The relationship between self-concept and achievement in mathematics of black and white children among title I and non-title I programs

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ABSTRACT

THE RELATIONSHIP BETWEEN SELF-CONCEPT AND ACHIEVEMENT IN MATHEMATICS OF BLACK AND WHITE CHILDREN AMONG TITLE I AND NON-TITLE I PROGRAMS

By

THELMA SIMMONS WOODFORK

The general purpose of the study was to investigate the relationship between self-concept and achievement in mathematics for three groups of children from Charles L. Gideons Elementary School in Atlanta, Georgia. The specific purpose of the study was to determine whether this hypothesized relationship is affected by Title I supported education and/or race.

The subjects of the study were one hundred seventy-two pupils from the fourth, fifth and sixth grades. Seventy-five were in Title I and ninety-seven were Non-Title I students.

Both groups were given the Coopersmith Self-Esteem Inventory to determine their level of self-concept. The achievement scores on the Iowa Test of Basic Skills were obtained from the Principal's Office. The Title I students were selected on the basis of a composite score of 90 and below. When the total scores from the Iowa Test of Basic Skills and the Coopersmith were compiled, the Pearson r was used to determine the relationship between them. Once the relationship was established, the "t" distribution was used to test its significance.
The data for the study were compiled to test the following hypotheses: (1) There is a positive relationship between self-concept and achievement in mathematics; (2) There is no significant difference in the relationship between self-concept and achievement in mathematics among black and white students; and (3) There is no significant difference in the relationship between self-concept and achievement in mathematics among Title I and Non-Title I students.

The results of the data analysis support hypotheses 1 and 3, but do not support hypothesis 2 because there was a significant difference in the relationship of white students but not in the relationship of black students. With regard to the total population, a relationship does exist between self-concept and achievement in mathematics. The correlation coefficient representing this relationship was significant at the .01 level. In this study, there was a significant difference in the relationship between the self-concept and achievement in mathematics among the white students. The relationship between self-concept and achievement was the same for both the Title I and Non-Title I students in this study.

The researcher recommends that: (1) More research should be conducted to determine the effect of Title I on the achievement of the students in Title I; (2) More study should be conducted to identify factors which contribute to high self-concept and achievement in children of the disadvantaged; (3) A thorough evaluation of each Title I program needs to be implemented once every two years to determine if the desired goals are being met; and (4) finally, a diagnostic tool for pointing out the disadvantaged child's strengths and weaknesses should be designed.
THE RELATIONSHIP BETWEEN SELF-CONCEPT AND ACHIEVEMENT IN MATHEMATICS OF BLACK AND WHITE CHILDREN AMONG TITLE I AND NON-TITLE I PROGRAMS

A Study

Submitted to the Faculty of The School of Education, Atlanta University in Partial Fulfillment of the Requirement for the Degree of Education Specialist

by

Thelma Simmons Woodfork

April, 1978

Atlanta University
Atlanta, Georgia
# TABLE OF CONTENTS

**LIST OF TABLES** ................................................................. iv  
**ACKNOWLEDGEMENTS** .......................................................... v  
**DEDICATION** ........................................................................ vi  

**Chapter**  

I. **INTRODUCTION** ............................................................... 1  
  Rationale ................................................................. 2  
  Statement of the Problem .................................................. 4  
  Purpose of the Study ....................................................... 4  
  Hypotheses ...................................................................... 5  
  Procedures ...................................................................... 5  
  Definition of Terms .......................................................... 5  
  Limitations ...................................................................... 6  

II. **REVIEW OF RELATED LITERATURE** ................................. 7  
  Self-Concept and Achievement ........................................... 7  
  Self-Concept and Low Socio-Economic and Minority Group Status .................................................. 11  
  Compensatory Education Programs .................................... 12  

III. **METHODOLOGY, ANALYSIS AND SUMMARY** .................... 15  
  Introduction ..................................................................... 15  
  Sample ........................................................................... 16  
  Instruments ...................................................................... 17  
  Procedures ...................................................................... 18  
  Analysis of the Data ........................................................ 19  
  Summary ......................................................................... 22  

