The effects of reading achievement and sex upon self-esteem of achievers and low-achievers in grades two through six in Billings, Montana

by Judith Tasset Starr

A thesis submitted in partial fulfillment of the requirements for the degree of DOCTOR OF EDUCATION
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Abstract:
The purposes of this investigation were as follows: to deter- mine the effect of factors, namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year and after five months of reading instruction, and to determine the effect of these factors upon change in self-esteem scores.

Hypotheses were formulated around three categories: First Self-Esteem Inventory (SEI) Scores; Second SEI Scores; Change in SEI Scores.

Two groups of students were drawn from the population of second through sixth grade children who attended the nine Title I-designated public schools in Billings, Montana during the 1978-79 academic year. Achievers were students who were not enrolled in the Title I labs for supplemental reading instruction. Low-achievers were students who were enrolled in Title I labs for supplemental reading instruction. Participants were grouped according to grade level and sex. The resultant population consisted of 142 achievers and 142 low-achievers in grades two through six.

Subjects were given the SEI during the first week of the 1978-79 academic year, and again after five months of reading instruction. Two textbook-related reading test scores were recorded for each subject.

All hypotheses were tested at the .05 level of significance, using either the Student's t-test, two-way analysis of variance, or stepwise multiple regression.

Analyses of the data indicated that on both SEI administrations, the self-esteem scores of achievers were significantly higher than those of low-achievers when the subjects were examined as two groups without regard to grade level. When grade level was considered, however, achievers' SEI scores were significantly higher only in grade six on the first SEI, and in grades five and six on the second SEI. Neither sex nor the interaction between achievement and sex was significant on either of the SEI administrations when achievers and low-achievers were examined as two groups. The change in self-esteem scores was not significant when achievers and low-achievers were examined as two groups nor when they were examined by grade level. Sex was not a significant factor in the change in self-esteem scores for the two groups nor was the interaction between sex and achievement significant. There was no linear relationship between change in self-esteem scores and other factors such as reading achievement scores, grade level, and sex.

For Nathan and Joshua

My Sonshines

THE EFFECTS OF READING ACHIEVEMENT AND SEX UPON SELF-ESTEEM OF ACHIEVERS AND LOW-ACHIEVERS IN GRADES TWO THROUGH SIX IN BILLINGS, MONTANA

by

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A thesis submitted in partial fulfillment
of the requirements for the degree

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ABSTRACT

The purposes of this investigation were as follows: to determine the effect of factors, namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year and after five months of reading instruction, and to determine the effect of these factors upon change in self-esteem scores.

Hypotheses were formulated around three categories: First Self-Esteem Inventory (SEI) Scores; Second SEI Scores; Change in SEI Scores.

Two groups of students were drawn from the population of second through sixth grade children who attended the nine Title I-designated public schools in Billings, Montana during the 1978-79 academic year. Achievers were students who were not enrolled in the Title I labs for supplemental reading instruction. Low-achievers were students who were enrolled in Title I labs for supplemental reading instruction. Participants were grouped according to grade level and sex. The resultant population consisted of 142 achievers and 142 low-achievers in grades two through six.

Subjects were given the SEI during the first week of the 1978-79 academic year, and again after five months of reading instruction. Two textbook-related reading test scores were recorded for each subject.

All hypotheses were tested at the .05 level of significance, using either the Student's t-test, two-way analysis of variance, or stepwise multiple regression.

Analyses of the data indicated that on both SEI administrations, the self-esteem scores of achievers were significantly higher than those of low-achievers when the subjects were examined as two groups without regard to grade level. When grade level was considered, however, achievers' SEI scores were significantly higher only in grade six on the first SEI, and in grades five and six on the second SEI. Neither sex nor the interaction between achievement and sex was significant on either of the SEI administrations when achievers and low-achievers were examined as two groups.

The change in self-esteem scores was not significant when achievers and low-achievers were examined as two groups nor when they were examined by grade level. Sex was not a significant factor in the change in self-esteem scores for the two groups nor was the interaction between sex and achievement significant. There was no linear relationship between change in self-esteem scores and other factors such as reading achievement scores, grade level, and sex.

Chapter 1

INTRODUCTION TO THE PROBLEM

Although many studies have been conducted relative to self-esteem and academic achievement, investigators have failed to concur on the relationship between these variables. A review of the literature indicated a need for additional research in this area. Further, the review showed a need for studies relative to self-esteem in low-achievers, and relative to the effects of reading achievement upon self-esteem.

This investigation was concerned with self-esteem and reading achievement in achieving and low-achieving students in grades two through six. Self-esteem was examined at the beginning of students' academic year, and again after five months of reading instruction. Change in self-esteem as a function of reading achievement, grade level, and sex was also considered.

The purposes of this study and the procedures which were followed in this investigation are presented in this chapter. Specific questions which were considered are delineated. The need for the study is discussed. Limitations and delimitations of the research are noted, and terms are defined as necessary.

STATEMENT OF THE PURPOSES

The purposes of this investigation were as follows: to determine the effect of factors, namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year and after five months of reading instruction, and to determine the effect of these factors upon change in self-esteem scores.

The research was conducted during the 1978-79 academic year in Billings, Montana. Two groups of students were involved. Achievers were students who did not attend the nine Title I labs within the public school system for supplemental instruction in reading. Low-achievers were students from the same nine schools who did attend the Title I labs for supplemental instruction in reading.

QUESTIONS INVESTIGATED

Several questions related to the purposes of this study were developed:

1. Is there a difference between the self-esteem scores of achievers and low-achievers before they are subjected to a reading instructional program?

2. Is there a difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, before they are subjected to a reading instructional program?

3. When considering the interaction between sex and achievement, is there a difference between the self-esteem scores of achievers and low-acievers before they are subjected to a reading instructional program?

4. Is there a difference between the self-esteem scores of achievers and low-achievers after they have been subjected to a reading instructional program for five months?

5. Is there a difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, after they have been subjected to a reading instructional program for five months?

6. When considering the interaction between sex and achievement, is there a difference between the self-esteem scores of achievers and low-achievers after they have been subjected to a reading instructional program for five months?

7. Is there a difference in the change in self-esteem scores between achievers and low-achievers as a result of having been subjected to a reading instructional program for five months?

8. Is there a difference in the change in self-esteem scores between achievers and low-achievers when examined by grade level as a result of having been subjected to a reading instructional program for five months?

9. When considering the interaction between sex and achievement, is there a difference between the change in self-esteem scores for achievers and low-achievers as a result of having been subjected to a reading instructional program for five months?

10. Is there a linear relationship between change in self-esteem scores and other factors such as reading achievement scores, grade level, and sex?

NEED FOR THE STUDY

The review of the literature indicated conflicting findings relative to the relationship between self-esteem and achievement in reading and in other academic areas. Noting the failure of researchers to concur on this issue, Fink suggested that ". . . the investigation into the development of adequate and inadequate self-concept remains a fruitful area for further research" (1965:491).

Burg suggested that our technological orientation has been a subtle deterrent to the investigation of the affective variables that influence individuals. One such variable is self-esteem. Furthermore, the study of these variables

> . . . demands an exploration of the growth and development of uniquely human attitudes and reactions. It is an area of study less well understood, more threatening for some, and with fewer readily apparent remedies (1975:361).

In order to contribute to the understanding of these affective dimensions of children and in order to propose methods which might more effectively enhance their development, it is important that research projects, such as the one discussed herein, be conducted.

Although researchers have gradually ventured into the affective realm, few have concerned themselves primarily or exclusively with low-achieving students. This was verified by Opie and Lemaster' survey of the literature from 1960 through 1975. In their summary of the literature review, the investigators stated that "in spite of a growing interest in the variety of learning problems, the low-average child remains an enigma and is the forgotten child" (1975:379). The present investigation was addressed to the "forgotten child" of whom Opie and Lemasters speak.

Perhaps the most significant indication of the need for this research was provided by the frequently-cited study by Jean Williams of Colorado State University. In her concluding remarks, Williams noted that

> Much remains to be done to facilitate understanding of the complex relationship between psychological factors such as the self-concept and academic achievement. Future investigation of the self-concept and young children might [also] profitably examine its change . . . (1973:379).

Like many schools throughout the nation, the schools used in this investigation have adopted the practice of periodically testing the elementary students on specific reading skills. The tests were

developed by the publisher of the basal reading text and are essential for the proper use of the basal readers. Most children are tested five or more times during the school year. After each test, the teacher informs the child of his performance. Stenner and Katzenmeyer noted the significance of self-esteem and the potential effect on self-esteem of instructional practices such as this. They emphasized the importance of periodic examination of educational practices, ". . . . not only in light of how they affect academic development but also in the way they contribute to the development of a positive concept of the self" (1976:357).

RESEARCH PROCEDURES

In order to gain information concerning self-esteem, reading achievement, and the relationship between these factors, the investigator conducted a review of the related literature of the past ten years. The major sources of the literature were the libraries of Montana State University, Bozeman, and Eastern Montana College, Billings. The following procedures were then followed in order to answer the questions which related to the broad purposes of the investigation.

During the first week of the school year, before being exposed to the formal instruction and testing in the reading program, all children in grades two through six in the nine Title I-designated

public schools in Billings, Montana were given Coopersmith's Self-Esteem Inventory (SEI) by their regular reading teachers. Since this was the first week of school, the first self-esteem test provided a baseline measure of self-esteem which was therefore uninfluenced by academic experiences of the current school year.

Approximately five months lapsed. During that time, all students were exposed to reading instruction from the 1974 edition of the Houghton Mifflin Company basal readers. In addition to classroom reading instruction, low-achievers received supplemental instruction in reading from the Title I lab teachers. The basis for that instruction was also the Houghton Mifflin basal series. Achievers received their reading instruction from their regular reading teachers. The reading achievement of all students was measured at least twice on the tests published by Houghton Mifflin Company to accompany the basal series. After each reading test, the students were individually informed of their performance on the test. All students were again given the SEI after having taken at least two, in some cases more, of the textbook-related reading tests.

From the nine Title I schools, two groups of children were drawn. Low-achievers were students who attended the Title I reading and Math Labs for supplemental instruction in reading. They were "educationally disadvantaged in reading," as defined on page 8.

> An educationally disadvantaged student is a student who is performing at least six (6) months below grade level in reading (language arts) or math.
>
> An educationally disadvantaged student is a student who demonstrates poor work habits, has a short attention span, has poor self-image and shows a negative attitude toward school (Title I Project Proposal).

Achievers were students who were not "educationally disadvantaged" in reading and did not attend the Title I labs for supplemental instruction in reading. Each group consisted of 142 children in grades two through six, selected as described later on page 30.

After the two groups of students were identified, the investigator recorded their scores from the two textbook-related reading tests they had taken during the 1978-79 academic year. The data collected on the two groups of subjects included their grade level, sex, two SEI scores, and two reading test scores. This body of data was statistically analyzed in order to answer the questions which related to the broad purposes of the investigation.

LIMITATIONS AND DELIMITATIONS

The following were limitations of the investigation:

1. Specific teaching techniques, which might have influenced reading achievement, were not controlled by the investigator.

