>
<td>1</td>
<td>1</td>
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<td>5 or more</td>
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<td>32</td>
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<tr>
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<td>2. Sometimes</td>
<td>35</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>3. Often</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
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<td>4</td>
<td>8</td>
</tr>
<tr>
<td></td>
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<td>28</td>
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<td>2</td>
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<td>32</td>
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<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>5 or more</td>
<td>4</td>
<td>8</td>
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<td>Frequency</td>
<td>Per cent</td>
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<td></td>
<td>3. Often</td>
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<td>3</td>
<td>11</td>
<td>22</td>
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<tr>
<td></td>
<td>4</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>5 or more</td>
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<td>10</td>
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<td>2. Bike Distance</td>
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<td>3. Car</td>
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<td></td>
<td>2. Sometimes</td>
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<td>33</td>
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<td>3. Often</td>
<td>43</td>
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<td></td>
<td>3. Often</td>
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## Table XXV Continued

### Demographic Variable Frequencies

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<tr>
<td></td>
<td>2. Sometimes</td>
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<td>24</td>
</tr>
<tr>
<td></td>
<td>3. Always</td>
<td>46</td>
<td>64</td>
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<td>Student Leisure Reading Per Week</td>
<td>1. Less Than Hour</td>
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<td>47</td>
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<td></td>
<td>2. 1-2 Hours</td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>3. More Than 2 Hours</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>Student TV Viewing Per Week</td>
<td>1. Less Than Hour</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>2. 1-2 Hours</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>3. More Than 2 Hours</td>
<td>52</td>
<td>72</td>
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<td>32</td>
</tr>
<tr>
<td></td>
<td>2. yes</td>
<td>49</td>
<td>68</td>
</tr>
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<td>Books</td>
<td>1. no</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>2. yes</td>
<td>64</td>
<td>89</td>
</tr>
<tr>
<td>Newspapers</td>
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<td>21</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>2. yes</td>
<td>51</td>
<td>71</td>
</tr>
<tr>
<td>Magazines</td>
<td>1. no</td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>2. yes</td>
<td>49</td>
<td>68</td>
</tr>
</tbody>
</table>
Forty-seven per cent stated that they read for less than one hour per week, while 72 per cent watched more than two hours of television per week.

(7) A high percentage of the subjects indicated that their parents read, and newspaper reading was the most frequent (89%) kind of reading.

**Eta Statistic Analysis**

"Eta" is a correlational statistic that was used in evaluating the preceding analytic variables for their possible relationship with the dependent variables of the present study. With regard to what eta and eta-squared measure, Nie, et. al. state:

> It is basically an indication of how dissimilar the means on the dependent variable are within the categories of the independent variable. When the means are identical, eta is zero. If the means are very different... eta increases towards its maximum value of one.

When eta is squared, it has an intuitive interpretation as the proportion of variance explained by the independent variable. Eta-squared is often referred to as the "correlation-ratio" (4, p. 230).

Winer also notes that eta squared can be interpreted as $r^2$ (6).

The values of eta and eta-squared as computed for the relationship of the demographic variables from the questionnaire to the pretest scores on the Gates-MacGinitie Reading Achievement Tests are presented in Table XXVI. The values of
eta and eta-squared as computed for the relationship of the demographic variables to the posttest scores on the Gates-MacGinitie Reading Achievement Tests are presented in Table XXVII. The results shown in these tables indicate very little relationship between the individual demographic variables and the pretest or posttest reading achievement scores. For example, in assessing the relationship between the Gates-MacGinitie total score on the posttest and the variable of "father's education" there is an eta of .21 and an eta-squared of only .044, which reflect a relatively low correlation.

The eta statistic was also calculated for the reading attitude scale. The values computed for the relationship of the demographic variables to the pretest scores of the "Estes Reading Attitude Scale" are shown in Table XXVIII. The values computed for the relationship of the demographic variables to the posttest scores of the "Estes Reading Attitude Scale" are presented in Table XXIX. Again the results of the calculation of the eta statistic indicate very little relationship between the individual variables and the reading attitude scores. For example, for the relationship between the Estes posttest and the variable of father's education the eta is .15 and the eta-squared is only .022.
TABLE XXVI
RELATIONSHIP OF DEMOGRAPHIC VARIABLES TO DEPENDENT VARIABLE PRETEST "GRADE EQUIVALENT" SCORES ON GATES-MACGINITE READING TESTS ETA AND ETA-SQUARED

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<th>Comprehension</th>
<th>Total</th>
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<td>Eta</td>
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<td>.19 (.036)</td>
<td>.17</td>
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<tr>
<td>Father's Occupation</td>
<td>.21 (.044)</td>
<td>.21 (.044)</td>
<td>.17</td>
</tr>
<tr>
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<td>.17 (.029)</td>
<td>.20 (.040)</td>
<td>.20</td>
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<tr>
<td>Residence</td>
<td>.10 (.01)</td>
<td>.23 (.053)</td>
<td>.19</td>
</tr>
<tr>
<td>Previous School</td>
<td>.16 (.026)</td>
<td>.18 (.032)</td>
<td>.20</td>
</tr>
<tr>
<td>Prior Library Use</td>
<td>.19 (.036)</td>
<td>.17 (.029)</td>
<td>.20</td>
</tr>
<tr>
<td>No. of Books</td>
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<td>.25 (.063)</td>
<td>.22</td>
</tr>
<tr>
<td>Public Library Use</td>
<td>.18 (.032)</td>
<td>.06 (.004)</td>
<td>.10</td>
</tr>
<tr>
<td>Public Charging</td>
<td>.21 (.044)</td>
<td>.31 (.100)</td>
<td>.27</td>
</tr>
<tr>
<td>Public Library Summer Use</td>
<td>.26 (.068)</td>
<td>.17 (.029)</td>
<td>.20</td>
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<tr>
<td>Summer Charging</td>
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<td>.27 (.073)</td>
<td>.26</td>
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<td>.15 (.023)</td>
<td>.11 (.012)</td>
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<td>Parents Read To</td>
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<td>.03 (.001)</td>
<td>.04</td>
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<td>Parents Read Now</td>
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<td>.28 (.078)</td>
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<td>Parents Encourage</td>
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<td>.16 (.026)</td>
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<tr>
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<tr>
<td>TV Viewing</td>
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<td>.20 (.040)</td>
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### TABLE XXVIII

RELATIONSHIP OF DEMOGRAPHIC VARIABLES TO DEPENDENT VARIABLE PRETEST SCORES ON ESTES READING ATTITUDE SCALE

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<td>(.012)</td>
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<td>(.176)</td>
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<td>Books (Parents)</td>
<td>.14</td>
<td>(.02)</td>
</tr>
<tr>
<td>Magazines (Parents)</td>
<td>.04</td>
<td>(.001)</td>
</tr>
<tr>
<td>Newspapers (Parents)</td>
<td>.17</td>
<td>(.029)</td>
</tr>
</tbody>
</table>
Regression Analysis

Multiple regression procedures were also employed to assess the relationship among the demographic variables and the posttest Gates-MacGinitie Reading Tests and the "Estes Reading Attitude Scale". The "backward elimination" method was used as provided by the Statistical Package for the Social Sciences (3). This method initially enters all variables simultaneously into the regression equation and removes the variables that do not account for a significant portion of the variance. The initial analysis is performed using all the variables. The $t$ statistic is calculated and the regression coefficient with the minimum $t$ value (the least significant coefficient) is deleted. The remaining variables produce an equation with one less coefficient. It is a one-at-a-time elimination or "step-down" procedure. The final equation, therefore, contains only those variables that account for a significant amount of the variance.

The results of these analyses are summarized in Tables XXX, XXXI, XXXII and XXXIII. With regard to the vocabulary scores on the Gates-MacGinitie Reading Tests, the following variables remained in the final regression equation:
(a) parent's reading of the newspaper, (b) mother's occupation, (c) previous school the child had attended, (d) residence, (e) leisure reading of the child, (f) father's occupation, and (g) summer book charging. The $r^2$ value for the equation was .64, indicating that sixty-four per cent of
the variance was accounted for by these demographic variables as shown in Table XXX.

**TABLE XXX**

**SUMMARY OF MULTIPLE REGRESSION WITH VOCABULARY SCORES AS DEPENDENT VARIABLE**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>Beta</th>
<th>Sig.T*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent's Reading of Newspaper</td>
<td>-.83460</td>
<td>-.23702</td>
<td>.0401</td>
</tr>
<tr>
<td>Mother's Occupation</td>
<td>-.40122</td>
<td>-.49579</td>
<td>.0001</td>
</tr>
<tr>
<td>Previous School Attended</td>
<td>-.92775</td>
<td>-.29541</td>
<td>.0133</td>
</tr>
<tr>
<td>Residence</td>
<td>.47408</td>
<td>.28665</td>
<td>.0208</td>
</tr>
<tr>
<td>Leisure Reading</td>
<td>.78123</td>
<td>.51742</td>
<td>.0002</td>
</tr>
<tr>
<td>Father's Occupation</td>
<td>.52664</td>
<td>.46362</td>
<td>.0009</td>
</tr>
<tr>
<td>Summer Book Charging</td>
<td>-.38779</td>
<td>-.39605</td>
<td>.0011</td>
</tr>
</tbody>
</table>

*Sig. at .05 level

In the second regression equation, the comprehension score on the Gates-MacGinitie Reading Tests was the dependent variable. All the variables that were selected in the equation for the vocabulary posttest were included in the equation for the comprehension posttest scores with the exception of "previous school attended" and "residence." Additionally, however, "father's education," "parent's reading to child at present time," and "public library book charging" were also found to be significant. The $r^2$
value was .60, indicating that sixty per cent of the variance was accounted for by these demographic variables as shown in Table XXXI.