IV. **FINDINGS, CONCLUSIONS, DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS** ............................ 23  
  Findings ......................................................................... 23  
  Conclusions ..................................................................... 24  
  Discussion ....................................................................... 24  
  Implications ..................................................................... 27  
  Recommendations ............................................................ 27
TABLES

1. Total Number of Black and White Title I and Non-Title I Students from the Fourth, Fifth and Sixth Grades ........................................... 16

2. Correlation of Scores on the Coopersmith Self-Esteem Inventory and Mathematics Scores on the ITBS for Self-Concept and Achievement ........................................... 19

3. Correlation of Scores on the Coopersmith Self-Esteem Inventory and Mathematics Scores on the ITBS for Black and White Students ........................................... 20

4. Correlation of Scores on the Coopersmith Self-Esteem Inventory and Mathematics Scores on the ITBS for Title I and Non-Title I Students ........................................... 21
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DEDICATED

to

My devoted husband Jerry

and

My darling daughter Erica

For Their Untiring Patience, Assistance and Love.
CHAPTER I

INTRODUCTION

Extensive social legislation was enacted during the 1960's to alleviate the plight of poverty in our nation. Educators and scholars from all over the nation believed that improved education was the key to be used in unlocking the poverty cycle.

To solve the huge educational problem of the nation's poverty population, Federal support was given to programs developed and administered by educational agencies. These agencies were designed to provide educational opportunities for the disadvantaged children comparable to that of other children in our society. In order to do this, compensatory education was the vehicle for alleviating the limitations which hamper disadvantaged children from meeting school expectations.

In thousands of schools throughout this nation compensatory education programs were put into operation. All of these programs attempt to solve the educational problems of disadvantaged children. The programs are based on the premise that disadvantaged children can succeed if they are given the assistance and adequate educational programs which will enable them to maximize their potential. The compensatory education program has been looked upon as being the most prevalent form of intervention planned to raise the student's academic achievement.
Rationale

The Civil Rights Act of 1965 was a major document which stressed the interest of the federal government in the educationally disadvantaged in our nation. This particular act compelled the United States Commission of Education to conduct a survey and report back to the President of the United States its findings regarding the availability of educational opportunities for children by reasons of race, color, religion or national origin.

The United States Office of Education's Study "Equality of Educational Opportunity," commonly known as the Coleman Report, suggested that American children are largely segregated in our schools. According to the report, segregation would not be as shocking if poverty was not so heavily concentrated in the non-white population. Since then, housing patterns have developed which further segregate the poor from the affluent and the white from the non-white.

Educators agree that the only possible answer is the upgrading of educational programs in those schools where the population is from low income and poverty environments. Because of the relationship that exists between the conditions of poverty and inferior educational opportunity, the Elementary-Secondary Educational Act was developed in 1965. Section 201 of the Title I Act reads:

"In recognition of the special educational needs of children from low-income families and the impact that concentration of low-income families has on the ability of local educational agencies to support adequate educational programs, the Congress hereby declared it to be the policy of the United States to provide financial assistance (as set forth in the title) to local educational agencies serving areas with concentrations of children from low-income families to expand and improve their educational programs by various means (including pre-school programs) which contribute particularly to
meet the special education needs of educationally deprived children.¹

Additional light is shed on the seriousness of the unavailability of educational opportunity for blacks in the report Racial Isolation In The Public Schools. The report focuses on black children as being the largest ethnic minority group. The report also focuses on the consequences of racial isolation on the inequalities between black and white children. The Commission found that:

While black and white children begin at the same point with respect to verbal ability and reading achievement in the first grade, by the time the 12th grade is reached the average white child performs at slightly or below the twelfth grade level, but the average black child performs below the ninth grade level.²

There has been concern on the part of national, state and local educational agencies, regarding the funding of special programs over the last eleven years. It would appear that we are still faced with the need to find effective solutions to educational problems of minority children.