2. Control of other specific teacher-related variables, such as years of experience and classroom management techniques, was beyond the scope of this investigation.

3. Control of extraneous variables which might affect achievement, such as intelligence and home environment, was beyond the scope of this investigation.

4. No provision was made to determine whether any of the students were repeating their current grade level or previous grade levels.

5. Length of daily reading instructional periods in classrooms and in Title I labs was not controlled by the investigator.

The following were delimitations of the investigation:

1. The investigation included children who attended the nine Title I-designated schools in Billings, Montana during the 1978-79 academic year and whose formal reading instruction was based exclusively upon the 1974 edition of the Houghton-Mifflin Company basal reading series.

2. The low-achieving group included the children in grades two through six who attended Title I Reading and Math Labs for supplemental instruction in reading.

3. The achieving group duplicated the low-achieving group in size and was drawn from the children in grades two through six who did not attend the Title I labs in their schools.

4. All reading tests and Self-Esteem Inventories were given by the regular reading teachers of the subjects.

5. Measurement of self-esteem was limited to Coopersmith's Self-Esteem Inventory.

6. Measurement of reading achievement was limited to the Basic Reading Tests, published by Houghton-Mifflin Company, to accompany their 1974 basal reading series.

DEFINITIONS OF TERMS

The terms listed here were used throughout the study and are defined as follows:

Achiever. An achiever is a student who is not "educationally disadvantaged" in reading and does not attend a Title I Reading and Math Lab for supplemental instruction in reading.

Low-achiever. A low-achiever is a student who is "educationally disadvantaged" in reading and attends a Title I Lab for supplemental instruction in reading because he/she meets both of the following general criteria:

> An educationally disadvantaged student is a student who is performing at least six (6) months below grade level in reading (language arts) or math.
> An educationally disadvantaged student is a student who demonstrates poor work habits, has a short attention span, has poor self-image and shows a negative attitude toward school (Title I Project Proposal, 1977-78:2).

Reading Achievement. Reading achievement is the total of the scores received on two textbook-related reading tests.

Self-esteem. Self-esteem is the score received on Coopersmith's Self-Esteem Inventory. As noted in Chapter 2, the term "self-concept" is frequently used synonymously with self-esteem in research and in the literature.

Supplemental Reading Instruction. Supplemental reading instruction is the daily instruction in reading received by low-achievers in Title I labs in addition to classroom reading instruction. Each low-achiever attended the Title I lab in his/her school for thirty to forty minutes per day.

Textbook-related reading tests. Textbook-related reading tests are the Basic Reading Tests published by Houghton Mifflin Company to accompany their 1974 basal reading series.

Title I-designated schools. Title I-designated schools are schools which meet federal guidelines for the receipt of monies under Title I of the Elementary and Secondary Education Act. In Billings, Montana, a minimum of 13.9 percent of students in a particular school must come from homes which qualify for free lunch under federal guidelines in order for that school to receive the Title I designation.

SUMMARY

In this chapter, the investigator stated that the purposes of this investigation were as follows: to determine the effect of factors,

namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year and after five months of reading instruction, and to determine the effect of these factors upon change in self-esteem scores. The need for the study was documented. The investigator enumerated questions which were considered as they related to the broad purposes of the research. The general procedures for the investigation were discussed, and limitations and delimitations were noted. Terms used specifically for the research were defined.

Chapter 2

REVIEW OF THE LITERATURE

INTRODUCTION

Approximately one-third of the children in American classrooms fail to become competent readers (Gunderson, 1976:370). Many researchers have offered explanations for underachievement in reading and in other academic areas. In his summary of the research relative to academic underachievement, Fink (1965:486-7) noted that lack of perseverance, asocial tendencies, submission-aggression conflict, hostility, organic brain damage, poor teaching, low socioeconomic level, poor home background, and inadequate school facilities have all been documented as factors contributing to academic underachievement.

In his discussion of the research, Fink said that many of the explanations for academic underachievement are superficial or fragmentary. He suggested, therefore, that

> . . . the problem is based on a central rather than a peripheral motivating force and further that this force is essentially molar rather than molecular. The conceptualization that appears to satisfy best the above requirements is that of the concept of self (Fink, 1965:487).

In the following review of the literature, implications for reading achievement and for self-esteem will be discussed. Evidence will then be cited of the relationship between these two factors.

Consideration will be given to teaching practices as they relate to reading achievement and self-esteem.

Although the terms used throughout the study were defined in Chapter 1, the investigator feels that the review of the literature must be prefaced by the clarification of two terms. For purposes of the investigation, the terms self-concept and self-esteem were used interchangeably. The researcher noted, in examining the literature, that other investigators have used the terms synonymously. Williams (1973:378), for example, entitled her study The Relationship of Self-Concept and Reading Achievement in First Grade Children. The instrument she used to measure self-concept was Coopersmith's Self-Esteem Inventory. Conversely, Opie and Lemasters (1975:381) used the term self-esteem in the title of their study but used the term self-concept in their discussion of the research problem and the findings. Further, McIntire and Drummond (1976:529) cite the Self-Esteem Inventory as one of two ". . . self-concept measures commonly used with elementary school age children."

It must also be noted that indices related to the topic investigated use the terms self-concept and self-esteem interchangeably. The Education Index, for example, has as one of its topics self-concept. The reader is then referred to the heading of self-perception. Under that particular heading, some articles are listed in which the term self-concept appears in the title. Others in the same section have

the term self-esteem in their titles. Similarly, the heading self-esteem precedes titles using both terms--self-concept and self-esteem.

The investigator noted that Psychological Abstracts, Bibliographic Index, and Dissertation Abstracts also use the terms self-concept and self-esteem interchangeably. The same article is frequently listed under both headings.

IMPLICATIONS OF READING ACHIEVEMENT

As early as 1936, the emotional and personal problems of retarded readers were being studied. Carter contended that a child's failure to learn the materials presented to him might lead to frustration or fear which, in its extreme, might cause a "disorganized emotional response." The learning process would then be further inhibited (Robinson, 1946:77).

Ten years later, Robinson summarized the significant research of that period. Like Carter, she alluded to the effects of failure. Robinson indicated that although there were relatively few studies related to academic achievement, they agreed that pleasant stimuli, prior academic success, and praise facilitate learning. Unpleasant associations, failure, and frustration not only inhibit learning; they also potentially result in feelings of shame and reproval (Robinson, 1946:77).

Although Robinson did not refer directly to self-concept, she discussed the frustration and failure cycle in much the same way that current researchers discuss the low self-esteem and reading-failure cycle.

> It seems evident that emotional difficulties may cause reading disability in the beginning and that this disability may, in turn, result in frustration, which further blocks learning and again intensifies the frustration. The interaction and intensification become a vicious circle, leading to intense emotional maladjustments and complete failure to progress in reading (1946:78).

Robinson concluded that the emotional maladjustment of a retarded reader may be either the cause or the result of ". . . the interaction of reading failure and emotional maladjustments" (1946:78).

Investigators have continued to examine the effects of underachievement in reading. Camp and Zimet (1975:109) studied forty-five first-grade children who had been divided into high, middle, and low reading groups on the basis of their skills. Observers recorded the children's behavior in thirty-nine categories. In their discussion of the study, the researchers noted that decreasing reading skill was associated with more time samples in which deviant behavior and interruptions occurred. This corroborates Graubard's (1971) finding that as reading level decreases, behavior problems increase. Glavin and Annesley (1971) also found a significant relationship between behavior problems and reading underachievement.

Although teachers continue to be primarily interested in how well each child can read, and in the extent to which he uses reading skills in other academic areas, they are, according to Austin (1958:24), becoming increasingly concerned with children's feelings about reading. What does a child's ability to read--or the lack of it--mean to him? What needs are being satisfied, or frustrated, as a result of his level of reading skill? What is the process of learning to read doing to him?

> When difficulty in reading does occur, the accompanying feelings of failure and frustration often lead to emotional conflicts. Negative attitudes develop toward reading, and the pupil expresses his dislike of the process in a variety of ways . . . . Depending upon his basic temperament, the child may become defiantly uncooperative, withdrawing and inattentive, or over-anxious and tense (Austin, 1958:24).

Failure in reading has been cited by teachers as a problem common to the dropout, the underachiever, and to students erroneously labeled as "retarded" (Earp, 1974:562). Other serious consequences of reading failure were found in four separate studies, which concluded that,

> . . . in certain instances, failure in reading tends to contribute to juvenile delinquency. In general, the evidence indicates that the person with a reading [difficulty] tends also to be the person with other adjustment problems (Bond and Tinker, 1967:7).

The prognosis, however, is encouraging. Correction of a student's disability actually tends to improve his personal and social adjustment (Bond and Tinker, 1967:7). According to Austin (1958:26), when appropriate methods and materials are employed by a competent, caring teacher, the child will gradually experience success in reading. Improved emotional health results.

> When feelings of achievement and self-confidence are restored, the emotional health of the individual can be expected to show improvement also. Indeed, success in learning to read after a long period of failure may be of greater importance to the individual than the actual use of the ability itself (Austin, 1958:26).

The foregoing section has summarized the research relative to the importance of achievement in reading. Reading failure has been cited as a cause of negative behavior, including juvenile delinquency.

IMPLICATIONS FOR SELF-ESTEEM

Although many definitions for self-esteem have been advanced, most of them center upon an individual's view of himself. For Fink, self-concept is ". . . the attitudes and feelings that a person has regarding himself" (1965:487). He noted that

> It is implicit in this definition that these attitudes and feelings lead to attempts on the part of the individual through various actions to enhance or defend himself (1965:487).

Virginia Satir (1972:21) used the word "pot" to mean self-worth, self-concept, or self-esteem. According to Satir, an individual's pot has as its source not only the individual himself, but also the interaction of the individual with other people.

A. Jackson Stenner, president of National Testing Service, Inc., and William G. Katzenmeyer, professor of education and associate dean of the Graduate School, Duke University, collaborated on a study of the development of self-concept in young children. Based upon their research, they described children with positive self-concepts and children with poor concepts of themselves.

> Children . . . with positive self-concepts are confident of their ability to meet everyday problems and demands and are at ease in their relationships with other people. They compare themselves favorably with their peers and feel that authority figures are supportive and interested in them as individuals. These children tend to be comparatively independent and reliable and are relatively free from anxiety, nervousness, and excessive worry, tiredness, and loneliness. They are seldom considered behavior problems. As for their schoolwork, these children tend to be above average in reading and mathematics. They generally attain higher scores on standardized achievement tests than would be predicted from ability tests. They view school as a happy, worthwhile place to be (1976:356).

According to the authors, children having poor self-concepts exhibit characteristics which are opposite to those mentioned above.

The importance of self-esteem for both academic and personal achievement has been repeatedly discussed in the literature. As will be shown in the next section of this literature review, a positive

self-image may be important for success in learning. It is essential to future achievement. According to Ryan (1975:132), children with positive self-concepts are likely to view the future in a positive way. They expect to succeed. Conversely, children who have experienced failure and who hold negative self-concepts view the future as containing yet more opportunities for failure.