TABLE XXXI

SUMMARY OF MULTIPLE REGRESSION WITH COMPREHENSION SCORES AS DEPENDENT VARIABLE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>Beta</th>
<th>Sig.T*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent's Reading of Newspaper</td>
<td>-1.63809</td>
<td>-.34383</td>
<td>.0078</td>
</tr>
<tr>
<td>Mother's Occupation</td>
<td>-.22503</td>
<td>-.20552</td>
<td>.0317</td>
</tr>
<tr>
<td>Father's Education</td>
<td>-.92003</td>
<td>-.49431</td>
<td>.0022</td>
</tr>
<tr>
<td>Parent's Reading Now</td>
<td>.75074</td>
<td>.26233</td>
<td>.0346</td>
</tr>
<tr>
<td>Public Library Charging</td>
<td>.66402</td>
<td>.50710</td>
<td>.0055</td>
</tr>
<tr>
<td>Leisure Reading</td>
<td>.86248</td>
<td>.42253</td>
<td>.004</td>
</tr>
<tr>
<td>Father's Occupation</td>
<td>1.14958</td>
<td>.74798</td>
<td>.000</td>
</tr>
<tr>
<td>Summer Book Charging</td>
<td>-.88546</td>
<td>-.66838</td>
<td>.0002</td>
</tr>
</tbody>
</table>

*Sig. at .05 level

The third regression equation used the total score on the Gates-MacGinitie Reading Tests as the dependent variable. The significant variables in the equation were (a) parent's reading of newspaper, (b) mother's occupation, (c) previous school child had attended, (d) leisure reading of the child, (e) father's occupation, and (f) summer book charging. The \( r^2 \) was equal to .58 indicating that fifty-eight per cent of
the variance was accounted for by these demographic variables as shown in Table XXXII.

**TABLE XXXII**

**SUMMARY OF MULTIPLE REGRESSION WITH TOTAL SCORES AS DEPENDENT VARIABLE**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>Beta</th>
<th>Sig.T*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent's Reading of Newspaper</td>
<td>-1.41251</td>
<td>-.35817</td>
<td>.0047</td>
</tr>
<tr>
<td>Mother's Occupation</td>
<td>-.38485</td>
<td>-.42462</td>
<td>.0013</td>
</tr>
<tr>
<td>Previous School Attended</td>
<td>-.94831</td>
<td>-.26962</td>
<td>.0319</td>
</tr>
<tr>
<td>Leisure Reading</td>
<td>.99161</td>
<td>.58688</td>
<td>.0001</td>
</tr>
<tr>
<td>Father's Occupation</td>
<td>.69849</td>
<td>.54905</td>
<td>.0001</td>
</tr>
<tr>
<td>Summer Book Charging</td>
<td>-.38963</td>
<td>-.35531</td>
<td>.0049</td>
</tr>
</tbody>
</table>

*Sig. at .05 level

In reviewing these results it may be noted that five demographic variables consistently accounted for significant portions of the variance in the scores on the Gates-MacGinitie Reading Tests. These include (a) parent's reading of newspaper, (b) mother's occupation, (c) father's occupation, (d) leisure reading, and (e) summer book charging.

In the fourth regression equation the posttest score on the "Estes Reading Attitude Scale" was the dependent variable. The variables that remained in the final equation
included (a) parent's reading of the newspaper, (b) television viewing, (c) public library book charging, and (d) summer book charging. The $r^2$ value was equal to .45, indicating that forty-five per cent of the variance was accounted for by these variables as shown in Table XXXIII.

### TABLE XXXIII

**SUMMARY OF MULTIPLE REGRESSION WITH ATTITUDE SCORES AS DEPENDENT VARIABLE**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>Beta</th>
<th>Sig. T*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent's Reading of Newspaper</td>
<td>10.95399</td>
<td>.36990</td>
<td>.0069</td>
</tr>
<tr>
<td>TV Viewing</td>
<td>-6.43064</td>
<td>-.38498</td>
<td>.0044</td>
</tr>
<tr>
<td>Public Library Charging</td>
<td>3.35388</td>
<td>.41208</td>
<td>.0067</td>
</tr>
<tr>
<td>Summer Book Charging</td>
<td>6.27746</td>
<td>.34740</td>
<td>.0179</td>
</tr>
</tbody>
</table>

*Sig. at .05 level

While significant portions of the variance were found to be accounted for in regressing the dependent variables on this set of demographic variables, it should also be noted that some 36 to 55 per cent of the variance was left unexplained and that yet other variables would be needed to account for more of the variance. In the present study, however, no attempt was made to extend the above regression analyses nor to utilize the variables considered for statistical control. Rather, with regard to control,
reliance was placed primarily on the experimental design employed. In particular, two aspects of the study may be remarked in this regard.

1. Classrooms were randomly assigned to the treatments, and students were previously assigned to the classrooms in a virtually random manner.

2. The control provided by the design was strengthened through the use of the analysis of covariance.

Summary

The data collected in this study concerning the relationship between a regular librarian-centered reading guidance program and the reading attitudes and reading achievement of fifth grade elementary school students have been presented and analyzed in this chapter. The hypotheses formulated for the study have been reviewed and assessed in light of the findings. Related questions concerning background demographic variables have also been considered and evaluated for their predictive potential in multiple regression equations.
CHAPTER BIBLIOGRAPHY


CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

A review of the purpose and approach of the study, a summary of the findings, and conclusions are contained in this chapter. Implications and recommendations for further research are also included.

The purpose of this study was to investigate the relationships between a regular sequential librarian-centered reading guidance program and the reading attitudes, reading achievement, and reading behavior of elementary school students. The possible relationship between the reading attitudes of students and their reading achievement was also considered. In addition, selected background variables were analyzed for their possible relationship with the dependent variables of interest.

The main research hypotheses concerning reading attitudes and achievement were investigated using a quasi-experimental pretest-posttest control group design with randomly assigned intact classes of students. The analysis of covariance was the principal statistical technique employed in the evaluation of the main hypotheses concerning reading attitudes and reading achievement. The t-test for two independent samples was used to evaluate the hypothesis.
concerning reading behavior, and the Pearson product-moment correlation coefficient was used to evaluate the hypothesis concerning the relationship between reading attitudes and reading achievement. The relationships of background variables to reading achievement and reading attitude were tested by the use of the "eta" statistic and multiple regression analysis.

Data for this study were gathered during the spring term of 1984 from four intact classes of fifth grade students at a northwest Louisiana elementary school. The classes were randomly assigned so as to form an experimental group of two classes (totaling 41 students) and a control group of two classes (totaling 32 students). Each child in each class was administered the "Estes Reading Attitude Scale" and the Gates-MacGinitie Reading Tests in January, 1984, and again in May, 1984, at the conclusion of the reading guidance program. The treatment consisted of a weekly sequential library program of reading guidance and instruction conducted by the researcher. For background information, school records were consulted and a questionnaire was also administered to the students midway through the spring term in order to collect data concerning socioeconomic status, race, sex, age, previous library use, public library use, parental involvement in reading, time spent in leisure reading, and time spent in television viewing.
Findings of the Study

The present study addressed four principal hypotheses and a number of additional research questions. The findings of the study are summarized below with regard to each hypothesis and each question.

Hypothesis I

Hypothesis I stated that fifth grade elementary school students who attend a regular librarian-centered reading guidance program will score significantly higher on reading achievement tests than those who do not attend such a program. Hypothesis I was tested with a one way analysis of covariance. The pretest scores on the Gates-MacGinitie Reading Tests were used as the covariates.

Three analyses of covariance, relating to Hypothesis I, indicated significant treatment effects. The first analysis of covariance indicated a significant treatment effect on the posttest vocabulary scores of the Gates-MacGinitie Reading Tests. The experimental group scored higher than the control group on this dependent variable, as reflected by an F value of 11.36 with a probability level of .0006. The second analysis of covariance indicated a significant treatment effect on the posttest comprehension scores of the Gates-MacGinitie Reading Tests. The experimental group scored higher than the control group on this dependent variable, as reflected by an F value of 3.59 with a
probability level of .0312. The third analysis of covariance indicated a significant treatment effect on the posttest combined or total scores of the Gates-MacGinitie Reading Tests. The experimental group scored higher than the control group on this dependent variable, as reflected by an F value of 5.61 with a probability level of .01. In each case the experimental or treatment group thus scored higher on the dependent variable. Since these higher scores are interpreted as reflecting a higher reading achievement in terms of vocabulary and comprehension, the results are regarded as supporting Hypothesis I.

Hypothesis II

Hypothesis II stated that fifth grade elementary school students who attend a regular librarian-centered reading guidance program will have a significantly better or more favorable attitude toward reading than those who do not attend such a program. Hypothesis II was tested with a one-way analysis of covariance. The pretest scores on the "Estes Reading Attitude Scale" were used as the covariate. This analysis of covariance indicated a significant treatment effect on the posttest "Estes Reading Attitude Scale" scores. The experimental group scored higher than the control group on this dependent variable, as reflected by an F value of 11.10 with a probability level of .0007. Since the higher scores of the experimental group are interpreted as
reflecting a more favorable attitude toward reading, the results are regarded as supporting Hypothesis II.