Many school areas have been trying to design what they hope to be effective programs to raise the achievement level of minority children. The goal of some of these programs was to improve their self-concept. Students who progress at a normal rate think well of themselves. They are able to achieve in school tasks. With a rise in achievement and self-concept, a balanced cycle is developed. This cycle can lead to


competencies in skilled and semi-skilled jobs in the future. Statistics point to the fact that unemployed and underemployed are the major causes of poverty in our nation. This could be solved through improved education for the disadvantaged.

Based on legislative concern for the poor in our nation's schools and the large amount of funding which has been given to local educational agencies, one would generally expect to find an abundance of research specifically directed toward poverty level children and the relationship existing between self-concept and achievement of students in Title I.

A thorough review of the literature indicated this was not the case. What is needed, in keeping with the intent of Title I, is more study of the relationship between self-concept and achievement among Title I and Non-Title I children.

Statement of the Problem

The problem of this study was to determine whether Title I is effectively addressing itself to the following questions: (1) Are the goals of increased achievement of Title I students being reached? (2) Are the children developing a positive self-concept through these programs?

Purpose of the Study

The general purpose of the study was to investigate the possible relationship between self-concept and achievement in mathematics for three groups of children from Charles L. Gideons Elementary School. The specific purpose of the study was to determine whether this hypothesized relationship was affected by Title I supported education and/or race.
Hypotheses

The study was conducted on the basis of the following hypotheses:

(1) There is a positive relationship between self-concept and achievement in mathematics.

(2) There is no significant difference in the relationship between self-concept and achievement in mathematics among black and white students.

(3) There is no significant difference in the relationship between self-concept and achievement in mathematics among Title I and Non-Title I students.

Procedures

In this investigation, 6 classrooms with a total of 172 students (fourth, fifth and sixth grades) were utilized from Charles L. Gideons Elementary School. Each student was administered the Coopersmith Self-Esteem Inventory. The instructions were read item by item to eliminate any factors of poor reading skills. A 30 minute time period for the administration of the test was allowed.

The second instrument to be used was the Iowa Tests of Basic Skills. Grade equivalent scores from the most recent routine administration of the tests were utilized.

Definition of Terms

The terms which appear below are defined as they were used in this study.

1. Achievement is defined in this study as the scores earned by the students on the Iowa Tests of Basic Skills.

2. Compensatory Education is educational programs, practices, techniques, and projects designed to overcome the deficiencies of children from culturally disadvantaged homes to enable them to fulfill the fundamental purposes of education.
3. ESEA stands for the Elementary-Secondary Educational Act of 1965. The Act represents legislation enacted in response to the finding of the Presidential Task Force and testimony before congressional committees which demonstrated the need for a massive effort to expand and improve curricular offerings and provide needed educational services.

4. Self-Concept is a composite of thoughts and feelings which constitute a person's awareness of his individual existence, his conception of who and what he is.

5. Title I Schools are those schools receiving funds from Elementary-Secondary Educational Act to help meet the needs of educationally deprived pupils. These schools are located in areas which serve a high concentration of minority and low-income children.

Limitations

This investigation will be limited to the Title I and Non-Title I programs in Charles L. Gideons Elementary School in the City of Atlanta, State of Georgia.
CHAPTER II

REVIEW OF RELATED LITERATURE

A thorough review of related literature to secure background data pertinent to the study was conducted in the following areas: (1) self-concept and achievement; (2) self-concept and low socio-economic and minority group status; and (3) compensatory education programs.

Self-Concept and Achievement

Although there were several definitions to be found, a consensus throughout all is the significant role that self-concept plays in determining the behavior of an individual. A person's outlook on life is based on a negative or positive image of himself and his surroundings.

Crow, Murray and Smythe expressed the following view and belief that:

a child's self-concept is learned. His perceptions of his environment are filtered through his ideas about himself, and they affect the way he relates to subsequent experiences. Self-concept influences the way the child perceives his ability, his status, and his roles.