Because self-esteem, more than any other factor, affects an individual's behavior (Ryan, 1975:132-3), it becomes possible that children will exhibit negative behavior which is reflective of negative attitudes toward self. As a result, they often fail to reach their true potential for academic and personal achievement. This phenomenon can be observed in very young children.

> Even by first grade, many can't separate "I'm not very good at reading" (or writing, or arithmetic) from "I'm not very good." And then so much of what they do grows out of negative self-esteem and continues to prove to them how bad they really are (Simon and O'Rourke, 1975:46).

In many cases, the negative behavior resulting from the feelings of "I'm not very good" continues into adulthood. This was demonstrated by Balester in a study of the self-concepts of delinquents. He found that

> . . . adults had more positive self-concepts than juvenile nondelinquents, nondelinquents perceived themselves more positively than first-offender delinquents, and these latter, in turn, possess more positive self-concepts than "repeaters" (Combs, 1959:267).

Hunter's interviews with school-aged children have yielded information which relates good behavior to good feelings about the self, resulting from positive encounters with teachers. The comments of a group of children who had been behavior problems throughout most of their school years indicated that most of their teachers had made them feel devalued. The children generally agreed that they had behaved well in the classrooms of teachers who had encouraged them by saying positive things about them (1975:15).

In summary, although many definitions of self-esteem, or self-concept, have been advanced, the literature indicates that they generally center around the individual's view of himself. Characteristics of individuals having positive self-concepts, and those having negative self-concepts have been discussed. Evidence has been cited which suggests the significance of self-esteem for behavior patterns.

SELF-ESTEEM AND ACADEMIC ACHIEVEMENT

Educators, psychologists, and other researchers have discussed the relationship between self-esteem and academic achievement. Both Burg (1975:362) and Goodlad (1964:12) contended that self-esteem is related to achievement in a cyclical manner. Poor achievement results in a lowered self-image, which perpetuates the poor achievement. Furthermore, ". . . the problems resulting from failure to read block the effort to teach the child to read" (Goodlad, 1964:12). For the

disabled reader, the school experience may reinforce the negative self-concept and the academic failure. "Every school day in nearly every classroom setting he is reminded that he is an inadequate human being. He is embarrassed, ridiculed, and patronized" (Sawyer, 1974:559-60).

Pine (1978:412) reviewed the findings of eleven studies in which measures of self-concept were related to measures of reading achievement. The research with children in grades three through nine indicates that successful readers generally have positive self-concepts; the opposite is generally true of unsuccessful readers.

Burg (1975:362) reports that self-esteem is significant even in the earliest years of a child's formal education. Self-esteem has been shown to have a functional utility at the kindergarten level. At the end of grade two, self-esteem has proven to be a better predictor of achievement in reading than either intelligence or readiness tests.

The findings of other researchers, however, refute the ones reported above. Williams examined objective scores of young children's self-concepts and their first and second grade reading achievement scores. "There was essentially no relationship between the children's self-concepts and their first and second grade reading achievement" (1973:379). Similarly, two studies of first and second graders, reported by Pine, ". . . failed to find a significant difference

between the self-concept scores of successful and unsuccessful readers" (1978:413).

A study of 198 pupils from fourth, fifth, and sixth grades examined not only self-concept and achievement but also teacher ratings of students' self-concepts. No significant correlation was found between self-concept and reading or mathematics achievement scores. Interestingly, however, "teacher's rating of the child's self-concept was significantly related to achievement in reading and mathematics" (Chang, 1976:112).

The findings of a study of elementary and junior high male underachievers also questioned the widely reported relationship between self-concept and achievement. When both groups of boys were combined, a low self-concept was related to academic underachievement in approximately half of the subjects (Opie and Lemasters, 1975:384).

Although little research has been conducted relative to self-concept, achievement, and intelligence, it is important to note that children with average or above average intelligence test scores are often academic underachievers. In her study of 133 first and second grade children, Williams (1973:379) hypothesized a positive correlation between self-concept scores and reading achievement scores in grades one and two. She also hypothesized that self-concept scores are better predictors of reading achievement scores than are intelligence scores. The investigator failed to find significant correlations

between self-concept and first or second grade reading achievement. Self-concept scores were not found to be better predictors of reading achievement than intelligence test scores. Moreover, according to Williams, there was not a significant relationship between self-concept and intelligence.

The literature reviewed herein indicated conflicting findings relative to the relationship between self-esteem and reading achievement. In general, however, these two factors seem to be more closely related in the early years of a child's formal education. Researchers have failed to find a significant correlation between self-concept and intelligence.

TEACHING PRACTICES AS THEY RELATE TO SELF-ESTEEM

Although it is generally assumed that teachers want to employ teaching strategies and materials that will benefit their students, teachers are frequently unaware of potential negative effects inherent in some of their methods. For example, regardless of classroom organization, children are frequently grouped by ability for reading instruction. The stage is set for subtle forms of competition between reading groups, often noted as early as first grade. Camp and Zimet alluded to the potential consequences of classroom competition.

> . . . a competitive classroom milieu may . . . heighten the less successful students' dissatisfaction with their own performance with a resulting increase in inattentiveness and attention-getting behavior (1975:110).

In their discussion of ability grouping, another team of investigators noted that although there is little significant research relative to the effects of ability grouping for reading instruction, "Some [researchers] suspect that a concomitant of ability grouping in reading is the development of the child's self-concept" (Miller and Hering, 1975:389).

Although most teachers emphatically deny showing favoritism to particular students or groups of students, the research findings of Miller and Hering (1975:391) pointed to one possible source of lower self-esteem in underachieving students. The researchers found that many teachers prefer to work with children in the highest reading group. The preference for giving the most instruction to the children who need it the least is not only inconsistent with a basic purpose for grouping by reading ability. According to the investigators, it also presents an opportunity for underachieving readers to perceive negative teacher attitudes toward them as learners, and possibly as people. The researchers cautioned teachers, therefore, to ". . . guard against any negative effects that may be fostered through such grouping practices with children in reading" (1975:391).

Davidson and Lang (1965:437) demonstrated that children do, indeed, perceive how their teachers feel about them. In their study of children's perceptions of their teachers' feelings, the investigators found a positive and significant correlation between children's

self-perceptions and children's perceptions of their teachers' feelings toward them. Children with more favorable self-images generally perceived their teachers' attitudes toward them more favorably.

As shown above, competition is a subtle variable which potentially affects self-esteem and success in learning to read. It may be seen in the earliest years of a child's education. The same is true of pressure. Earp commented on the presence of pressure in classrooms, and noted the results of pressure upon the natural learning process. She suggested that strong emotional overtones accompany the process of learning to read. For the child who is having difficulty with this process, the pressure contributes to his failure (1974:562).

Many subtle forms of pressure are present within the classroom and within the child himself. A more obvious form of pressure lies in testing. According to Sawyer, teachers often assume that the child can learn specific skills, but simply hasn't. This assumption leads to repetitive teaching, and ultimately, to failure for the child.

> Diagnoses tend to be conducted within a specific conceptual framework. Reading teachers tend to focus on an assessment of reading skills mastered and those in which the child is deficient. Clearly, any child experiencing difficulty in reading will exhibit a profile of skill deficiencies, and the inability to use these skills will directly inhibit reading performance. A prescription centering on instruction in the skill deficient areas would seem reasonable. The assumption would be that the child is capable of learning these skills but for some unknown reason has not yet learned them. Most

> if not all special reading class instruction in our public schools is predicated upon this assumption. For some children acceptance of this assumption and the resulting recommendation for "more of the same" is an automatic prescription for frustration and failure (Sawyer, 1975:620-1).

Diagnoses and remedial suggestions which focus only upon a child's failures doom him to further failure and perpetuate the low achievement, low self-esteem cycle (Sawyer, 1975:621).

Teaching materials must also be considered as they relate to self-concept and success in learning to read. Despite the attempts of educators, researchers, and publishers to create a variety of materials for the teaching of reading, basal readers predominate. Indeed, "in 95 percent of our schools, the basal reader is the reading program" (Gunderson, 1976:371). One can only speculate upon the consequences for the child who does not "fit" the program.

Implications of teaching strategies for students' self-esteem have been discussed. Grouping for reading instruction, with its concomitant competition, has been examined as it relates to the development of self-esteem. Teacher preference for particular reading groups, pressure, and teaching materials have also been discussed as factors relating to self-esteem.

The foregoing review of the literature examined the implications of reading achievement and of self-esteem. Evidence was cited of the relationship between these two factors. Consideration was given to teaching practices as they relate to reading achievement and self-concept.

Chapter 3

PROCEDURES

INTRODUCTION

The purposes of this investigation were as follows: to determine the effect of factors, namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year and after five months of reading instruction, and to determine the effect of these factors upon change in self-esteem scores.

In this chapter, the investigator will discuss in detail the procedures of the study. Sections included in this chapter are as follows: (1) population description and sampling procedures, (2) reading instructional procedure, (3) methods of collecting data, (4) methods of organizing data, (5) statistical hypotheses, (6) analysis of the data, and (7) precautions taken for accuracy.

POPULATION DESCRIPTION AND SAMPLING PROCEDURE

Prior to the fall opening of school, the investigator met with appropriate administrative officials of School District #2, Billings, Montana. The purposes of the research and the procedures to be employed in the investigation were discussed. The investigator requested the cooperation of the principals of the nine Title I schools. Although the administrators with whom the investigator

discussed the research indicated that they believed all nine principals would cooperate, participation on the investigation was voluntary. Indeed, all nine principals did cooperate in the research.

Two groups of 142 students each were taken from the population of second through sixth grade children who attended the nine Title I-designated public schools in Billings, Montana during the 1978-79 academic year. Low-achievers were all students enrolled in Title I labs for supplemental reading instruction. Achievers were selected from the remaining student population according to the judgment of the investigator. Participants were grouped according to grade level and sex.

READING INSTRUCTIONAL PROCEDURES

Procedures for the achiever group consisted of the reading instructional program based upon the Houghton Mifflin Reading Series, 1974 edition. The instruction was implemented by the subjects' regular reading teachers. In addition to classroom reading instruction, the low-achiever group received supplemental reading instruction in the Title I labs. The basis for that instruction was also the Houghton Mifflin Reading Series. After completion of each section, or "magazine," of the basal texts, subjects were given a Basic Reading

Test, developed by Houghton Mifflin Company, to accompany that particular section of the text. After each test, subjects were individually informed of their performance on that test. For purposes of this investigation, each subject took two Basic Reading Tests.

Control of teaching style, materials, and classroom management techniques was beyond the scope of this investigation.

METHODS OF COLLECTING DATA

Reading Achievement Data

Students were classified as "low-achievers" or "achievers" based upon their attendance or non-attendance in the Title I labs in their schools for supplemental instruction in reading. Specific information relative to achievement in reading, used in the analysis of hypothesis ten, was collected from an examination of students' scores on the first two Basic Reading Tests taken during the 1978-79 academic year.