**Hypothesis III**

Hypothesis III stated that fifth grade elementary school students who attend a regular librarian-centered reading guidance program will charge more books from the school library, as shown by circulation records, than will those students who do not attend such a program. Hypothesis III was tested with the $t$ test for two independent samples. The $t$ test was used to compare the mean number of books charged out by the experimental group students and by the control group students. The results of the $t$ test indicated that there was a significant difference between the two groups in the mean number of books circulated. A $t$ value of 4.64 was obtained with a probability level of less than .001. These results were consistent with expectations, and they are regarded as supporting Hypothesis III.

**Hypothesis IV**

Hypothesis IV stated that a positive relationship exists between the reading attitude scores of fifth grade elementary school students and their reading achievement scores. This hypothesis was tested by the use of the Pearson product-moment correlation coefficient.

The correlations between these variables at pretest were relatively weak, and only one ($r = .20$ for attitude and
comprehension) was statistically significant at the .05 level. With regard to the posttest measures, there were significant correlations at the .01 significance level between the "Estes Reading Attitude Scale" and both the comprehension scores (r=.34) and the total scores (r=.29) of the Gates-MacGinitie Reading Tests. The magnitude of the correlations was still small (and the most variance that was accounted for was 12 per cent); however, the increases in correlation were all in the predicted direction, and this pattern was deemed to be consistent with the hypothesis and the expectation that changes in reading attitude may be positively linked to changes in reading achievement.

**Question One**

Question One asked, "Does the individual teacher have an effect on the reading achievement and reading attitude scores of the students?" In considering this question, t tests were used to compare the means of the student groups with different teachers on the posttest reading achievement scores. The results indicated that there were no significant differences between the groups with different teachers on the vocabulary, comprehension, or composite scores of the Gates-MacGinitie Reading Tests. The t values obtained were .81 for vocabulary, .94 for comprehension, and .99 for the composite or total scores. In each case the probability level was more than .05.
**Question Two**

Question Two asked, "Is there a relationship between the sex of the students and their scores on reading achievement and reading attitude tests?" Forty of the students participating in the study were males, and thirty-three were females. An analysis of variance was performed to test for a relationship between the sex variable and the scores of students on the reading achievement tests or the reading attitude tests. The only significant F value was on the posttest of the "Estes Reading Attitude Scale." It was concluded, accordingly, that a relationship may exist between the sex of the student and attitude toward reading, with female students having a more favorable attitude than male students.

**Question Three**

Question Three asked, "Is there a relationship between the race of the students and their scores on reading achievement and reading attitude tests?" For this question, information was collected on the race of each student with the following results: sixty-three of the students were white, eight were black, and two were of American Indian ancestry. Because of the small size of the sample and the limited number of non-white students thus identified, no further effort was made to consider race as a variable.
Question Four asked, "Is there a relationship between certain socioeconomic factors (including place of residence, occupation of parents, and education of parents) and the scores of the students on reading achievement and reading attitude tests?" The possible relationships of these and other background variables to the reading attitude and reading achievement of students were examined by using two different statistical techniques. The eta statistic was calculated for the relationships between twenty such background variables (excluding sex and race) and the reading attitude and reading achievement scores of students. Multiple regression analysis was also employed with the same twenty variables and the reading attitude and reading achievement scores of students.

Regarding place of residence, 48 per cent of the students lived in an upper middle class neighborhood, 30 per cent lived in a middle class neighborhood, 15 per cent in a lower middle class neighborhood, and 4 per cent in a lower class neighborhood. No students lived in an upper class neighborhood. The following eta correlational values were found for the relationship between this variable and the posttest Gates-MacGinitie Reading Tests scores of students: .27 for vocabulary score, .18 for comprehension score, and .19 for the total score. For the relationship with posttest "Estes Reading Attitude Scale" scores the eta value was .28.
The multiple regression analysis yielded a statistically significant Beta coefficient only for the relationship between place of residence and vocabulary score ($B = .28665$, $p = .0208$). The other Beta coefficients (for comprehension score, total score, and reading attitude) were not significant at the .05 level.

Regarding father's occupation, 11 per cent of the fathers were classed as professional, 34 per cent as managerial, 24 per cent as clerical, 23 per cent as skilled, 6 per cent as semi-skilled, and 3 per cent as unemployed. The following eta correlation values were found for the relationship between this variable and student posttest reading achievement: .36 for vocabulary, .18 for comprehension, and .28 for total. For the relationship with posttest reading attitudes scores, the eta value was .23. The multiple regression analysis yielded statistically significant Beta coefficients for vocabulary score ($B = .46362$, $p = .0009$), comprehension score ($B = .74798$, $p = .000+$), and total score ($B = .54905$, $p = .0001$), but the coefficient for reading attitude was not significant at the .05 level.

Regarding mother's occupation, 41 per cent of the mothers were classed as housewife, 38 per cent as skilled, 11 per cent as semi-skilled, and 10 per cent as clerical. None were identified as managerial or professional. The following eta values were found for the relationship between this
variable and student posttest reading achievement scores: (.18 for vocabulary, .21 for comprehension, and .16 for total). For the relationship with posttest reading attitude scores, the eta value was .16. The multiple regression analysis yielded statistically significant Beta coefficients for vocabulary score \( (B = -0.49579, p = .0001) \), comprehension score \( (B = -0.20552, p = .0317) \), and total score \( (B = -0.42462, p = .0013) \). It may be noted that these Beta coefficients are negative, indicating an inverse relationship. The Beta coefficient for reading attitude was not significant at the .05 level.

Regarding father's education, 18 per cent of the fathers completed college, another 13 per cent attended college, 52 per cent completed only high school, and 7 per cent completed only elementary school. The following eta values were found for the relationship between this variable and student posttest reading achievement scores: .33 for vocabulary, .11 for comprehension, and .21 for total. For the relationship with posttest reading attitude scores, the eta value was .15. The multiple regression analysis yielded a statistically significant Beta coefficient only for comprehension scores \( (B = -0.49431, p = .0022) \) and this was negative, counter to customary expectations. The Beta coefficients for vocabulary scores, total scores, and reading attitude were not significant at the .05 level.
**Question Five**

Question Five asked, "Is there a relationship between the previous schools attended by students and their scores on the reading attitude and reading achievement tests?"

Seventy-nine per cent of the students had previously attended local schools within the parish, while 21 per cent had attended schools outside the parish. The following eta values were found for the relationship between this variable and student posttest reading achievement scores: .12 for vocabulary, .06 for comprehension, and .11 for total. For the relationship with posttest reading attitude scores, the eta value was .15. The multiple regression analysis yielded statistically significant Beta coefficients for vocabulary score (B = -.29541, p = .0133) and total score (B = -.26962, p = .0319). The Beta coefficients for comprehension score and reading attitude were not significant at the .05 level.

**Question Six**

Question Six asked, "Is there a relationship between previous library use and public library use on the part of the students and their scores on reading attitude and reading achievement tests?" This formulation subsumes seven component relationships which are separately considered in the following paragraphs.

Regarding frequency of visits to the library at the previous school attended, 78 per cent of the students
reported "every week," 19 per cent reported "at recess and lunch," and 3 per cent reported "never." The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .13 for vocabulary score, .18 for comprehension score, and .12 for total score. For the relationship with the posttest reading attitude scores, the eta value was .12. However, the multiple regression analysis yielded no statistically significant Beta coefficient for this variable at the .05 level with respect to either reading achievement or reading attitude.

Regarding the number of books charged out per week by students at the library of the school previously attended, 39 per cent of the students reported 1 book per week, 49 per cent reported 2 books per week, 6 per cent reported 3 books per week, 4 per cent reported 4 or more books per week, and 3 per cent reported none per week. The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .24 for vocabulary, .25 for comprehension, and .24 for total score. For the relationship with the posttest reading attitude scores, the eta value was .13. However, the multiple regression analysis yielded no statistically significant Beta coefficients for this variable at the .05 level with respect to either reading achievement or reading attitude.
Regarding the frequency of visits to the public library or bookmobile, 19 per cent of the students reported "often," 49 per cent reported "sometimes," and 32 per cent reported "never." The following eta values were found for the relationship between this variable and the posttest reading achievement scores: .19 for vocabulary score, .12 for comprehension score, and .13 for total score. For the relationship with the posttest reading attitude scores, the eta value was .30. However, the multiple regression analysis yielded no statistically significant Beta coefficients for this variable at the .05 level with respect to either reading achievement or reading attitude.

Regarding the number of books charged out per week by students from the public library or bookmobile, 8 per cent of the students reported "none," 28 per cent reported 1 per week, 32 per cent reported 2 per week, 18 per cent reported 3 per week, and 14 per cent reported 4 or more per week. The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .33 for vocabulary score, .26 for comprehension score, and .27 for total score. For the relationship with the posttest reading attitude scores, the eta value was .47. The multiple regression analysis yielded statistically significant Beta coefficients for comprehension (B = .50710, p = .0055) and for reading attitude (B = .41208, p = .0067).
The Beta coefficients for vocabulary score and total score were not statistically significant at the .05 level.

Regarding the frequency of visits to the public library in the summer, 25 per cent of the students reported "often," 40 per cent reported "sometimes," and 35 per cent reported "never." The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .19 for vocabulary score, .12 for comprehension score, and .13 for total score. For the relationship with the posttest reading attitude scores, the eta value was .25. However, the multiple regression analysis yielded no statistically significant Beta coefficients for this variable at the .05 level with respect to either reading achievement or reading attitude.