A person's self-concept often referred to as the "I" or "Me" represents the child's attitude, feelings, and beliefs he holds about himself.

Syngg and Combs have quoted V. C. Raimey in their book as defining self-concept as:

the more or less organized perceptual object resulting from present and past self observation . . . it is what a person believes about himself. The self-concept is a map which each person consults in order to understand himself, especially during moments of crisis or choice.\textsuperscript{2}

Coopersmith defines self-concept as a personal judgement of worthiness that is expressive in the attitudes that an individual holds about himself.\textsuperscript{3}

A person's self-concept is derived from many sources: physical endowments, values, beliefs and present and past experiences. The way a person sees himself determines the way he will behave. If a person sees himself as successful, liked, happy and able to succeed, then his behavior will reflect these views. By the same token, if a person views himself as inadequate, unliked, unhappy, and not able to succeed, then his behavior will reflect these views.

Lecky perceives a primary relationship between learning and the self-concept and theorizes that understanding of one's self is a necessary factor in all behavior.\textsuperscript{4} His theory implies that preserving the identity of the self is a vital factor resulting from self consistency. If a person views himself as no good, unable to succeed, he will try to protect his perception and will refuse to do or to accept that which indicates that he is good, or able to succeed. A child's failure to learn in school is an attempt on the part of the child to hold on to the self-concept that he has acquired from his environment.


A child with a negative view of himself and the world around him will not be able to profit adequately from the school he or she attends. Once a child is convinced that he cannot learn or that no one cares about him at home or school, the task of the teacher and educator becomes almost impossible to overcome.

The greatest obstacle to teaching the educationally disadvantaged student is a poor concept of self. After several failures in school, the student becomes convinced he or she is not a good student and will not be able to succeed. After a period of years this image becomes more deep seated and additional psychological barriers develop.

Contemporary research points constantly to a relationship between self-esteem and academic achievement. The findings suggest strongly that parents and teachers can no longer ignore the vital role that self-concept plays in a student's development. The parents and teachers must put forth a concerted effort to instill a positive self-image within the child.

White, focusing on individual differences in ability, suggests that for many children, feelings of inferiority often have their roots in the home. When these inferior feelings are reinforced in the school, it becomes virtually impossible for the child to develop anything less than an unsatisfactory level of self-esteem.

Caplin reports that self-concept and achievement are related factors. The students for Caplin's study were 180 intermediate grade children from three elementary schools. The pupils were reported to have been

---

representative of the lower socio-economic class. In investigating this population from segregated and desegregated schools, Caplin found that:

the school related self-concept and level of aspiration of children, white and black attending the "de facto" desegregated schools were significantly lower than those children attending the newly desegregated schools. It was also found that children having more positive self-concepts and higher levels of aspiration had higher academic achievement.

Denmark, in attempting to identify which variables are related to academic achievement when children are put together in integrated groups, concluded that a positive self-concept was a major factor relating to academic achievement.7

The literature reported in this section has clearly suggested that a relationship exists between a child's self-concept and achievement. The investigator believes that this relationship is reciprocal. That is, self-concept affects achievement while achievement affects self-concept. Therefore, a low achievement may result from low self-concept. By improving a child's self-concept, his achievement should improve.

William and Spurgeon attempted to relate self-concept to several dimensions of the child's experiences that are deemed fundamental to effective academic adjustment. Their findings show some evidence of a reciprocal cause-effect relationship between self-concept and academic


achievement, and that the self-concept is a basic casual factor in determining achievement level in school.

**Self-Concept and Low Socio-Economic and Minority Group Status**

The cumulative effect of poor environment, low measures of intellect and achievement, and the resulting personality disorder, makes for a disoriented concept of self among disadvantaged children.