Each of the reading tests for grades two through six consists of a test booklet in which the student works independently. The four skill areas and their components are as follows:

Decoding Skills: Word-attack, Expressional Skills, Pronunciation. Comprehension Skills: Literal Comprehension, Interpretive Thinking, Meaning-Acquisition. Reference and Study Skills: Information-Locating, Information-Appraising,

Information-Organizing. Literary Skills: Classification, Elementary Identification, Quality Evaluation.

Separate scores are achieved for each component area. Composite scores are calculated for each of the four major skill areas and for the total test. For purposes of this investigation, total test scores were used as the measure of reading achievement. The investigator discussed use of the total test scores, as opposed to use of the composite scores for the four skill areas, with Mr. Roland Flynn, former Reading Consultant for School District #2, and with Ms. RuthAnn Green, a representative of Houghton Mifflin Company. Both Mr. Flynn and Ms. Green indicated that use of total test scores was legitimate for purposes of the investigation. Letters from Mr. Flynn and Ms. Green relative to that issue appear in Appendix A and an explanation of the reading achievement scores appears in Appendix B.

Information concerning the reliability and validity of the Basic Reading Tests does not accompany the materials distributed by Houghton Mifflin Company for use in the schools. Therefore, the investigator telephoned Ms. RuthAnn Green, a representative of the reading department at Houghton Mifflin, and asked for the necessary information. In her written reply to the investigator, Ms. Green indicated that "it is Houghton Mifflin Company's policy not to distribute test data on its various programs." The following information, however, was provided to the investigator:

All tests are validated through a variety of measures, however; learner verification studies, field testing, teacher attitude questionnaires, and item analysis studies by a staff-consultant on testing who regularly screens the reading testing program.

The most recent reading learner verification study was in 1976-77 for THE HOUGHTON MIFFLIN READING SERIES, 1976 Edition. The basic purpose of this study was to obtain feedback on the learning-teaching effectiveness of the HMRS program that can be used to enhance the instructional quality of future editions. The two types of data collected in this study were:

Learner Test Data: Data on the HMRS Tests of Basic Reading Skills were collected from a national cross-section of some 1,000 students in six elementary schools using the program, grades K-6. The sample is representative of a cross-section of five major characteristics: geographic diversity, community-type diversity, socio-economic diversity, racial and ethnic diversity, and diversity of ability levels. The selected classes were supplied with complementary sets of the test materials. The teachers of these classes were asked to teach the program in their normal way and to administer the proper tests at the appropriate time as they went along. Periodically throughout the school year, the teachers forwarded test data to Houghton Mifflin for processing and analysis. Essentially, the test results indicate that most pupils can adequately perform most of the skills in the HOUGHTON MIFFLIN READING SERIES after instruction. The sample clearly meets the "80/80 mastery criterion"--that is more than 80 percent of the time, the sample demonstrated mastery at or above the 80.0 "difficulty" level. ("Difficulty" is the percent of students who answered a test item correctly.)

Teacher Attitude Data: Teacher input was gathered by a direct mail attitudinal questionnaire sent to teachers in a cross-section of schools using the program in their classrooms, grades K-6 . . . .

The test and questionnaire results of these two studies will be used to eliminate or rewrite items where test precision was not obtained. It may also be used in reorganizing the tests or, perhaps, to revise certain areas of the program.

A copy of Ms. Green's response to the investigator's request for information concerning reliability and validity of the Basic Reading Tests appears in Appendix C.

Self-Esteem Data

Stanley Coopersmith's Self-Esteem Inventory (SEI) was used in order to collect self-esteem data on the subjects. The SEI, which has been widely used with subjects ranging in age from eight through adult, is comprised of five subscales: General self; social self-peers; Home-parents; Lie scale; School-academic. With the exception of the Lie scale, the subscales do not have to be scored separately. For purposes of this investigation, therefore, all references to self-esteem were based upon the composite score.

The fifty-eight items on the SEI were read to the children by their teachers, a procedure which, according to Coopersmith, is acceptable (Coopersmith, 1960). Administration time for the SEI was approximately twenty minutes. Appendix D presents a copy of Dr. Coopersmith's letter granting permission to reproduce the SEI, a copy of which appears in Appendix E. Check marks indicate correct, or high self-esteem, responses. Because the directions were given orally, the directions which appear at the top of the SEI were omitted. Scoring information, which appears in the top right corner, was omitted from the forms prepared for this investigation.

Immediately preceding the first administration of the SEI, each teacher had a brief discussion with his/her students telling them that a college student was interested in learning how children feel about themselves. The importance of telling true feelings was emphasized. Students were assured that their answers were "private" because their response sheets would be immediately placed in a stamped, addressed envelope (provided by the investigator) and mailed to the college student.

The teacher then explained that some sentences would be read to the children. Showing them the response sheet, the teacher said:

> If the sentence tells how you usually feel, put an "x" in the column "Like me." If the statement does not tell how you usually feel, put an "x" in the column marked "Not like me."

After reminding the children that their answers would be "private," the teacher gave the SEI. Upon completion of the form, the answer sheets were collected and placed in the envelope. As the children watched, the envelope was sealed. A child was designated to take the envelope to the school office, from which it was mailed to the investigator.

After approximately five months, and after the children had taken at least two of the Basic Reading Tests and had been informed of their performance on those tests, the SEI was given again following the procedure discussed above.

Coopersmith reported test-retest reliability, after a five-week interval, to be .88 (Coopersmith, 1967:1). Following is a summary, provided by Coopersmith upon request, of validity findings of the SEI.

> Convergent: Crandall (Shaver and Robinson, 1973) has found correlations of .59 and .60 between the short form and the Rosenberg scale for college students (N about 300). Weinberg (personal communication) reports a correlation of .63 between the Soares scale and the longer Coopersmith scale and .60 between a derived picture test and the long scale (Getsinger, et al., 1972). Taylor and Reitz (1968) report a correlation of .45 between the CPI self-acceptance scale and the longer Coopersmith scale, and correlations of .42 to .66 with other scales. Ziller, et al., (1969) found correlations for males of .46 with the Bill's scale, .37 with the Cutick scale, and .02 with the Ziller scale; for females, the correlations were .17, .23 and .04.
>
> Discriminant: Taylor and Reitz (1968) found correlations of .75 and .44 with the Edwards and the Marlowe-Crowne social desirability scales.
>
> Predictive: Coopersmith (1967) builds a nomological net suggesting how positive self-esteem might develop. Briefly, he found that parents of high esteem children report high acceptance of the child, setting clear and explicated rules, setting positive examples, and providing an overall level of quality stimulation and interaction. The entire book builds an outline of how parents might constructively affect children's self-esteem.
>
> On the basis of studies conducted and reported to him, Coopersmith reports that SEI scores are significantly related to creativity, academic achievement, resistance to group pressures, willingness to express unpopular opinions, perceptual constancy (all Coopersmith, 1967); perceived reciprocal liking (Simon and Bernstein, 1971); perceived popularity (Simon, 1972); anxiety (general and test) (Many, 1973); selection of difficult tasks (Goodstadt and Kipinis, 1971); effective communication between parents and youth (Matteson, 1973); family adjustment (Matteson, 1973) (Coopersmith, 1967:2).

By agreement with administrative personnel in School District #2, Billings, Montana, the anonymity of individual children was guaranteed by assigning to each child a number designating him, his school, sex, grade level, and achiever or low-achiever category.

METHODS OF ORGANIZING DATA

Data were collected from two administrations of the SEI and from two Basic Reading Tests. Each participant was assigned an identification number. After data were hand-coded and checked, they were entered into a data file and verified. Errors in coding were then corrected. Data were subjected to computer analysis using the Statistical Packages for Social Sciences (Nie et al., 1975). The results of the study were then presented under three categories: First SEI Scores; Second SEI Scores; Change in SEI Scores. After each null hypothesis was stated, a table was constructed to summarize the data. A discussion of the findings relative to that hypothesis followed.

STATISTICAL HYPOTHESES

The purposes of this investigation were as follows: to determine the effect of factors, namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year and after five months of reading instruction, and to determine the effect of these factors upon change in self-esteem scores.

In order to draw conclusions relative to the questions (pages 2-4) which relate to the broad purposes of this investigation, ten hypotheses were postulated. For purposes of clarity, the hypotheses are grouped according to First SEI Scores (from beginning of students' academic year), Second SEI Scores (after five months of reading instruction), and Change in SEI Scores. All hypotheses were tested at the .05 level of significance. If an error were made in this investigation, to commit a Type I error and reject a true null hypothesis would be less serious than to commit a Type II error and thus not reject a false null hypothesis. In other words, the possibility of saying that a difference existed when no such difference did exist was of relatively less importance than not recognizing a difference that actually did exist (Ferguson, 1976).

The hypotheses formulated for this study follow.

Hypotheses Related to First SEI Scores

Null Hypothesis 1. There is no difference between the self-esteem scores of achievers and low-achievers before they are subjected to a reading instructional program.

Null Hypothesis 2. There is no difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, before they are subjected to a reading instructional program.

Null Hypothesis 3. There is no interaction between sex and achievement on self-esteem scores before students are subjected to a reading instructional program.

Hypotheses Related to Second SEI Scores

Null Hypothesis 4. There is no difference between the self-esteem scores of achievers and low-achievers after they have been subjected to a reading instructional program for five months.

Null Hypothesis 5. There is no difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, after they have been subjected to a reading instructional program for five months.

Null Hypothesis 6. There is no interaction between sex and achievement on self-esteem scores after students have been subjected to a reading instructional program for five months.

Hypotheses Related to Change in SEI Scores

Null Hypothesis 7. There is no difference in the change in self-esteem scores between achievers and low-achievers as a result of having been subjected to a reading instructional program for five months.

Null Hypothesis 8. There is no difference in the change in the self-esteem scores between achievers and low-achievers, when

examined by grade level, as a result of having been subjected to a reading instructional program for five months.

Null Hypothesis 9. There is no interaction between sex and achievement on change in self-esteem scores as a result of having been subjected to a reading instructional program for five months.

Null Hypothesis 10. There is no linear relationship between change in self-esteem scores and other factors, such as reading achievement scores, grade level, and sex.

ANALYSIS OF DATA

The ten hypotheses, as listed in the previous section, were related to First SEI Scores (hypotheses 1-3), Second SEI Scores (hypotheses 4-6), and Change in SEI Scores (hypotheses 7-10). In each of these three general areas, the first two hypotheses were analyzed using the student's t-test in order to determine whether differences existed between self-esteem scores of achievers and low-achievers, when examined as two groups, and when examined by grade level. The third hypothesis in each section was analyzed using two-way analysis of variance in order to determine whether there was an interaction between achievement and sex on self-esteem scores.

The tenth hypothesis was analyzed using stepwise multiple regression in order to determine whether a linear relationship existed

between change in self-esteem scores and other factors, such as reading achievement scores, grade level, and sex.

PRECAUTIONS TAKEN FOR ACCURACY

All collected data were hand-coded and checked by the investigator with the assistance of a qualified, independent source. The data were then entered into a data file and were verified. After errors in coding were corrected, data were subjected to computer analysis using the Statistical Package for Social Sciences (SPSS). The SPSS program was implemented on the Xerox Sigma 7 computer at Montana State University, Bozeman, and on the DEC System 10 computer at Eastern Montana College, Billings.