Regarding the number of books checked out per week by students from the public library in summer, 6 per cent of the students reported "none," 14 per cent reported 1 per week, 35 per cent reported 2 per week, 22 per cent reported 3 per week, and 22 per cent reported 4 or more per week. The following eta values were found for the relationship between this variable and the posttest reading achievement test scores of students: .37 for vocabulary score, .23 for comprehension score, and .32 for total score. For the relationship with the posttest reading attitude scores, the eta value was .41. The multiple regression analysis yielded statistically significant Beta coefficients for this variable for
vocabulary \((B = -0.39605, p = 0.0011)\), comprehension \((B = -0.66838, p = 0.0002)\), total score \((B = -0.35531, p = 0.0049)\), and reading attitude \((B = 0.34740, p = 0.0179)\).

Regarding the proximity of the public library to the student's home, 24 per cent of the students reported "I could walk;" 24 per cent reported "I could ride my bike;" and 52 per cent reported "Someone would have to drive me." The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .07 for vocabulary score, .15 for comprehension score, and .09 for total score. For the relationship with the posttest reading attitude scores, the eta value was .08. Consistent with these low correlational values, the multiple regression analysis yielded no statistically significant Beta coefficients for this variable at the .05 level with respect to either reading achievement or reading attitude.

**Question Seven**

Question Seven asked, "Is there a relationship between parental encouragement of reading and students' scores on reading attitude and reading achievement tests?" This formulation subsumes three component relationships which are separately considered in the following paragraphs.

Regarding the frequency with which parents read aloud to them when they were younger, 60 per cent of the students reported "often," 33 per cent reported "sometimes," and
7 per cent reported "never." The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .06 for vocabulary score, .08 for comprehension score, and .08 for total score. For the relationship with the posttest reading attitude scores, the eta value was .14. Consistent with these low correlational values, the multiple regression analysis yielded no statistically significant Beta coefficients for this variable at the .05 level with respect to either reading achievement or reading attitude.

Regarding the frequency with which parents read aloud to them now, 3 per cent of the students reported "often," 36 per cent reported "sometimes," and 44 per cent reported "never." The following eta values were found for the relationship between this variable and the reading achievement scores of students: .39 for vocabulary score, .30 for comprehension score, and .38 for total score. For the relationship with the posttest reading attitude scores, the eta value was .08. The multiple regression analysis yielded a statistically significant Beta coefficient for this variable only for comprehension score (B = .26233, p = .0346). The Beta coefficients for vocabulary score, total score, and reading attitude were not significant at the .05 level.

Regarding the frequency with which their parents encouraged them to read, 64 per cent of the students reported
"yes, all the time," 24 per cent reported "sometimes," and 13 per cent reported "never." The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .32 for vocabulary score, .11 for comprehension score, and .22 for total score. For the relationship with the posttest reading attitude scores, the eta value was .11. However, the multiple regression analysis yielded no statistically significant Beta coefficients for this variable at the .05 level with respect to either reading achievement or reading attitude.

Question Eight

Question Eight asked, "Is there a relationship between the reading habits of the students' parents and the scores of the students on reading achievement and reading attitude tests?" This formulation subsumes three component relationships which are separately considered in the following paragraphs.

Regarding whether their parents read books, 68 per cent of the students reported "yes," and 32 per cent reported "no." The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .08 for vocabulary score, .07 for comprehension score, and .02 for total score. For the relationship with the posttest reading attitude scores,
the eta value was .03. Consistent with these low correlational values, the multiple regression analysis yielded no statistically significant Beta coefficients for this variable at the .05 level with respect to either reading achievement or reading attitude.

Regarding whether their parents read magazines, 71 per cent of the students reported "yes," and 29 per cent reported "no." The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: none for vocabulary score, .07 for comprehension score, and .07 for total score. For the relationship with the posttest reading attitude score, the eta value was .04. Consistent with these low correlational values, the multiple regression analysis yielded no statistically significant Beta coefficients for this variable at the .05 level with respect to either reading achievement or reading attitude.

Regarding whether their parents read newspapers, 89 per cent of the students reported "yes," and 11 per cent reported "no." The following eta values were found for the relationship between this variable and the reading achievement scores of students: .11 for vocabulary score, .19 for comprehension score, and .20 for total score. For the relationship with posttest reading attitude scores, the eta value was .17. The multiple regression analysis yielded statistically significant Beta coefficients for this
variable with respect to vocabulary ($B = -0.23702$, $p = 0.0401$), comprehension ($B = -0.34383$, $p = 0.0078$), total score ($B = -0.35817$, $p = 0.0047$), and reading attitude ($B = 0.36990$, $p = 0.0069$). It may be noted that the Beta coefficients for reading achievement scores were negative, indicating an inverse relationship.

**Question Nine**

Question Nine asked, "Is there a relationship between the amount of time the students spend in leisure reading and their scores on reading achievement and reading attitude tests?" Of the students participating in the study, 47 per cent reported spending less than one hour per week in "reading for enjoyment," 32 per cent reported 1 to 2 hours per week, and 21 per cent reported more than two hours per week. The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .10 for vocabulary score, .24 for comprehension score, and .20 for total score. For the relationship with posttest reading attitude scores, the eta value was .36. The multiple regression analysis yielded statistically significant Beta coefficients for this variable with respect to vocabulary ($B = 0.51742$, $p = 0.0002$), comprehension ($B = 0.42253$, $p = 0.004$), and total score ($B = 0.58688$, $p = 0.0001$). The Beta coefficient for reading attitude was not statistically significant at the .05 level.
Question Ten

Question Ten asked, "Is there a relationship between the amount of time the students spend viewing television and their scores on reading achievement and reading attitude tests?" A majority of the students indicated a high level of television viewing. Seventy-two per cent reported watching television more than two hours per week, 18 per cent reported watching one to two hours per week, and 10 per cent reported watching less than a hour per week. The following eta values were found for the relationship between this variable and the posttest reading achievement scores of students: .07 for vocabulary score, .18 for comprehension score, and .14 for total score. For the relationship with posttest reading attitude scores, the eta values was .42. The multiple regression analysis yielded a statistically significant Beta coefficient for this variable with respect to reading attitude scores (B = -.38498, p = .0044), indicating an inverse relationship. The Beta coefficients for the reading achievement factors (vocabulary, comprehension, and total scores) were not statistically significant at the .05 level.

Conclusions

The hypotheses and other research questions which guided this study have centered upon the relationships between a regular sequential librarian-centered reading guidance
program and the reading achievement, reading attitude, and reading behavior of fifth grade elementary school students. While the results can not be formally generalized beyond the particular school and the students involved, the study was conducted in a setting and with subjects considered to be typical of many elementary schools elsewhere. It is believed accordingly that a librarian-centered reading guidance program can make a difference in terms of the reading achievement and reading attitude of elementary school children.

Specifically, the following conclusions would appear to be supported with regard to the four main hypotheses addressed by the study.

1. The experimental treatment was positively related to differences in the reading achievement scores of the students participating in the study. The students who attended a regular librarian-centered reading guidance program scored significantly higher (p < .05) on all sections of the Gates-MacGinitie Reading Tests than those students who did not attend the program.

2. The experimental treatment was positively related to differences in the reading attitude scores of the students participating in the study. The students who attended a regular librarian-centered reading guidance program scored significantly higher (p < .05) on the "Estes Reading Attitude Scale" than those students who did not attend the program.
3. The experimental treatment was positively related to differences in the number of books charged from the school library by the students participating in the study. The students who attended a regular librarian-centered reading guidance program charged significantly more books (p .05) as evidenced by library circulation records than those who did not attend the program.

4. The reading attitude scores of students participating in the study were positively associated with their reading achievement scores. The correlations between these variables increased from pretest to posttest, and the posttest correlations were statistically significant for attitude and comprehension scores (r = .34, p = .002) and for attitude and total scores (r = .29, p = .007). The posttest correlation for attitude and vocabulary scores failed to reach statistical significance (r = .16, p = .080) but still reflected an increase consistent with the expected direction.

The following conclusions would appear to be supported with regard to the other research questions addressed by the study.

1. The differences between students on their reading achievement scores and their reading attitude scores were not associated with differences between the teachers of the experimental and control groups.
2. The sex of the students was not associated with the differences on their reading achievement scores. Sex was associated to a limited degree with the differences of students on their reading attitude scores, with girls scoring slightly higher than boys.

3. Eta statistic correlational values ranging from at least .10 to .38 were found for the relationships between posttest student reading achievement scores (either/or vocabulary, comprehension, and total) and other selected background variables (including father's education, father's occupation, mother's occupation, place of residence, prior school attended by student, student's prior school library use and book borrowing, student's proximity to public library, student's regular and summer public library use and book borrowing, parent's current reading to student and encouragement of reading, parental reading of newspapers, and student's leisure reading and television viewing, but excluding parental reading to student when younger and parental reading of books and magazines). However, multiple regression analyses identified only seven of these variables as significantly related (p<.05) to student vocabulary scores (with R^2 = .64), only eight as significantly related (p<.05) to student comprehension scores (with R^2 = .60), and only six as significantly related (p<.05) to student total reading achievement scores.
(with $R^2 = .58$), as summarized in Table XXXIV (with significant Beta coefficients shown for each variable).