Clark feels that a black child's low self-esteem is a result of his feelings of inferiority and his feelings of hopelessness as he perceives his environment. These children cannot be expected to respect themselves when they perceive themselves as rejected and set apart in an environment for those with inferior status. A minority child who is expected to fail will always fail. Furthermore, Clark feels the child's failure will reinforce his sense of inferiority, resentment and hostility. By the same token, a child who is a member of the dominant majority group who is expected to learn, who is taught, and who is required to learn will learn. This type of expectation will enhance the child's worth. The drop-out rate is much higher for the disadvantaged child than for the middle class child.\(^9\)

Deutsch states in his thesis that lower-class children enter the school situation so poorly prepared to produce what the school demands of


them that initial failure is almost inevitable. The school experience becomes a negative concept rather than a positive one.  

Grambs suggests that one of the clearest differences between black and white is that society in the contemporary United States continually tells the two groups that they are different. This message has been communicated in different ways in our society ever since the black was first brought to America. It is obvious that this kind of differential social communication is going to have a differential impact on the personality. The black children's self-concept stems from the fact that they feel that society has rejected them simply because they are black.

There is no one thing that the school alone can do that would make a significant difference in raising the self-concept of these black disadvantaged children if the home is left out of the effort.

Research findings tend to point in the direction of the lower self-concept for minority group and low socio-economic status students. However, it would appear from some of the literature that the self-concept of these groups of children might be changing as the times are changing. This would suggest that the view that these children have of themselves at present may be more positive than before.

Compensatory Education Programs

Compensatory education programs and practices are designed to identify and describe the status of such activity in the United States.


These programs refer to educational programs, practices, techniques, and projects which have been designed to overcome the deficiencies of children from culturally disadvantaged homes. They are aimed toward helping these children to fulfill the fundamental purposes of education here in the United States. Many parents view the Compensatory Education Programs as a bridge by which their children are able to obtain a productive future.

Compensatory education programs vary widely in scope throughout the country. Prevention and remediation are the dual goals of the programs. They are remedial in that they attempt to fill gaps of social, cultural, or academic achievement in the child's total education. They are preventive in that they try to forestall either initial or contributing failures in the school and in later life by building a good foundation.

Research indicates that Compensatory Education Programs have not had a lasting effect in improving the achievement of the students in the program. The very nature of Title I has been viewed by many as a source of difficulty in gathering the kind of quality data needed to adequately assess the success of the program. Although the United Office of Education has started several surveys and studies designed to obtain data necessary for the national assessment of the programs, it appears that these surveys in the past and at present are still unsuccessful in their attempt to determine the results of the programs. The information that represents the student benefits from the programs is almost non-existent for the evaluation. Since the information which is needed for evaluating the student benefits is very seldom reported, evaluation of the programs tends to be centered around the number and variety of children eligible to receive benefits for the program.
Gordon suggests that most of the programs appear to have been based on sentiment rather than facts. He believes that the appropriateness of the practices or even the success of the given program cannot be adequately judged from the enthusiasm with which it is embraced or the speed with which the practice spreads.

Cohen states that existing evidence reveals that Compensatory Education Programs in schools isolated by race and social class have resulted in no substantial or lasting improvement in students' academic competence. Evaluations have been conducted in several different school systems, under varying conditions and with different emphasis on and for school improvement. The data are scarce and very imperfect, but the uniformity of results cannot be ignored.

Two basic problems are suggested by Cohen concerning poor records. First, compensatory education programs misinterpret sources of academic failures by locating them exclusively in individual children's cultural deprivation. Secondly, there has not been a clear definition of "compensation" nor the required change in the schools' program in the magnitude of effect involved.

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14 Ibid.
CHAPTER III

METHODOLOGY, ANALYSIS AND SUMMARY

This study focuses on the effect that Title I Compensatory Education Programs have had on the disadvantaged children who were beneficiaries of the Elementary-Secondary Education Act of 1965. These students obtained all or a portion of their food and shelter from the federal government. The programs were used to compensate for the inadequacies found in the students' learning environment. Some of these inadequacies include: restricted verbal communication; scarcity of educational materials; inadequate diets; restricted environment; poor self-image and overcrowded conditions. The programs were also used to take the child from where he was and bring him up to the level of other students who were not receiving compensatory education.