SUMMARY

The purposes of this investigation were as follows: to determine the effect of factors, namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year and after five months of reading instruction, and to determine the effect of these factors upon change in self-esteem scores.

The research was conducted during the 1978-79 academic year in the nine Title I-designated public schools in Billings, Montana. Two groups of students were involved. The 142 achievers did not attend Title I labs for supplemental instruction in reading. The 142

low-achievers did attend the Title I labs for supplemental instruction in reading.

Treatment for both groups consisted of the reading instructional program, based upon the 1974 edition of the Houghton Mifflin Company basal readers. In addition to classroom reading instruction, low-achievers received supplemental reading instruction in the Title I labs in their schools. The basis for that instruction was also the 1974 edition of the Houghton Mifflin Company basal readers.

"Low-achiever" and "achiever" categories were based upon attendance or non-attendance in Title I labs for supplemental reading instruction. Specific data relative to reading achievement were collected for each student from two Basal Reading Tests, published by Houghton Mifflin to accompany their basal readers. Self-esteem data were collected for each student from two administrations of the Self-Esteem Inventory.

All data were tabulated and statistically analyzed. The results of the study were presented under three categories: First SEI Scores; Second SEI Scores; Change in SEI Scores.

Ten hypotheses, which relate to the problem of the study, were postulated. After data were hand-coded and checked, they were verified. Errors in coding were corrected. The hypotheses were then tested using the student's t-test, two-way analysis of variance, or

multiple regression. The SPSS programs used for this investigation were implemented on the Xerox Sigma 7 computer at Montana State University, Bozeman, and on the DEC System 10 computer at Eastern Montana College, Billings.

Chapter 4

ANALYSIS AND DISCUSSION

INTRODUCTION

During the first week of the 1978-79 academic year, students in grades two through six in the nine Title I-designated schools in Billings, Montana were given the Self-Esteem Inventory (SEI). After having been subjected to the Houghton Mifflin reading program for approximately five months, and after having taken two textbook-related reading tests, the students were again given the SEI.

A complete set of data for each student included two SEI score and two reading test scores. Students for whom complete data were available were divided into two groups. Achievers were students who were not enrolled in Title I Reading and Math Labs for supplemental reading instruction. Low-achievers were students who were enrolled in Title I labs for supplemental reading instruction. Participants were grouped according to grade level and sex. The resultant population consisted of 142 achievers and 142 low-achievers in grades two through six. The distribution of the population according to grade level and sex is presented in Table 1.

Table 1

Distribution of Population by Grade Level and Sex

Grade	Males		Females		Total
	Achievers	Low-Achievers	Achievers	Low-Achievers	
2	21	21	8	8	58
3	19	17	13	15	64
4	11	13	14	13	51
5	14	14	11	11	50
6	19	16	12	14	61
Total	84	81	58	61	284

Data obtained from the 284 participants responding to two administrations of the SEI were computer scored. These scores, together with scores obtained from the two textbook-related reading tests, were then computer analyzed. Hypotheses one through nine were tested by using either the student's t-test or analysis of variance. Multiple regression was used to generate a prediction equation to provide a basis upon which hypothesis ten might be rejected or not rejected. The reader is reminded that, for purposes of the present investigation, the significance level was .05.

The analysis and results of this study are presented in this chapter under three categories: First SEI Scores; Second SEI Scores; Change in SEI Scores. In all three categories, self-esteem scores

are examined as they relate to achievement or low-achievement in reading. Additionally, in the third category (Change in SEI Scores), reading test scores, grade level, sex, and change in self-esteem scores are examined to determine whether a linear relationship exists between these variables and change in self-esteem scores. After each null hypothesis is presented, a table is given to summarize the data. A discussion of the findings relative to that hypothesis follows.

ANALYSIS AND DISCUSSION

First SEI Scores

In this section, the findings relative to scores for achievers and low-achievers on the first SEI, administered during the first week of the 1978-79 academic year, are presented. Three hypotheses are discussed, as follows:

Null Hypothesis 1. There is no difference between the self-esteem scores of achievers and low-achievers before they are subjected to a reading instructional program.

Student's t-test results for achievers and low-achievers on the first administration of the SEI are presented in Table 2.

Table 2

Summary of Student's t-Test Results for Achievers and Low-Achievers on the First Administration of the SEI

Degrees of Freedom	Mean for Achievers	Mean for Low-Achievers	t Value	Probability Value
282	30.75	27.74	3.29	.001*

*Significant at .05 level.

Since the calculated probability value was less than .05, the null hypothesis that there is no difference between the self-esteem scores of achievers and low-achievers before they are subjected to a reading instructional program was rejected. Therefore, it is accepted that this is a difference between self-esteem scores of achievers and low-achievers before they are subjected to a reading instructional program.

As illustrated in Table 2, the mean score on the first administration of the SEI was higher for achievers than for low-achievers. The calculated probability value was .001. Because the SEI was administered during the first week of the academic year, before initiation of the reading instructional program, this difference between achievers and low achievers in self-esteem scores may have been influenced by factors other than success level in reading during that

academic year. It is clear, however, that the two groups of students--achievers and low-achievers--were significantly different in at least one variable at the beginning of the investigation: level of self-esteem as measured by the SEI.

Null Hypothesis 2. There is no difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, before they are subjected to a reading instructional program.

The Students' t-test results for achievers and low-achievers, in grades two through six, on the first administration of the SEI, are presented in Table 3.

Table 3

Summary of Students' t-Test Results for Achievers and Low-Achievers, by Grade Level, on the First Administration of the SEI

Grade	Degrees of Freedom	Mean for Achievers	Mean for Low-Achievers	t Value	Probability Value
2	56	28.0	26.3	.98	.33
3	62	28.2	25.8	1.47	.15
4	49	29.0	29.3	-.16	.87
5	48	33.8	29.4	1.99	.052
6	59	34.8	28.4	3.26	.002*

*Significant at .05 level.

Since the calculated probability value was greater than .05 for grades two through five, for those grades the null hypothesis that there is no difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, before they are subjected to a reading instructional program, was not rejected. Therefore, if a difference exists between the self-esteem scores of achievers and low-achievers in grades two through five, before they are subjected to a reading instructional program, it has not been demonstrated in this study.

Since the calculated probability was less than .05 for grade six, for that grade the null hypothesis that there is no difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, before they are subjected to a reading instructional program, was rejected. Therefore, it is accepted that there is a difference between the self-esteem scores of achievers and low-achievers, in grade six, before they are subjected to a reading instructional program.

With the exception of grade three, in which low-achievers scored slightly higher than achievers, the mean scores on the first SEI administration were higher for achievers than for low-achievers. However, a significance level of .05 was found only for grade six, at which the probability value was .002.

Because the first SEI was administered during the first week of the academic year, it is unlikely that the differences between achievers and low-achievers in self-esteem scores can be attributed to level of success in reading during that academic year. Further, whatever factors influenced the first self-esteem score of sixth-graders, seemingly were non-operant for children in grades two through five.

Null Hypothesis 3. There is no interaction between sex and achievement on self-esteem scores before students are subjected to a reading instructional program.

The analysis of variance results for the variables of sex and achievement on the first SEI scores are presented in Table 4.

Since the calculated probability value for F for the interaction between sex and achievement was greater than .05, the null hypothesis that there is no interaction between sex and achievement on self-esteem scores before students are subjected to a reading instructional program, was not rejected. Therefore, if there is an interaction between sex and achievement on SEI scores before students have been subjected to a reading instructional program, it has not been demonstrated in this study. However, the main effect of achievement was significant, as shown in the discussion relative to Hypothesis 1. The main effect of sex was not significant, as shown in Table 4.

Specifically, the two-way analysis of variance revealed that when the main effects of achievement and sex were considered together

Table 4

Analysis of Variance Results for Achievement and Sex on the First SEI Scores

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F	Signif. of F
Main effects	689.68	2	344.84	5.82	.003*
Achievement	634.24	1	634.24	10.70	.001*
Sex	47.68	1	47.68	.81	.370
Interactions (Achievement/Sex)	54.90	1	54.90	.927	.337
Explained	744.58	3	248.20	4.20	.006*
Residual	16,585.65	280	59.23		

*Significant at the .05 level.

they had a significant influence (.003) on students' self-esteem scores. When these two variables were considered separately, achievement had a significant effect (.001) on self-esteem, while the effect of sex was not significant (.370). The interaction between achievement and sex was not significant (.337) in influencing students' self-esteem during the first week of the academic year.

Summary of first SEI scores. The findings relative to scores for achievers and low-achievers on the first SEI, administered during the first week of the 1978-79 academic year, have been presented in

this section. When considered as two groups, achievers had significantly higher SEI scores than did low-achievers. When considered by grade level, however, achievers' SEI scores were significantly higher than low-achievers' SEI scores only in grade six. Neither sex, nor the interaction between achievement and sex on first SEI scores was significant.

Second SEI Scores

The findings relative to scores for achievers and low-achievers on the second SEI are presented in this section. The three hypotheses discussed in this section parallel the three hypotheses which were related to the first SEI. However, whereas first SEI scores were obtained during the first week of the 1978-79 academic year, the second SEI scores were obtained after subjects had been subjected to a reading instructional program for five months.

Null Hypothesis 4. There is no difference between the self-esteem scores of achievers and low-achievers after they have been subjected to a reading instructional program for five months.

The results of the Students' t-test for achievers and low-achievers on the second administration of the SEI are presented in Table 5.

Table 5

Comparison of Students' t-Test Results for Achievers and Low-Achievers on the First and Second Administrations of the SEI

	Degrees of Freedom	Mean for Achievers	Mean for Low-Achievers	t Value	Probability Value
First Administration	282	30.75	27.74	3.29	.001*
Second Administration	282	32.58	28.34	4.09	.000*

*Significant at .05 level.

The calculated probability value was less than .05. Therefore, the null hypothesis that there is no difference between the self-esteem scores of achievers and low-achievers after having been subjected to a reading instructional program for five months was rejected. Therefore, it is accepted that there is a difference between the self-esteem scores of achievers and low-achievers after they have been subjected to a reading instructional program for five months.

As was discussed in the section dealing with first SEI scores, achievers' mean score on the second SEI was significantly higher than low-achievers' mean score. Although the change in self-esteem scores is discussed in relation to Hypothesis 7 (p. 39), it should be noted

here that the mean score increased slightly from first to second SEI administrations for low-achievers as well as for achievers.

Null Hypothesis 5. There is no difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, after they have been subjected to a reading instructional program for five months.

The results of the Students' t-test for achievers and low-achievers, in grades two through six, on the second administration of the SEI are presented in Table 6.

Since the calculated probability value was greater than .05 for grades two through four, for those grades the null hypothesis that there is no difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, after they have been subjected to a reading instructional program for five months, was not rejected. Therefore, if a difference exists between the self-esteem scores of achievers and low-achievers, in grades two through four, after they have been subjected to a reading instructional program for five months, it has not been demonstrated in this study.