In summary, ten different background variables were thus identified as being significantly related statistically ($p < .05$) to the posttest reading achievement scores of students. It may also be noted that four of these variables (father's education, mother's occupation, students' public library borrowing in summer, and parental newspaper reading) had negative Beta coefficients, indicating inverse relationships with the dependent variable which might be viewed as counter to customary expectation.

4. Eta statistic correlational values ranging from at least .10 to .47 were similarly found for the relationships between posttest student reading attitude scores and other selected background variables (including father's education, father's occupation, mother's occupation, place of residence, prior school attended by student, student's prior school library use and book borrowing, student's regular and summer public library use and book borrowing, parent's encouragement of reading and parental reading to student when younger, parental reading of books and newspapers, and student's leisure reading and television viewing, but excluding student's proximity to public library, parental current reading aloud to students, and parental reading of newspapers). However, multiple regression analysis identified only four of these variables as significantly
TABLE XXXIV
SUMMARY OF MULTIPLE REGRESSION ANALYSES
FOR THE GATES-MACGINITIE
READING TESTS

<table>
<thead>
<tr>
<th>Background Variables</th>
<th>Significant Beta for Vocabulary</th>
<th>Significant Beta for Comprehension</th>
<th>Significant Beta for Total</th>
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<tbody>
<tr>
<td>Student Leisure Reading</td>
<td>.51742</td>
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<td>.58688</td>
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<tr>
<td>Previous School Attended</td>
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<td>Student Public Library Borrowing (Regular)</td>
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<td>.50710</td>
<td></td>
</tr>
<tr>
<td>Student Public Library Borrowing (Summer)</td>
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<td>-.66838</td>
<td>-.35531</td>
</tr>
<tr>
<td>Place of Residence</td>
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<td></td>
</tr>
<tr>
<td>Father's Education</td>
<td></td>
<td>-.49431</td>
<td></td>
</tr>
<tr>
<td>Father's Occupation</td>
<td>.46362</td>
<td>.74798</td>
<td>.54905</td>
</tr>
<tr>
<td>Mother's Occupation</td>
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<td>-.42462</td>
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<tr>
<td>Parent's Reading of Newspapers</td>
<td>-.23702</td>
<td>-.34383</td>
<td>-.35817</td>
</tr>
<tr>
<td>Parent's Current Reading to Student</td>
<td></td>
<td>.26233</td>
<td>(R² = .64)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(R² = .60)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(R² = .58)</td>
</tr>
</tbody>
</table>
related (p<.05) to student reading attitude scores (with
$R^2 = .45$) as summarized in Table XXXV.

TABLE XXXV

SUMMARY OF MULTIPLE REGRESSION ANALYSES
FOR THE ESTES READING ATTITUDE SCALE

<table>
<thead>
<tr>
<th>Background Variables</th>
<th>Significant Beta Coefficient</th>
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</thead>
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<tr>
<td>Student Television Viewing</td>
<td>-.38498</td>
</tr>
<tr>
<td>Student Public Library Book Borrowing (Regular)</td>
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</tr>
<tr>
<td>Student Public Library Use (Summer)</td>
<td>.34740</td>
</tr>
<tr>
<td>Parent's Reading of Newspapers</td>
<td>.36990</td>
</tr>
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</table>

(R$^2 = .45$)

Note: As previously indicated, sex of student was also found to be related to reading attitude in a separate analysis of variance. Sex of student was not included in the above regression analysis.

It may be observed, finally, that only one of these variables (student television viewing) associated with student reading attitude differed from the ten variables previously identified as being associated with student reading achievement. The negative coefficient for student television viewing also indicated an inverse relationship with the dependent variable which might be viewed as agreeing with customary expectation (the more television viewing, the less favorable the attitude toward reading).
Recommendations

In pursuing the present study a number of needs were identified for further investigation. The following recommendations are accordingly made for further research.

1. Replications of the present study should be undertaken in different settings and preferably with larger samples of elementary school students at fifth grade and other levels.

2. Similar studies over a longer time period, such as an entire school term, would also be desirable to assess the duration of experimental treatment effects.

3. The relationships between background variables and the reading attitude and reading achievement of students should be examined further so as to identify possible qualifying conditions which should be specified for the interpretation and strengthening of program effects.

4. Alternative testing measures should be used for the variables in question to strengthen the validity of interpretations and to extend the range of possible applications.

5. Causal modeling of the main variables and background variables should be attempted (using path analysis) in order to clarify relations and to provide a framework for assessing additional variables, such as the achievement drive of students.
The present study was undertaken as a limited effort to evaluate the effectiveness of a librarian-centered reading guidance program at the elementary level. The findings suggest that such a program can make a difference in terms of reading achievement and attitude toward reading and that further investigations in this area are warranted in view of the intrinsic importance of the variables involved.
APPENDICES
Appendix A

Letter to Parents for Permission

January 9, 1984

To: The Parents of Curtis Elementary School Fifth Grade Pupils

From: Mattie J. Mosley, Assistant Professor of Library Science, LSU-S

I will be conducting a study at Curtis Elementary School from January through May, 1984. It is a project concerning the relationship between the reading achievement of children and their knowledge and use of the library/resource center.

As part of the study fifth grade children at Curtis will be given reading achievement and reading attitude tests in January, 1984 and again in May, 1984.

If your child's participation is acceptable to you, please sign below:

______________________________
Signature of Parent or Guardian

If you do not wish your child to participate in this program, please sign below:

______________________________
Signature of Parent or Guardian

Please return this form to school as soon as possible. Your cooperation in this project will be very much appreciated.

Mattie J. Mosley
Appendix B
Letter to Parents

May 16, 1984

To the Parents of Fifth Grade Pupils at Curtis Elementary School:

Thank you for allowing your child to participate in my doctoral dissertation study at Curtis Elementary School.

If your child was in the experimental group, I'm sure he or she told you about all the reading-related activities we had every week. All of the children have kept a record of books they have read since January, and I was pleased by the number.

I do not have the final results of my testing, but I think all of the children benefited from the extra emphasis on reading. I would also like to compliment you for having such polite, considerate children. I really enjoyed each of them, and I will miss working with them.

Please encourage your child to continue reading this summer by taking him or her to the public library. Thank you again for your cooperation.

Sincerely,

Mattie J. Mosley
Assistant Professor of Library Science

MJM/ds
Appendix C

Estes Reading Attitude Scale

A=strongly agree
B=agree
C=undecided
D=disagree
E=strongly disagree

1. Reading is for learning but not for enjoyment.
2. Money spent on books is well spent.
3. There is nothing to be gained from reading books.
4. Books are a bore.
5. Reading is a good way to spend spare time.
6. Sharing books in class is a waste of time.
7. Reading turns me on.
8. Reading is only for grade-grubbers.
9. Books aren't usually good enough to finish.
10. Reading is rewarding to me.
11. Reading becomes boring after about an hour.
12. Most books are too long and dull.
13. Free reading doesn't teach anything.
14. There should be more time for free reading during the school day.
15. There are many books which I hope to read.
16. Books should not be read except for class requirements.
17. Reading is something I can do without.

18. A certain amount of summer vacation should be set aside for reading.


20. Reading is dull.

<table>
<thead>
<tr>
<th>Items</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</thead>
<tbody>
<tr>
<td>The negative items:</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nos. 1, 3, 4, 6, 8, 9, 11, 12, 13, 16, 17, 20</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The positive items:</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Nos. 2, 5, 7, 10, 14, 15, 18, 19</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Appendix D

Pupil Report on Reading-Library Use

Name ___________________________ Date of Birth ____________
Age _______ Sex _______ Race ____________________________
Address ________________________________

Did your father finish? ___ elem. school, ___ high school, ___ college, ___ don't know.

What does your father do? (for example, truck driver, salesman, construction worker). ________________________________.

What does your mother do? (for example, housewife, nurse, teacher). ________________________________.

Do you live (check one) ____ in country ____ in town?

Do you live (check one) ____ in a house ________ in an apartment?

Do your parents (check one) ____ rent ____ own a house?

Where did you go to school before you came to Curtis?

Did you go to the library at your other school ________
every week on a regular basis ________ at recess and
at lunch ________ never?

How many books did you check out? ________ a week
approximately.

Do you go to the public library or visit the bookmobile?
(check one) ____ often ____ sometimes ____ never.

How many books a week do you check out if you go?
_______ approximately.
Do you go to the public library in the summer?
____ often _____ sometimes _____ never.

How many books a week do you check out if you go? ______

How close is the public library to where you live?
____ I could walk, _______ I could ride my bike,
____ Someone would have to drive me.

Do your parents read? (check as many as apply) _____ books,
_____ magazines, _____ newspaper, _____ nothing.

Did your parents read to you when you were younger?
____ often _______ sometimes ________ never.

Do your parents read to you now? _______ often
_______ sometimes ________ never.

Do your parents encourage you to read? ______ Yes, all the
time, _______ sometimes ________ never.

How much time do you spend reading for enjoyment per week?
_____ less than 1 hour, ______ 1-2 hours _____ more
than 2 hours.

How much time do you spend watching TV? _____ less than 1
hour, _____ 1-2 hours, ______ more than two hours.

What is the best book you have ever read?