The purpose of this study was to determine whether any differences exist in the relationship between self-concept and achievement in mathematics of these elementary school children that are associated with enrollment in Title I programs or race classification.

Data for the study were compiled to test the following hypotheses: (1) There is a positive relationship between self-concept and achievement in mathematics; (2) There is no significant difference in the relationship between self-concept and achievement in mathematics among black and white students; and (3) There is no significant difference in the
relationship between self-concept and achievement in mathematics among Title I and Non-Title I students.

The following sources were used to assist in obtaining information to complete this investigation:

(1) Documents concerning the purposes and objectives of Title I Programs.

(2) Interviews with administrators involved in the Title I Programs.

(3) Achievement scores from the Iowa Test of Basic Skills given by the system's yearly routine testing program.

(4) Collected data on self-concept and disadvantaged children.

Sample

The fourth, fifth and sixth grade population used in this study consisted of 172 students from the Charles L. Gideons Elementary School. The 172 students were classified as Title I or Non-Title I students.

TABLE I

TOTAL NUMBER OF BLACK AND WHITE TITLE I AND NON-TITLE I STUDENTS FROM THE FOURTH, FIFTH AND SIXTH GRADES

<table>
<thead>
<tr>
<th></th>
<th>Title I Students</th>
<th>Non-Title I Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>66</td>
<td>80</td>
</tr>
<tr>
<td>White</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>97</td>
</tr>
</tbody>
</table>

N = 172
Instruments

The Coopersmith Self-Esteem Inventory (Form A) was the instrument selected to measure self-concept in this study. Fifty-eight items are included in the total test. This inventory provides a general assessment of self-esteem which may be divided into component subscales of (1) general self-concept; (2) social self; (3) home-parents; (4) lie scale; and (5) school academics. The scores from all of the subscales, except for the lie scale, are totaled to provide a measure of self-concept. The students marked in the space according to "like me" or "unlike me" on the inventory sheet. (See Appendix A).

Coopersmith states that most of the items in the inventory were taken from the Rogers and Dymond Scale with several original items being added. Rewording of the items is necessary in order to be used by children from ages 8 to 10. Five psychologists sorted the items into groups indicative of low self-esteem. The final fifty-item inventory was initially administered to the fifth and sixth grades where the scores ranged from 40 to 80 (raw scores multiplied by 2 for ease in scoring).

Subsequently, the inventory was administered to 1,748 children attending the public schools of Central Connecticut. This group was more diverse in ability, interest, and social background than the initial sample. This administration of the test resulted in a mean of 70.1 S.D. of 13.8 for the males and a mean of 72.2, S.D. 12.8 for the females.¹

The Iowa Test of Basic Skills was used as a measure of achievement. Grade equivalent scores were used from the routine administration of the

of the test. Generally considered to be an achievement test by most and listed along with other achievement tests in the *Buros Fifth Mental Measurements Yearbook*, the Iowa Test of Basic Skills measures functional skills of children in grades 3-9 in the areas of vocabulary, reading, language, workstudy and arithmetic.

**Procedures**

The investigator met with the principal and the fourth, fifth and sixth grade teachers to explain the purpose of the study and the administering of the Coopersmith Self-Esteem Inventory to the students. The administering of the test was done by the investigator at a designated time given by the principal. The inventory was administered in 6 thirty minute settings over a two-day period.

The Iowa Test of Basic Skills scores were obtained from the Principal's office. Each school receives a print-out of the scores on the Iowa Test of Basic Skills for the entire school population. From this list, the Title I students are selected on the basis of scores of 90 and below. Each teacher obtains a print-out of her students from the test contact person in the local school.

When the total scores from the Iowa Test of Basic Skills and the Coopersmith were compiled, the Pearson $r$ was used to determine the relationship between them. Once the relationship was established, the "$t$" distribution was used to test its significance by the following formula:

$$ t = r \sqrt{\frac{N - 2}{1 - r^2}} $$
Analysis of the Data

Hypothesis 1 states: There is a positive relationship between self-concept and achievement in mathematics.