Since the calculated probability level was less than .05 for grades five and six, for those grades the null hypothesis that there is no difference between the self-esteem scores of achievers and low-achievers, when examined by grade level, after they have been subjected to a reading instructional program for five months, was

Table 6

Comparison of Students' t-Test Results of
First and Second SEI Administrations
for Achievers and Low-Achievers,
When Examined by Grade Level

Grade	Degrees of Freedom	Mean for Achievers		Mean for Low-Achievers		t Value		Probability Value	
		First Adm.	Second Adm.	First Adm.	Second Adm.	First Adm.	Second Adm.	First Adm.	Second Adm.
2	56	28.0	28.4	26.3	28.2	.98	.46	.33	.96
3	62	28.2	32.8	25.8	29.3	1.47	1.77	.15	.08
4	49	29.0	28.6	29.3	27.5	-.16	.45	.87	.66
5	48	33.8	35.1	29.4	26.9	1.99	3.18	.052	.003*
6	59	34.8	37.6	28.4	29.4	3.26	3.97	.002*	.000*

*Significant at the .05 level

rejected. Therefore, it is accepted that there is a difference between the self-esteem score of achievers and low-achievers, in grades five and six, after they have been subjected to a reading instructional program for five months.

On the second SEI administration, the mean scores for achievers were higher than mean scores for low-achievers at all grade levels. The difference between achievers and low-achievers in self-esteem scores was significant only in grades five and six. It seems that in grades two through four, achievement during five months of the reading program did not affect students' self-esteem scores. For grades five and six, it might appear that achievement during five months of the reading program influenced self-esteem scores. However, as will be revealed in the section dealing with change in self-esteem scores (p. 59), such was not the case.

Null Hypothesis 6. There is no interaction between sex and achievement on self-esteem scores, after students have been subjected to a reading instructional program for five months.

The analysis of variance results for the variables of sex and achievement on the second SEI scores are presented in Table 7.

Table 7

Analysis of Variance Results for Achievement and Sex on the Second SEI Scores

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F	Signif. of F
Main effects	1,306.48	2	653.24	8.50	.000*
Achievement	1,271.90	1	1,271.90	16.54	.000*
Sex	26.16	1	26.16	.34	.560
Interactions (Achievement/Sex)	18.32	1	18.32	.24	.630
Explained	1,324.80	3	441.60	5.74	.001*
Residual	21,531.78	280	76.90		

*Significant at the .05 level.

Since the calculated probability value of F for the interaction between sex and achievement was greater than .05, the null hypothesis that there is no interaction between sex and achievement on self-esteem scores, after students have been subjected to a reading instructional program for five months, was not rejected. Therefore, if there is an interaction between sex and achievement on SEI scores, after students have been subjected to a reading instructional program for five months, it has not been demonstrated in this study. However, the main effect of achievement was significant, as shown in the

discussion relative to Hypothesis 4. The main effect of sex was not significant, as shown in Table 7.

Specifically, two-way analysis of variance revealed that, when the main effects of achievement and sex were considered together, they had a significant influence (.000) on students' self-esteem scores. When these two variables were considered separately, achievement had a significant effect (.000) on self-esteem scores, while the effect of sex was not significant (.560). The interaction between achievement and sex was not significant (.630) in influencing students' self-esteem after five months of reading instruction.

Summary of second SEI scores. The findings relative to scores for achievers and low-achievers on the second SEI, administered after subjects had been subjected to five months of the reading instructional program, have been presented in this section. When considered as two groups, achievers had significantly higher SEI scores than did low-achievers. When considered by grade level, however, achievers' SEI scores were significantly higher than low-achievers' SEI scores only in grades five and six. Neither sex nor the interaction between achievement and sex on second SEI scores was significant.

Change in SEI Scores

The findings relative to change in scores from the first to the second SEI for achievers and low-achievers are presented in this section. The same order will be followed as in the first two sections. Three hypotheses will be examined, the first two by the student's t-test, the third by analysis of variance. Additionally, stepwise multiple regression will be used to determine whether a linear relationship exists between change in self-esteem scores and the independent variables of reading scores, grade level, and sex.

Null Hypothesis 7. There is no difference in the change in self-esteem scores between achievers and low-achievers, as a result of having been subjected to a reading instructional program for five months.

The Students' t results for the change in self-esteem scores for achievers and low-achievers are presented in Table 8.

Table 8

Summary of Students' t Results for Achievers and Low-Achievers on the Change in SEI Scores

Degrees of Freedom	Mean Change for Achievers	Mean Change for Low-Achievers	t Value	Probability Value
282	1.9	.60	1.36	.174

Since the calculated probability value was greater than .05, the null hypothesis that there is no difference in the change in self-esteem scores between achievers and low-achievers, as a result of having been subjected to a reading instructional program for five months, was not rejected. Therefore, if a difference exists in the change in self-esteem scores between achievers and low-achievers, after students have been subjected to a reading instructional program for five months, it was not demonstrated in this study.

For achievers and for low-achievers, the change in mean SEI scores was positive. Although the mean for the change in SEI scores was higher for achievers than for low-achievers, the probability value of .174 was not significant. Therefore, for achievers and for low-achievers, self-esteem remained relatively stable during the five-month period. It was not significantly affected by achievement in the reading program, nor by other extraneous variables.

Null Hypothesis 8. There is no difference in the change in self-esteem scores between achievers and low-achievers, when examined by grade level, as a result of having been subjected to a reading instructional program for five months.

The Students' t results for the change in self-esteem scores for achievers and low-achievers in grades two through six are presented in Table 9.

Table 9

Summary of Students' t Results for Change in Self-Esteem Scores of Achievers and Low-Achievers, When Examined by Grade Level

Grade	Degrees of Freedom	Mean Change for Achievers	Mean Change for Low-Achievers	t Total	Probability Value
2	56	.38	2.0	-.70	.49
3	62	4.60	3.5	.56	.58
4	49	-.40	-1.9	.74	.47
5	48	1.20	-2.5	1.59	.11
6	59	2.70	1.0	1.26	.21

Since the calculated probability value was greater than .05 for grades two through six, the null hypothesis that there is no difference in the change in self-esteem scores between achievers and low-achievers, when examined by grade level, as a result of having been subjected to a reading instructional program for five months, was not rejected. Therefore, if a difference exists in the change in self-esteem scores between achievers and low-achievers, when examined by grade level, as a result of having been subjected to a reading instructional program for five months, it has not been demonstrated in this study.

Mean scores for achievers and low-achievers in grades two through six, for both SEI administrations, were presented in Table 6,

page 55. As shown in Table 9, the change in mean SEI scores was positive in all grades except fourth for achievers. For low-achievers, the change in mean SEI scores was positive in all grades except fourth and fifth. However, the change was not significant at any grade level for achievers or for low-achievers.

On the first SEI administration, achievers scored significantly higher than low-achievers in grade six. On the second SEI, achievers scored significantly higher than low-achievers in grades five and six. However, since the change in SEI scores from first to second administration was not significant at any grade level, it appears that, on the second SEI, the higher scores earned by fifth and sixth grade achievers might be attributed to factors other than achievement during the five months of the reading program.

Null Hypothesis 9. There is no interaction between sex and achievement on change in self-esteem scores, as a result of having been subjected to a reading instructional program for five months.

Analysis of variance results for the variables of achievement and sex on the change in SEI scores are presented in Table 10.

Table 10

Analysis of Variance Results for Achievement and Sex on the Change in SEI Scores

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F	Signif. of F
Main effects	112.28	2	56.14	.91	.404
Achievement	109.82	1	109.82	1.78	.183
Sex	3.20	1	3.20	.05	.820
Interactions (Achievement/Sex)	9.80	1	9.80	.16	.691
Explained	122.07	3	40.69	.66	.577
Residual	17,268.40	280	61.67		

Since the calculated probability value of F for the interaction between sex and achievement was greater than .05, the null hypothesis that there is no interaction between sex and achievement on change in self-esteem scores, as a result of having been subjected to a reading instructional program for five months, was not rejected. Therefore, if there is an interaction between sex and achievement on change in self-esteem scores, as a result of having been subjected to a reading instructional program for five months, it was not demonstrated in this study.

As revealed by the findings relative to Hypotheses 7 and 8, there was no significant difference in the change in self-esteem

scores between achievers and low-achievers, when examined as two groups, or when examined by grade level. Two-way analysis of variance revealed that, when the main effects of achievement and sex were considered together, they did not have a significant influence (.404) on change in students' self-esteem scores. Further analysis showed that, when achievement and sex were considered separately, their significance levels were .183 and .820 respectively. The interaction between achievement and sex was not significant (.691) in influencing change in self-esteem scores.

Null Hypothesis 10. There is no linear relationship between change in self-esteem scores and other factors, such as reading achievement scores, grade level, and sex.

The results of the analysis of variance for stepwise multiple regression on the dependent variable, change in SEI scores, are presented in Table 11. The multiple regression summary is presented in Table 12.

The reader is referred to Appendix B for an explanation of the reading achievement scores.

Table 11

Summary of Analyses of Variance for Stepwise Multiple Regression on the Dependent Variable, Change in SEI Scores

Variables	Sum of Squares	Degrees of Freedom	Mean Squares	F	Critical Value of F
Reading Achmt.					
Regression	206.49	1	206.49	2.79	3.91
Residual	10,422.44	141	73.92		
Reading Achmt./ Grade Level					
Regression	223.10	2	111.55	1.50	3.06
Residual	10,405.84	140	74.33		
Reading Achmt./ Grade Level/Sex					
Regression	230.46	3	76.82	1.03	2.67
Residual	10,398.47	139	74.81		

Table 12

Multiple Regression Summary

Variable	Multiple R	R Square	RSQ Change	Simple R
Reading Scores	.13938	.01943	.01943	.13938
Grade Level	.14488	.02099	.00156	.03507
Sex	.14725	.02168	.00069	.00063

Since the computed F value of 1.63 for the independent variables of reading achievement scores, grade level, and sex was less than the critical value of 2.67, the null hypothesis that there is no linear relationship between change in self-esteem scores and other factors, such as reading achievement scores, grade level, and sex was not rejected. Therefore, if there is a linear relationship between change in self-esteem scores and other factors, such as reading achievement scores, grade level, and sex, it was not demonstrated in this study.

Although tolerance levels were calculated as part of the regression analysis, they were not used to discriminate variables for inclusion in the stepwise mode of analysis because the number of variables under consideration was small. The results of the analysis of the three independent variables showed no linear relationship between reading scores, reading scores and grade level, or reading scores, grade level, and sex and the dependent variable of change in self-esteem scores. Indeed, as each independent variable was added to the stepwise multiple regression analysis, the significance of F was decreased, as follows: Step one, reading achievement scores, F was 2.70, critical value was 3.91; Step two, reading achievement scores and grade level, F was 1.50, critical value was 3.06; Step three, reading achievement scores, grade level and sex, F was 1.03, critical value was 2.67. Therefore, none of the independent variables

may be used to predict change in students' self-esteem scores from the first week of the academic year to the end of a five-month period of reading instruction.