________________________________________________________________________
Appendix E

Reader-Meter

<table>
<thead>
<tr>
<th>DATE</th>
<th>AUTHOR</th>
<th>TITLE OF BOOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td></td>
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<tr>
<td>(3)</td>
<td></td>
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<td>(9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GOAL: I will try to read ____ books this month.
Appendix F

Program of Reading Guidance at Curtis Elementary School
Spring Term, 1984

The following presentations took place on a weekly sequential basis and followed the fifth grade reading syllabus. These activities were planned in collaboration with the reading teachers and followed closely the units the classes were studying in the Scott Foresman reader, Sky Climbers. One class was ahead of the other so a unit could be used at a later date with the slower class. The information about the presentations is given in basically the same way as it was actually presented to the fifth graders. After every program, books that related to the subject of the program were made readily available for charging by the children.

Program I:
Animal stories
(Correlated with Scott Foresman Sky Climbers "The Magic Meadow," Unit 24)

Animal stories were presented to both experimental classes since both classes were involved in reading units relating to animals. A brief overview concerning the importance of animals in our culture was first presented to the children:
1. Animals for food, clothing, beasts of burden and farming.
2. Animals as an aspect of ecology and the balance of nature, examples of birds and insects in nature.
3. Animals as pets: the love and friendship found in animals.

This was followed by a discussion of the types of animal stories that are written:
1. Realistic fiction.
2. Animals acting as people.
3. Informational books about animals.

There was a brief discussion of the children's favorite animals.

The following books were introduced to the children specifically and more were available for circulation on a book truck. The annotation following each book is a condensation of what was included in the presentation.

Group 1 Books:

Bailey, Carolyn. **Finnegan II and His Nine Lives.**

The story of an alley cat's adventures told through his eyes.

Dean, Anabel. **Animal Defenses.**

Weapons such as teeth, protection such as coloring and smoke screens, and even playing dead are discussed and illustrated.
Henry, Marguerite. Justin Morgan Had a Horse.

A horse called "Lil Bub" becomes the first in a long line of strong, fast race horses. History and horses go well together in this tale. Breeds of horses were also discussed.


A series of family episodes are told by the dog himself. A St. Bernard relates humorous and exciting adventures of how he becomes a super dog.

O'Brien, Jack. Silver Chief, Dog of the North.

This was presented as a story of two: the beautiful, wild, strong, Silver Chief and his friend, Mountie Jim Thorpe. Will the dog revert to the wild? Not for the weak of heart.

Program II: Animal Stories

Correlated with Scott Foresman Sky Climbers, Unit 35, "Shark!"

Group 2

The same basic introduction to animals was used as for group 1, but different books were introduced.

Bialk, Tia. Tizz.

Have you ever moved away to a new place, said goodbye to old friends, and found it hard to make new ones? Tracy finds herself in such a situation. A pony named Tizz makes it easier, but will she be able to keep her?
Rabinowich, Ellen. **Seals, Sea Lions, and Walruses.**

Did you know that Jacques Cousteau had two pet sea lions? What is a sea lion? How are they similar to seals? Did you know that a walrus can weigh a ton? Various facts about all these animals were shared with the class from this book. Example: A sea lion can hear fish in the water through his sonar.

Rounds, Glenn. **The Blind Colt.**

Close your eyes. Could you find your way back to your classrooms? to the cafeteria? Can you imagine being born blind and living on the prairie as a wild mustang? Everything you find to eat or drink has to be by smell or taste or hearing. Think of the dangers. This was based on a true story.

Roever, J.M. **The Whooping Crane.**

What is a whooping crane? A discussion of the crane and his habitat was given. Why is he called a whooper? Why is he endangered and what can be done about it? Special note, in 1941 all the cranes were blown out of Louisiana by a hurricane.

Salten, Felix. **Bambi.**

A realistic view of a wild deer's life through the eyes of the deer. It is not like the Disney movie. We see man's guns invade the forest, the terrible forest fire, and Bambi become the Great Stag of the Forest.
Program III: Historical fiction

(Correlated with Scott Foresman Sky Climbers Unit 17, "Trail to Oregon.")

Groups 1 and 2 at different times in the term.

Historical fiction was presented to both experimental groups at different times during the semester since one group was ahead of the other in terms of units of study. A discussion of history and what makes up our study of history was first. History includes events, laws, people, and dates. Historical fiction includes "made-up" conversations, situations, sometimes people, but it is based on true events. Four of the books discussed concerned American history during a war or a period of wars.

Hoff, Carol. Johnny Texas.

About a young boy named Johann who comes to the territory of Texas from his native Germany. Johann becomes "Johnny" in Texas. A series of exciting episodes: there's trouble brewing with Mexico, prairie life is quite different from Germany, even ants are different! War breaks out; Johnny's father has to go to fight at the Alamo.

Steele, William. The Perilous Road.

Set during the Civil War in the hills of Tennessee. Eleven-year-old Chris Brabson hates the Yankees, especially after they steal food. One brother joins the Yanks, the others become Confederates. Chris finds out the Confederates
are going to attack the wagon train that his brother Jethro is on.

Clapp, Patricia. I'm Deborah Sampson.

Deborah Sampson was a real person who lived during Revolutionary times. She tells this story in her own words. She is a hired girl but enlists in the Revolutionary army as a man. Her trials and tribulations are told, but not too explicitly. She never takes a bath, for example. War is a horrible experience, and she is finally discovered.

Nolan, Jeannette. The Victory Drum.

Again, a tale of the Revolution. Benny, twelve-years-old, volunteers to become a drummer when the old drummer is wounded. He marches through the Northwest territory with George R. Clark to Vincennes. He wades through waist-deep ice-water and helps raid the British forts.

Jones, Ruth. Boy of the Pyramids.

Perhaps you like your history really long ago! Egypt is a country that has always appealed to me. Mysterious, strange, mummies, and pyramids! King Tut! This is actually a mystery. Kaffe, a young Egyptian discovers who is stealing the pharaoh's jewels from the pyramid.

Program IV: Folklore (Correlated with Scott Foresman Sky Climbers Unit 50, "The Popcorn Blizzard.")

Group 1 and 2 at different times during the term.
An overview of folklore was presented. What is folklore? What does it include? How has it come down to us? Legends were discussed and St. Valentine was used as an example. Fairy tales were differentiated from other folktales. Some principal heroes in folklore were presented:

1. Sinbad from the *Arabian Nights*. The origin of the *1001 Nights* was explained and some of Sinbad's adventures were recounted.

2. Another sailor, Windwagon Smith, was also introduced and his prairie schooner.

3. John Henry was introduced as a real life person who helped build the railroad. The ballad of John Henry was sung by the class.

4. Pecos Bill. Several tales about this tall tale hero were told: being raised by the coyotes, his horse, Lightning, his riding of the tornado.

5. Lazy Tom, a humorous hillbilly was told about.

6. The entire story of "Mr. Fox", the English version of "Bluebeard" was told to the class. Folklore books were available for charging.

Program V: Poetry and Choral Reading.

(Correlated with Scott Foreman *Sky Climbers* Unit 45 and 46, "Music", and "The Secret Song.")

Poetry was introduced from the standpoint of listening to the sounds and rhythm, listening to the words that the poet chooses for effect, and understanding the mood and
meaning of the poem. Choral readings were done using the following poems:

"The Trains", by James Tippett;
"What is Pink", by Christina Rossetti;
"Mr. Nobody", unknown;
"Ladies, Gentlemen, Farmers, Ride", Mother Goose; and
"What the Leaves Said", unknown.

Various poetry books from the library were made available for charging.

Program VI: Dramatic Writing
(Correlated with Scott Foreman Unit 75, "Recognizing Types of Literature.")

Groups 1 and 2 at different times during term.

The classes were given sheets on which they were to list the main characters from their library books and select famous actors or actresses to play the parts. They were also to draw four main dramatic scenes from the books and write a brief narration of each scene. This was really a form of storyboarding. Props necessary for the play were also to be listed. The books and pictures were shared with the class.

Program VII: Literary Elements
(Correlated with Scott Foresman Unit 34, "Story Elements.")

A presentation of literary elements included a discussion of characterization, setting, plot, point of
view, and theme. The students were asked to participate orally and talk about the books they were reading in terms of these elements. The researcher led the discussion in order that important aspects would be brought out. Favorite characters were especially noted.

Program VII: Libraries
(Correlated with Scott Foresman Unit 52, "Answering Hard Questions.")

Library World, a twenty minute color film that introduces children to the library was shown. After the film, a discussion followed concerning the use of the card catalog, the Reader's Guide, the Dewey Decimal system and going to the public library for fun and information.

Program IX: Science Fiction
(Correlated with Scott Foreman Sky Climbers "Seeking Life on Mars", Unit 75.)

Science fiction as a literary genre was presented to the class. It was compared with fantasy. Some of the themes of science fiction were discussed such as good versus evil, societies of the future, overpopulation, and space travel. The Star Wars films were discussed as to whether they are fantasy or science fiction. The following books were introduced to the children specifically, and more were available for circulation on a book truck.

In the twenty-first century, Tripods control the earth and maintain their mastery over humans by inserting steel caps in the skulls of children when they reach fourteen. Three boys escape before they are capped.

Cameron, Eleanor. *Wonderful Flight to the Mushroom Planet.*

Two boys answer a mysterious ad in the newspaper. A "small space ship" is needed by the mysterious Mr. Bass in order to save the mushroom people on the planet Basidium from extinction.

Corbett, Scott. *The Deadly Hoax.*

What do the visitors from space really want? A malfunctioning computer reveals the horrible truth to Morgan and Sid.

Norton, Andre. *Star Kaats and the Planet People.*

An unusual world in which the intelligent beings are cats who aid humans in facing their problems. Strange cities and mystical settings.

Higdon, Hal. *The Team that Played in the Space Bowl.*

A football team is mysteriously whisked from Earth to play in the Space Bowl. The fate of the earth hangs in the balance. Funny!
Program X: Ghosts
(Correlated with Scott Foresman Sky Climbers "Haunted American History," Unit 33.)
Presented to both classes at different times during the term.

What are ghosts? Are there really such things? We all know some stories about ghosts. Are ghosts unhappy spirits? Do people sometimes believe in ghosts and not admit that they do? Some of our best stories are ghost stories. The following books were introduced to the classes.

Nic Leodhas, Sorche. Ghosts Go Haunting.
A collection of Scottish ghost stories. One story was told to the class about the lad who meets three men carrying a coffin. Another tale about the Irish lad hired by the farmer was also shared.

J.D. and Hank discover a magic spell that brings Edward Teach (Blackbeard the pirate) back to the tavern that he built. How times have changed! How do you get rid of an outdated, antiquated, blustery pirate? An excerpt from the book was read aloud.

Warren, Mary P. The Haunted Kitchen.
A ghost story with a modern setting. Mark and his sisters move into a new, smaller house with their father. Strange sounds are heard in the kitchen walls and a tiny voice calls to them. Two mysteries for the price of one!

Is there a ghost in Alexander's barn that only he can see? And what does Blossom Culp with her black spidery legs have to do with it? In 1913 Alexander helps a restless spirit find her way back to her family.

Hoke, Helen. *Spooks, Spooks, Spooks.*

A gust of wind, footsteps, a noise outside the door--we're spooked! A book of haunted houses, ghosts coming back to earth, even Mungo, a ghost dog. We encounter witches, devils, and the king of the cats. (This story was read to the children: "The King of the Cats.")

Program XI  Adventure: Survival Stories
(Correlated with Scott Foresman *Sky Climbers* "Island of the Blue Dolphin," Unit 42 and "Understanding Imagery and Foreshadowing," Unit 59.)

Adventure stories as a genre of literature were introduced. The elements of the adventure-romance were discussed: the hero, the quest, the reunion at the end with loved ones. The use of imagery in making the adventure more believable was discussed. Foreshadowing as a literary device was demonstrated in the following books. Survival always makes adventure exciting. We all need to live, to breathe, to eat, to survive!
Sperry, Armstrong. *Call It Courage.*

This is the story of Mafatu who is afraid of the sea because it took the life of his mother when he was only three. An island boy cannot be afraid of the sea so he is taunted by all the others. He sets out across the sea with only a dog for a companion. He nearly drowns before coming to an island inhabited by cannibals. He is alone.

Carlson, Natalie. *The Family under the Bridge.*

The only refuge that a family of fatherless children can find is a bridge in Paris. But, someone already lives there, a tramp named Armand. The mother does not approve of such a person, but the children do. He feeds them and takes them to see "Father Christmas." He even rescues them from the orphanage.


This is the story of a Swedish orphan named Rasmus. Whenever people come to the orphanage they never choose him; they only want curly-haired girls. Rasmus runs away from the cruel place. He meets Oscar, a tramp, and he and Oscar help capture some robbers. A farmer and his wife want Rasmus to live with them. Will he?

Cunningham, Julia. *Dorp Dead.*

Gilly Ground's grandmother has died and he goes to live at the orphanage. He hates it! He won't even associate
with the other children. Because of his disobedience, he is sent to live with Mr. Kobalt, the ladder maker, where everything has to be exactly right, perfect. Gilly realizes that something terrible is going to happen when he is no longer of use to Kobalt. He must escape.

Roy, Ron. *Nightmare Island*.

Going camping on an island with your brother sounds like fun. What can go wrong? On Nightmare Island, everything does. His father says "no matches," but Harley takes some anyway. During the night he builds a fire. When he goes to put it out, the water itself catches on fire.

Program XII Using the Card Catalog
(Correlated with Scott Foresman *Sky Climbers* "Using a Card Catalog," Unit 51.)

The card catalog's function as a way of finding materials in the library quickly and easily was introduced. The information found on a typical card in the card catalog was illustrated through the use of posters representing an author card, a title card, and a subject card. Call numbers and location were also discussed. The children were then each given a tray from the card catalog and asked to locate some books that the researcher had made advance cards for. Each child had to locate at least one title, one author, and one subject card. Special mention was made of subject cards
having the subject in all capitals and the ignoring of initial articles in titles.

Some of the authors that the classes were to look for:

Adams, Kathleen, comp.
Chafetz, Henry. Thunderbird and other stories.
Clarke, Arthur C. Dolphin Island.
Clyne, Patricia Edwards. Tunnels of terror.
McInerney, Judith Whitclock. Judge Benjamin, Superdog.

Some of the titles that the classes were to look for:

A book of giant stories.
The British Isles.
Doctor Doolittle and the green canary
Dolphin Island
Elmo Dooland and the search for the golden mouse.
Mathematics, by Irving Adler.
Talltale America.

Some of the subject headings that the classes were to look for:

ANIMALS-STORIES
CAVES-FICTION
DOGS-FICTION
FAIRY TALES
GREAT BRITAIN-HISTORY
HEAT
LEGENDS-U.S.
Program XIII  Biographies
(Correlated with Scott Foresman Sky Climbers "Harriet Quimby Flies the Channel," Unit 30, and "Recognizing Fiction and Nonfiction," Unit 13.)

The literary genre of biographies was introduced to the classes. Biographical fiction was compared to biography. Autobiography was also discussed. The first time this unit was presented, since it was Valentine's Day, St. Valentine was used as an example of a person that might be the subject of a biography. Five famous people were looked at from the standpoint of their accomplishments.

de Leeuw, Adele. Story of Amelia Earhart.

One of the first women pilots, she was the first woman to fly the Atlantic. Earhart attempted to fly around the world and was never heard from again. As a child, she had always wanted to learn to fly. Excerpt was read about the way she felt about flying, p. 119.

Fox, Mary V. Mr. President: the Story of Ronald Reagan.

"Dutch," the President's boyhood nickname, was born above the store where his father worked. He was very poor, and his family moved around a great deal. Once, he saved 77 people from drowning. After he finished college, he even
helped put his brother through. He worked as a radio announcer, became an actor, and eventually became interested in politics.

Beegan, Paul J. **Hank Aaron**.

Hank Aaron was also poor and became famous, but in a different way. Aaron was a black baseball player who was relatively unknown until he came close to Babe Ruth's homerun record. In 1974, he broke that record, hitting 715 homeruns at the age of forty, the same age Ruth had been.

*Note:* His wrists measure eight inches around, bigger than the boxer, Mohammad Ali.

McKown, Robin. **Marie Curie**.

Marie Curie was originally from Poland and named Manya. She wanted an education more than anything else and finally got her chance in Paris at the Sorbonne. She became the greatest woman scientist the world has even known. She married Pierre Curie and with him won the Nobel Prize twice. She is the discoverer of the elements, radium and polonium.

Dugan, James. **Undersea Explorer: The Story of Captain Jacques Cousteau**.

The life and adventures of the most famous oceanographer were outlined. When he was young the doctors wanted to amputate his arm, and he saved it through the use
of the whirlpool. His diving apparatuses are discussed. Filming sharks from an underwater cage is one of book's highpoints.


Mosby is a man whose real life is very different from the heroic legend. He was expelled from college for shooting another student and joined the Virginia army, not the calvary as we often think. He was not a good officer and left the army to organize a guerilla band of raiders, "hit and run" soldiers. He was never caught by the Union, even when they had him surrounded at his own house. He escaped dressed in his wife's clothes.

 Appropriately decorated valentines were given to the children and they were to guess who had "sent" them to the class. The slogans included:
"I'll fly high with you, Valentine." (Earhart)
"Don't make me a rebel without a cause, Valentine." (Mosby)
"You'll be a movie star for me, Valentine." (Reagan)
"I'm all aglow for you, Valentine." (Curie)
"Let's play ball, Valentine." (Aaron)

Additional biographies were also available for charging.

Program XIV Using the Encyclopedia
(Correlated with Scott Foresman Sky Climbers, "Using an
Encyclopedias as principal reference sources were presented. The arrangement of encyclopedias was discussed as were such terms as "entry," "volume," "guide words," and "cross references." The importance of the index volume was noted. Each child was given a sheet of questions to be answered by using the encyclopedia. Since the school's encyclopedias were limited in number, the children worked together in pairs. The encyclopedias consulted included the Britannica Junior, Compton's, Merit Encyclopedia, and the World Book.

The questions included:

1. What kind of cat has no tail?
2. What was the purpose of the Buffalo Dance among the American Indians?
3. Why doesn't a bird fall off its perch when it sleeps?
4. What protects some butterflies from attacks by birds?
5. What was the first musical instrument?
6. Why can an elephant pull his feet out easily when sunk deep in the mud?
7. What river contains more water than any other?
8. The largest island in the world is:

The researcher worked with the children in using the encyclopedias to answer the questions.

Program XV: An intensive look at one author and his books: Roald Dahl.
(Correlated with Scott Foresman *Sky Climbers* "The Cat and the Fiddler," Unit 44.

Roald Dahl as a popular writer of fantasy was introduced to the classes. Dahl's style was compared to Lloyd Alexander, the author of the excerpt in the text. What do we mean by fantasy? Do you like this kind of book? Why or why not?

Dahl, Roald. *James and the Giant Peach*.