Summary of change in SEI scores. The findings relative to change in self-esteem scores from the first to the second SEI administrations for achievers and low-achievers have been presented in this section. Change in self-esteem score was not significant when achievers and low-achievers were examined as two groups, or when they were examined by grade level. Neither sex, nor the interaction between achievement and sex was significant in the change in self-esteem for the two groups. There was no linear relationship between change in self-esteem scores and other factors, such as reading achievement scores, grade level, and sex.

SUMMARY

The analysis and results of this study were presented under three categories: First SEI Scores; Second SEI Scores; Change in SEI Scores. In all three categories, self-esteem scores were examined as they relate to achievement or low-achievement in reading. Additionally, in the third category, (Change in SEI Scores), reading achievement scores, grade level, and sex were examined to determine

whether a linear relationship existed between these independent variables and the dependent variable of change in SEI scores.

One hundred forty-two achievers and 142 low-achievers in grades two through six were grouped according to grade level and sex. Subjects were given the Self-Esteem Inventory during the first week of the 1978-79 academic year, and again after five months of reading instruction. Two textbook-related reading test scores were recorded for each student.

Analyses of the data indicated that on both SEI administrations, the self-esteem scores of achievers were significantly higher than those of low-achievers when the subjects were examined as two groups, without regard to grade level. When grade level was considered, however, achievement was significant only in grade six on the first SEI, and in grades five and six on the second SEI. Neither sex, nor the interaction between achievement and sex was significant when achievers and low-achievers were examined as two groups.

The change in self-esteem scores was not significant when achievers and low-achievers were examined as two groups, nor when they were examined by grade level. Sex was not a significant factor in the change in self-esteem scores for the two groups, nor was the interaction between sex and achievement significant. There was no linear relationship between change in self-esteem scores and other factors, such as reading achievement scores, grade level, and sex.

Chapter 5

DISCUSSION

INTRODUCTION

Approximately one-third of the children in American classrooms fail to become competent readers (Gunderson, 1976:370). Many explanations have been offered for underachievement in reading and in other academic areas. In his discussion of the research, Fink suggests that many of the explanations for academic underachievement are superficial or fragmentary, and concludes that the "concept of self" is the central factor in academic underachievement (Fink, 1965:487).

As early as 1936, the emotional and personal problems of retarded readers were being studied. Since then, investigators have continued to compile evidence which suggests that reading underachievement is a concomitant with deviant classroom behavior, poor self-image, emotional conflicts, school dropout, and juvenile delinquency.

Although many definitions for self-esteem have been offered, most of them center upon an individual's view of himself. Educators, psychologists, and other researchers, however, have been unable to reach a consensus on the relationship between self-esteem and academic achievement. Both Burg (1975:362) and Goodlad (1964:12) contend that self-esteem is related to achievement in a cyclical manner. Poor

achievement results in lowered self-esteem, which perpetuates poor achievement. Pine's review (1978:412) of the findings of eleven studies, in which measures of self-esteem were related to measures of reading achievement, indicated that successful readers have positive self-esteem; the opposite is true of unsuccessful readers.

Other researchers, however, have found that no relationship exists between self-esteem and reading achievement. In two separate studies, Williams (1973:379) and Pine (1978:413) found no relationship between self-esteem and reading achievement for children in grades one and two. Similarly, Chang (1976:112) found no significant relationship between self-esteem for children in grades four through six.

The purposes of this investigation were as follows: to determine the effect of factors, namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year and after five months of reading instruction, and to determine the effect of these factors upon change in self-esteem scores.

Accordingly, the Self-Esteem Inventory (SEI) was administered twice to a total of 142 achievers and to 142 low-achievers, for a total population of 284. The students were enrolled in grades two through six. The first administration was during the first week of the 1978-79 academic year. The second administration was after students had been subjected to a reading instructional program for five months

and had taken two textbook-related reading tests. Reading test scores were compiled for all students. Collected data, including self-esteen scores, reading achievement scores, grade level, and sex, were computer analyzed. The hypotheses were tested at the .05 level of confidence. Conclusions which might be drawn from this investigation are presented in the following section. Inferences, recommendations, and summary are presented in subsequent sections.

CONCLUSIONS

The conclusions which might be drawn from this investigation will be presented in three sections: First SEI Scores; Second SEI Scores; Change in SEI Scores.

First SEI Scores

Based upon analysis of the data relative to the first SEI, administered during the first week of the 1978-79 academic year, the following conclusions were drawn:

1. When achievers and low-achievers were examined as two groups, achievers exhibited significantly higher self-esteem scores than did low-achievers.

2. In grades two through five, there was no significant difference between the self-esteem scores of achievers and low-achievers.

In grade six, achievers exhibited significantly higher self-esteem scores than did low-achievers.

3. Sex as a main effect was not significant in influencing students' self-esteem scores. There was no interaction between achievement and sex on students' self-esteem scores.

Second SEI Scores

Based upon analysis of the data relative to the second SEI, administered after students had been subjected to a reading instructional program for five months, the following conclusions were drawn:

1. When achievers and low-achievers were examined as two groups, achievers exhibited significantly higher self-esteem scores than did low-achievers.

2. In grades two through four, there was no significant difference between the self-esteem scores of achievers and low-achievers. In grades five and six, achievers exhibited significantly higher self-esteem scores than did low achievers.

3. Sex as a main effect was not significant in influencing students' self-esteem scores. There was no interaction between achievement and sex on students' self-esteem scores.

Change in SEI Scores

Based upon an examination of the change in scores from first SEI to second SEI for achievers and low-achievers, the following conclusions were drawn:

1. No significant difference was demonstrated in the change in self-esteem scores between achievers and low-achievers, as a result of having been subjected to a reading instructional program for five months.

2. At all grade levels, no significant difference was demonstrated in the change in self-esteem scores between achievers and low-achievers, as a result of having been subjected to a reading instructional program for five months.

3. Neither of the main effects, sex and achievement, was significant in influencing change in students' self-esteem scores. There was no interaction between achievement and sex on change in students' self-esteem scores.

4. There was no linear relationship between change in self-esteem scores and the factors of reading achievement scores, grade level, and sex.

Conclusions relative to the present investigation were drawn. Inferences from the findings and possible recommendations will be discussed in the following sections.

INFERENCES

In this investigation, no provision was made for the examination or control of extraneous variables which might account for some of the differences found. For example, on both the first and second SEI administrations, when achievers and low-achievers were examined as two groups, achievers exhibited significantly higher self-esteem scores than did low-achievers. When examined by grade level, the difference between achievers and low-achievers in SEI scores was significant only in grade six on the first SEI and in grades five and six on the second SEI. However, the reader is reminded that the change in SEI scores was not significant for achievers or low-achievers at any grade level, as a result of having been subjected to a reading instructional program for five months. Therefore, it appears that achievers and low-achievers, at all grade levels, were basically unchanged in self-esteem scores from the first week of the academic year until after five months of reading instruction.

It now appears that the significant differences noted at specific grade levels on both SEI administrations must be accounted for by factors other than success in the reading program. Perhaps, as the emphasis in reading turns from phonics and basic skills in primary grades to comprehension and usage of reading skills in other curricular areas in intermediate grades, non-achievers in reading

become more acutely aware of their inabilities, with resultant lower self-esteem. In contrast, their achieving peers gain new confidence from their demonstrated skills. Hence, reading may still be an important factor.

On the other hand, it is also possible that, as children mature, they become more concerned with test achievement scores, classroom performance, and other subtle types of competition. A student's awareness of his performance might account for the achievement/self-image/achievement cycle, as discussed by Burg (1975:362) and Goodlad (1964:12).

The possible effects of time must also be considered. Perhaps certain variables (undefined in this study), such as maturity, classroom performance, and feedback from teachers and peers, have a cumulative effect upon students and finally become significant in influencing self-esteem scores.

Although significant differences were noted between self-esteem scores of achievers and low-achievers at specific grade levels, the change in self-esteem was not significant at any grade level for achievers or low-achievers. Self-esteem might be a human dimension which is not susceptible to change over a time span as brief as five months. Indeed, in a telephone conversation with this investigator, Dr. Stanley Coopersmith, author of the SEI, expressed the opinion that no change would be found even after one year. Perhaps, in order for

self-esteem to change, it must be influenced by variables which, obviously, were not accounted for in the present investigation.

In summary, significant differences were noted between the self-esteem scores of achievers and low-achievers in grade six on the first SEI and in grades five and six on the second SEI. However, the difference in change in SEI scores between achievers and low-achievers, from first to second administrations of the test, was not significant at any grade level. Therefore, it seems that the differences noted must be accounted for by factors other than success during five months of reading instruction.

RECOMMENDATIONS

Based upon the statistical results and the conclusions of this investigation, several recommendations emerge as appropriate areas for further research and as appropriate for consideration by school personnel.

Recommendations for Further Research

1. This investigation, as it relates to achievement and self-esteem, should be replicated in other schools within the research city. All subjects for this investigation attended Title I-designated schools. It is important to know whether these findings can be

applied to students who do not attend Title I schools within the research city.

2. This investigation should be replicated in Title I-designated schools in other cities, in order to determine whether these findings can be applied to a larger population.

3. A similar investigation should be conducted on a longitudinal basis. This type of study, with one population over a period of years, would help to determine the stability of self-esteem. It might reveal patterns of change in self-esteem which would enable teachers to plan experiences which would enhance students' views of themselves.

4. An investigation similar to this one should be conducted using SEI subscale scores which might help identify areas of self-esteem, specifically related to reading achievement.

5. An investigation should be made of the relationship between self-esteem scores and other selected variables, such as intelligence, family background, social adjustment, and school retention. Studies of this kind would help to determine factors which affect self-esteem and would provide information which would be helpful to teachers and parents as they interact with children.

6. Research should be conducted concerning the improvement of self-esteem. This would help to determine whether self-esteem can be modified through external influence and might suggest some

possible ways by which it can be done. This would also help to determine whether teachers and others can enhance the self-esteem of students and thus boost students' success in the self-esteem, achievement, self-esteem cycle, as discussed in the review of the literature.

Recommendations for School Personnel

1. The results of the present investigation revealed that the difference between self-esteem scores of achievers and low-achievers was not significant in grades two through four. Further, the change in self-esteem scores from first to second SEI administrations was not significant, either for achievers or low-achievers, at any grade level. It seems, therefore, that if self-esteem can be influenced, it must be influenced by factors other than success in reading. Teachers should be informed of this and should be sensitive to seeking other factors which might influence the self-esteem of their students.

2. The results of studies investigating self-esteem and reading achievement have been inconclusive, as shown in the review of the literature. It is the opinion of the investigator, however, that teachers should make conscious efforts to enhance students' self-esteem and to avoid comments and teaching practices which might damage students' self-esteem.

SUMMARY

As shown by a review of the literature, research findings relative to the relationship between reading achievement and self-esteem have been inconclusive. In order to compile further evidence of that relationship, the present investigation was conducted. The purposes of the investigation were as follows: to determine the effect of factors, namely, reading achievement, grade level, and sex upon self-esteem scores at the beginning of students' academic year, and after five months of reading instruction; and to determine the effect of these factors upon change in self-esteem scores.

After reviewing the literature of the past ten years relative to reading achievement and self-esteem, the investigator developed ten hypotheses. They were grouped into three categories: First SEI Scores; Second SEI Scores; Change in SEI Scores.

Two groups of students were drawn from the population of second through sixth grade children who attended the nine Title I-designated public schools in Billings, Montana during the 1978-79 academic year. Achievers were students who were not enrolled in the Title I labs for supplemental reading instruction. Low-achievers were students who were enrolled in Title I labs for supplemental reading instruction. Participants were grouped according to grade level and

sex. The resultant population consisted of 142 achievers and 142 low-achievers in grades two through six.

Subjects were given the Self-Esteem Inventory (SEI) during the first week of the 1978-79 academic year, and again after five months of reading instruction. Two textbook-related reading test scores were recorded for each subject.

All hypotheses were tested at the .05 level of significance, using either the student's t-test, two-way analysis of variance, or stepwise multiple regression.

Analyses of the data indicated that on both SEI administrations, the self-esteem scores of achievers were significantly higher than those of low-achievers when the subjects were examined as two groups without regard to grade level. When grade level was considered, however, achievers' SEI scores were significantly higher only in grade six on the first SEI, and in grades five and six on the second SEI. Neither sex, nor the interaction between achievement and sex, was significant on either of the SEI administrations when achievers and low-achievers were examined as two groups.

The change in self-esteem scores was not significant when achievers and low-achievers were examined as two groups, nor when they were examined by grade level. Sex was not a significant factor in the change in self-esteem scores for the two groups, now was the interaction between sex and achievement significant. There was no linear

relationship between change in self-esteem scores and other factors, such as reading achievement scores, grade level, and sex.

Conclusions which might be drawn, as a result of data analysis, were presented. Inferences, or potential explanations for the findings, were discussed. Recommendations were made for further research and for consideration by school personnel.

APPENDICES

APPENDIX A

COMPOSITE TEST SCORE LETTERS

Miles Avenue Elementary School
1601 Miles Avenue
Billings, Montana 59102

June 11, 1979

Ms. Judith L. Starr
Rural Route 1
P. O. Box 281
Laurel, Montana 59044

Dear Judy,

This letter is in reply to your request for information relative to the use of a student's total reading score for the assessment of his achievement on any complete magazine, or section, of one of the Houghton-Mifflen Company reading texts.

As you know, the four general areas measured are Decoding, Comprehension, Reference, and Literary skills. Division of the tests into these four general areas allows the teacher to re-emphasize, if necessary, the area(s) of weakness for a particular child or group of children. At some levels, however, certain areas are not tested, because they have not been the focus of instruction.

As I explained to you during our recent discussion, combining the composite scores for each of the areas tested provides a total score and gives the teacher a basis upon which to evaluate the child's progress in the total reading process. It is my feeling therefore, that for purposes of your research, the use of a child's total score would be entirely legitimate.

Sincerely,

Roland Flynn

Roland Flynn
Principal
Miles Avenue Elementary School
Formerly:
Reading Consultant
School District #2
Billings, Montana

Houghton Mifflin Company

One Beacon Street, Boston, Massachusetts 02107
(617) 725-5000 Cable HOUGHTON

School Division

June 13, 1979

Ms. Judy Starr
R.R. #1 Box 281
Laurel, Montana 59044

Dear Judy:

I spoke with our staff consultant in testing, Mr. John Sommer, to make certain that what I had told you over the phone yesterday was correct. He concurred.

We feel, therefore, that it is perfectly legitimate to use the composite Test of Basic Reading Skills scores in your research study so long as you fully describe the total score you are using for each student. Further, you probably should list all subscores comprising your composite scores as an appendix.

Best wishes,

RuthAnn Green

RAG/jjg

cc C. Wingert

APPENDIX B

EXPLANATION OF READING ACHIEVEMENT SCORES

For purposes of this investigation, specifically related to Hypothesis 10, reading achievement score for each student was a summation score comprised of the total scores earned on two basic reading tests.

APPENDIX C

HOUGHTON MIFFLIN LETTER--TEST VALIDATION

Houghton Mifflin Company

One Beacon Street, Boston, Massachusetts 02107
(617) 725-5000 Cable HOUGHTON

School Division

May 14, 1979

Ms. Judy Starr
R.R. #1, Box 281
Laurel, Montana 59044

Dear Judy:

I enjoyed talking with you the other day, and hope that the following information will be helpful as you develop your doctoral dissertation.

It is Houghton Mifflin Company's policy not to distribute test data on its various programs. All tests are validated through a variety of measures, however: learner verification studies, field testing, teacher attitude questionnaires, and item analysis studies by a staff-consultant on testing who regularly screens the reading testing program.

The most recent reading learner verification study was in 1976-77 for The HOUGHTON MIFFLIN READING SERIES, 1976 Edition. The basic purpose of this study was to obtain feedback on the learning-teaching effectiveness of the HMRS program that can be used to enhance the instructional quality of future editions. The two types of data collected in this study were:

Learner Test Data: Data on the HMRS Tests of Basic Reading Skills were collected from a national cross section of some 1,000 students in six elementary schools using the program, grades K-6. The sample is representative of a cross-section of five major characteristics: geographic diversity, community-type diversity, socio-economic diversity, racial and ethnic diversity, and diversity of ability levels. The selected classes were supplied with complementary sets of the test materials. The teachers of these classes were asked to teach the program in their normal way and to administer the proper tests at the appropriate time as they went along. Periodically throughout the school

year, the teachers forwarded test data to Houghton Mifflin for processing and analysis. Essentially, the test results indicate that most pupils can adequately perform most of the skills in The HOUGHTON MIFFLIN READING SERIES after instruction. The sample clearly meets the "80/80 mastery criterion" -- that is more than 80 percent of the time, the sample demonstrated mastery at or above the 80.0 "difficulty" level. ("Difficulty" is the percent of students who answered a test item correctly.)

Teacher Attitude Data: Teacher input was gathered by a direct mail attitudinal questionnaire sent to teachers in a cross section of schools using the program in their classrooms, grades K-6. What follows is a summary of 423 valid questionnaire returns.

**Two-thirds of the teachers responding to the survey say the amount of vocabulary repetition in the HMRS program is sufficient for instant recognition.

**Eight out of ten teachers state the number of new words introduced in the level(s) of the program they use is appropriate.

**Nine out of ten teachers using the pre-reading level of the program, Level A, GETTING READY TO READ, say the number of high frequency words introduced is appropriate. And four out of five say the text provides adequate provision for the teaching of the high frequency words.

**The majority of respondents say the number of skills in the level(s) of the program they use is appropriate.

**Most of the teachers responding indicate their students had no major problem with readability.

**Nine out of ten teachers say the HMRS management system is effective.

The test and questionnaire results of these two studies will be used to eliminate or rewrite items where test precision was not obtained. It may also be used in reorganizing the tests or, perhaps, to revise certain areas of the program.

This type of learner verification is ongoing for HMCO reading materials, Judy. Hope this gives you some feeling for the research that goes into developing the criterion-referenced tests that are part of The HOUGHTON MIFFLIN READING SERIES.

Cordially,

RuthAnn Green

RAG/jjg

cc C. Wingert

APPENDIX D

COOPERSMITH LETTER

UNIVERSITY OF CALIFORNIA, DAVIS

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

DEPARTMENT OF PSYCHOLOGY DAVIS, CALIFORNIA 95616

Thank you for your recent inquiry regarding the Self-Esteem Inventory and Behavior Rating Form. Enclosed you will find a memorandum describing the procedures we have developed for assessing self-esteem and the methods of administration, scoring and interpretation. Further information is contained in my book, The Antecedents of Self-Esteem (W. H. Freeman).

I do not have copies of the Inventory and Rating Form for sale but make them available for research purposes. If your study is intended as an investigation of self-esteem, you have my permission to reproduce and duplicate the enclosed copies of the tests. You also have my permission to modify the tests for the purposes of your specific study as long as the modifications are noted in your write-up of the results.

I should appreciate learning the results of the study you conduct. If I can be of further assistance, let me know. Best wishes.

Sincerely,

Stanley Coopersmith

SC:lp
Enclosure

APPENDIX E

ITEMS 6, 13, 20, 27, 34, 41, 48, 55 are
LIE DEFENSIVE SCALE (8 items)
MAXIMUM TOTAL SCORE = 50
8 LIE ITEMS

SELF-ESTEEM INVENTORY (SEI)

Please mark each statement in the following way:
If the statement describes how you usually feel, put an "x" in the column "LIKE ME."
If the statement does not describe how you usually feel, put an "x" in the column "UNLIKE ME"
There are no right or wrong answers.

	LIKE ME	UNLIKE ME
1. I spend a lot of time daydreaming.		x
2. I'm pretty sure of myself.	x	
3. I often wish I were someone else.		x
4. I'm easy to like.	x	
5. My parents and I have a lot of fun together	x	
6. I never worry about anything. (LIE)		x
7. I find it very hard to talk in front of the class.		x
8. I wish I were younger.		x
9. There are lots of things about myself I'd change if I could.		x
10. I can make up my mind without too much trouble.	x	
11. I'm a lot of fun to be with.	x	
12. I get upset easily at home.		x

	LIKE ME	UNLIKE ME
13. I always do the right thing. (LIE)		x
14. I'm proud of my school work.	x	
15. Someone always has to tell me what to do.		x
16. It takes me a long time to get used to anything new.		x
17. I'm often sorry for the things I do.		x
18. I'm popular with kids my own age.	x	
19. My parents usually consider my feelings.	x	
20. I'm never unhappy. (LIE)		x
21. I'm doing the best work that I can.	x	
22. I give in very easily.		x
23. I can usually take care of myself.	x	
24. I'm pretty happy.	x	
25. I would rather play with children younger than me.		x
26. My parents expect too much of me.		x
27. I like everyone I know. (LIE)		x
28. I like to be called on in class.	x	
29. I understand myself.	x	
30. It's pretty tough to be me.		x
31. Things are all mixed up in my life.		x
32. Kids usually follow my ideas.	x	
33. No one pays much attention to me at home.		x
34. I never get scolded. (LIE)		x
35. I'm not doing as well in school as I'd like to.		x

	LIKE ME	UNLIKE ME
36. I can make up my mind and stick to it.	x	
37. I really don't like being a boy - girl.		x
38. I have a low opinion of myself.		x
39. I don't like to be with other people.		x
40. There are many times when I'd like to leave home.		x
41. I'm never shy. (LIE)		x
42. I often feel upset in school.		x
43. I often feel ashamed of myself.		x
44. I'm not as nice looking as most people.		x
45. If I have something to say, I usually say it.	x	
46. Kids pick on me very often.		x
47. My parents understand me.	x	
48. I always tell the truth. (LIE)		x
49. My teacher makes me feel I'm not good enough.		x
50. I don't care what happens to me.		x
51. I'm a failure.		x
52. I get upset easily when I'm scolded.		x
53. Most people are better liked than I am.		x
54. I usually feel as if my parents are pushing me.		x
55. I always know what to say to people. (LIE)		x
56. I often get discouraged in school.		x
57. Things usually don't bother me.	x	
58. I can't be depended on.		x

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