This peach pit I'm holding (actual pit) may be from the tree in the garden of nasty old Aunt Sponge and Aunt Spiker that grows a house-sized peach that takes James away on a fantastic adventure. Inside the peach, James meets cheerful Old Green Grasshopper, dainty Ladybug, and grumpy Centipede of the many boots and unbelievable things happen. The librarian had drawn some posters copied from the illustrations by Nancy Burkert for the book.


Willie Wonka announces that the five children who find the gold seal on their candy bars will be allowed to visit his fabulous factory. What an assortment of children win: Augustus Gloop, a greedy fat pig of a boy; Veruca Salt, a spoiled rich girl; Violet Beauregarde, the world's champion gum chewer; Mike TeeVee, who spends every minute in front of the television; and Charlie, the Hero, who is honest, brave, trustworthy, obedient, poor and starving!

A sequel to the chocolate factory with the further adventures of Charlie and Willie Wonka.

Program XVI: The Character I'd Most Like to Be.

(Correlated with Scott Foresman "And Now Miguel," Unit 65.)

The children were asked ahead of time by their teachers to come dressed as a character from a book they had read, or at least to be able to describe themselves in terms of that character. Characterization methods were discussed. How do we know what kind of person a character is? Why do you like him or dislike him? Is what others say about him important? Does the character describe himself? The children came dressed as various characters: Tom Sawyer, Pecos Bill, the Grey Ghost, Sherlock Holmes, Charlie with chocolate bars hanging around him, Karana, from *Island of the Blue Dolphin*, Paul Bunyan, Calamity Jane, and so on.

Program XVII: Easter

(Correlated with school holiday.)

The customs of Easter were discussed. The film *Rabbit Hill* based on the Robert Lawson novel was shown. Whether *Rabbit Hill* was a fantasy or a realistic story was discussed. Each child was given a candy egg for identifying a character in literature.
## Appendix G

### TABLE XXXVI

**Means and Standard Deviations for the Pretest and Posttest Scores on the Gates-MacGinitie**

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean</th>
<th>S.D.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>PreVocl (Raw Vocabulary)</td>
<td>27.23</td>
<td>5.91</td>
<td>73</td>
</tr>
<tr>
<td>Voc2 (NCE)</td>
<td>50.41</td>
<td>12.26</td>
<td>73</td>
</tr>
<tr>
<td>Voc3 (%)</td>
<td>50.47</td>
<td>20.45</td>
<td>73</td>
</tr>
<tr>
<td>Voc4 (G.E.)</td>
<td>5.62</td>
<td>1.22</td>
<td>73</td>
</tr>
<tr>
<td>PostVocl (Raw)</td>
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<td>6.04</td>
<td>70</td>
</tr>
<tr>
<td>Voc2 (NCE)</td>
<td>51.48</td>
<td>12.21</td>
<td>70</td>
</tr>
<tr>
<td>Voc3 (%)</td>
<td>52.14</td>
<td>20.26</td>
<td>70</td>
</tr>
<tr>
<td>Voc4 (G.E.)</td>
<td>6.02</td>
<td>1.35</td>
<td>70</td>
</tr>
<tr>
<td>PreComl (Raw Comprehension)</td>
<td>22.05</td>
<td>5.93</td>
<td>73</td>
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<tr>
<td>Com2 (NCE)</td>
<td>43.84</td>
<td>13.58</td>
<td>73</td>
</tr>
<tr>
<td>Com3 (%)</td>
<td>40.65</td>
<td>20.80</td>
<td>73</td>
</tr>
<tr>
<td>Com4 (G.E.)</td>
<td>4.90</td>
<td>1.49</td>
<td>73</td>
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<td>PostComl (Raw Comprehension)</td>
<td>24.19</td>
<td>6.64</td>
<td>70</td>
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<td>Com2 (NCE)</td>
<td>45.86</td>
<td>14.85</td>
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<tr>
<td>Com3 (%)</td>
<td>43.54</td>
<td>22.99</td>
<td>70</td>
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<tr>
<td>Com4 (G.E.)</td>
<td>5.46</td>
<td>1.77</td>
<td>70</td>
</tr>
<tr>
<td>PreTotl (Raw Total)</td>
<td>49.29</td>
<td>10.13</td>
<td>73</td>
</tr>
<tr>
<td>Tot2 (NCE)</td>
<td>47.42</td>
<td>10.73</td>
<td>73</td>
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<tr>
<td>Tot3 (%)</td>
<td>45.53</td>
<td>18.39</td>
<td>73</td>
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<td>Tot4 (G.E.)</td>
<td>5.29</td>
<td>1.13</td>
<td>73</td>
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TABLE XXXVI
MEANS AND STANDARD DEVIATIONS FOR THE PRETEST AND POSTTEST SCORES ON THE GATES-MACGINTIE

<table>
<thead>
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<th>Test</th>
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<tr>
<td>PostTot1 (Raw Total)</td>
<td>53.21</td>
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<tr>
<td>Tot2 (NCE)</td>
<td>49.00</td>
<td>12.38</td>
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<tr>
<td>Tot3 (%)</td>
<td>47.96</td>
<td>20.64</td>
<td>70</td>
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<td>Tot4 (G.E.)</td>
<td>5.79</td>
<td>1.44</td>
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### Appendix H

**TABLE XXXVII**

**MEANS AND STANDARD DEVIATIONS FOR THE ESTES**

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<td>Estes Pretest</td>
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<td>73</td>
</tr>
<tr>
<td>Estes Posttest</td>
<td>79.14</td>
<td>10.51</td>
<td>70</td>
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</tbody>
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Appendix I

**TABLE XXXVIII**

**SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE POSTTEST NORMAL CURVE EQUIVALENT VOCABULARY SCORES ON GATES-MACGINITIE READING TESTS**

<table>
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<tr>
<td>(Pretest NCE Scores)</td>
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<td></td>
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<tr>
<td>Treatment</td>
<td>671.27</td>
<td>1</td>
<td>671.25</td>
<td>11.13</td>
<td>.001</td>
</tr>
<tr>
<td>Error</td>
<td>4041.55</td>
<td>67</td>
<td>60.32</td>
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<td></td>
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**TABLE XXXIX**

**SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE POSTTEST NORMAL CURVE EQUIVALENT COMPREHENSION SCORES ON GATES-MACGINITIE READING TESTS**

<table>
<thead>
<tr>
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<th>P</th>
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<tr>
<td>Covariate</td>
<td>7043.79</td>
<td>1</td>
<td>7043.79</td>
<td>60.65</td>
<td>.000</td>
</tr>
<tr>
<td>(Pretest NCE Scores)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Treatment</td>
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<td>1</td>
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<td>3.37</td>
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<td>7781.45</td>
<td>67</td>
<td>116.14</td>
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</table>
### TABLE XL

**SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE**  
**POSTTEST NORMAL CURVE EQUIVALENT TOTAL SCORES**  
**ON GATES-MACGGINITIE READING TESTS**

<table>
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<td>Covariate (Pretest NCE Scores)</td>
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### TABLE XLI

**SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE**  
**POSTTEST PERCENTILE VOCABULARY SCORES ON**  
**GATES-MACGGINITIE READING TESTS**

<table>
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<th>Source</th>
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<td>67</td>
<td>158.722</td>
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</table>
### TABLE XLII

SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE
POSTTEST PERCENTILE COMPREHENSION SCORES
ON GATES-MACGINITIE READING TESTS

<table>
<thead>
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<th>Source</th>
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<td>Covariate (Pretest Percentile Scores)</td>
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<td>18340.33</td>
<td>71.36</td>
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<td>903.22</td>
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<td>257.01</td>
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### TABLE XLIII

SUMMARY OF ANALYSIS OF COVARIANCE FOR DEPENDENT VARIABLE
POSTTEST PERCENTILE TOTAL SCORES ON
GATES-MACGINITIE READING TESTS

<table>
<thead>
<tr>
<th>Source</th>
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<td>103.59</td>
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BIBLIOGRAPHY

Books


**Articles**


Ley, Terry, "Getting Kids into Books: The Importance of Individualized Reading," Media and Methods, XV (March, 1979), 224.


Moore, Jesse C., Jones, Clarence J., and Miller, Douglas C., "What We Know After a Decade of Sustained Silent Reading," "Reading Teacher, XXXIII (January, 1980), 445-450.


Rowell, C. Glennon, "An Attitude Scale for Reading," Reading Teacher, XXV (February, 1972), 442-447.

Schneyer, J. Wesley, "Effects of Reading on Children's Attitudes," Reading Teacher, XXIII (October, 1969), 49-51, 57.


Tovey, Duane R., "Children's Perception of Reading," The Reading Teacher, XXIX (March, 1976), 536-540.

Towner, J.C., and Evans, Howard M., "The SS Reading: Does it Float?," Reading Horizons, XV (Winter, 1975), 83-86.

Reports


Bossier Parish Library First Quarter Report, Benton, La., April, 1985.


Publications of Learned Organizations


Media Programs: District and School, Prepared by the American Association of School Librarians, American Library Association, and Association for Educational Communications and Technology, Chicago, American Library Association 1975.

Encyclopedia Articles


Public Documents


Unpublished Materials


Stroud, Janet Gossard, "Evaluation of Media Center Services by Media Staff, Teachers and Students in Indiana Middle and Junior High Schools," unpublished doctoral dissertation, Purdue University, 1976.


Newspapers

Shreveport Journal, April 1, 1982.


Shreveport Times, April 27, 1979.