A measure of the relationship between self-concept and achievement in mathematics produced a Pearson $r$ of .22. In order to interpret the correlation coefficient, it must be squared to produce a common variance. The common variance refers to the variation in one variable that is attributable to the variation in the other. The value of the correlation coefficient of .22 may be interpreted by saying that 4 per cent of the variation in self-concept is associated with variation in achievement. When this relationship was tested for significance, a "t" value of 2.934 with 170 degrees of freedom was obtained. This relationship will exist by chance for this population one time out of a hundred. These findings indicate that a positive relationship exists between self-concept and achievement in mathematics for these students. (See Table 2).

<table>
<thead>
<tr>
<th>Variables</th>
<th>$r$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Concept and Achievement</td>
<td>.22</td>
<td>2.934</td>
<td>.01</td>
</tr>
</tbody>
</table>

N = 172

Hypotheses 2 states: There is no significant difference in the relationship between self-concept and achievement in mathematics among black and white children.
The relationship between self-concept and achievement in mathematics produced a Pearson r of .12 for the black students. The common variance of 1 per cent was obtained when the Pearson r was squared. Thus, 1 per cent variation in self-concept is associated with variation in achievement. When this relationship was tested for significance, a "t" value of 1.449 with 72 degrees of freedom was obtained. This indicates that the correlation coefficient of .12 was not significant.

A Pearson r of .44 was obtained when the relationship between self-concept and achievement in mathematics was measured for the white students. A common variance of 19 per cent was obtained when the Pearson r was squared. As a result 19 per cent of the variation in self-concept is associated with variation in achievement. When this relationship was tested for significance, a "t" value of 1.499 with 24 degrees of freedom was obtained. This relationship was significant at the .05 level. The findings indicate that there a significant difference between self-concept and achievement in mathematics among black and white students. (See Table 3).

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>.12</td>
<td>1.499*</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>.44</td>
<td>2.398</td>
<td>.05</td>
</tr>
</tbody>
</table>

*Not significant at the .05 level.
Hypotheses 3 states: There is no significant difference in the relationship between self-concept and achievement in mathematics among Title I and Non-Title I students.

The relationship between self-concept and achievement produced a Pearson r of .24 for the Title I students. The common variance of 3 percent was obtained when the Pearson r was squared. As a result, 3 percent of the variation in self-concept is associated with variation in achievement. When this relationship was tested for significance, a "t" value of 2.409 with 73 degrees of freedom was obtained.

A Pearson r of .17 was obtained when the relationship between self-concept and achievement in mathematics was measured for the Non-Title I students. The common variance of 3 percent was obtained when the Pearson r was squared. Therefore, 3 percent of the variation in self-concept is associated with variation in achievement. When this relationship was tested for significance, a "t" value of 1.473 with 95 degrees of freedom was obtained. The findings indicate that there is no significant difference in the relationship between self-concept and achievement in mathematics among Title I and Non-Title I students. (See Table 4).

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title I</td>
<td>.24</td>
<td>2.409*</td>
<td></td>
</tr>
<tr>
<td>Non-Title I</td>
<td>.17</td>
<td>1.473*</td>
<td></td>
</tr>
</tbody>
</table>

*Not significant at the .05 level.
Summary

This chapter has presented data and its statistical analysis concerning the relationship between self-concept and achievement in mathematics for the fourth, fifth and sixth grades at Charles L. Gideons Elementary School. The data indicate that no relationship exists between self-concept and achievement in mathematics associated with enrollment in the Title I program, but a significant difference does exist between black and white children.
CHAPTER IV

FINDINGS, CONCLUSIONS, DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

In this investigation, black and white Title I students were compared to the Non-Title I students with regard to their self-concepts and achievement in mathematics. Title I students receive Compensatory Education funds that are not applicable to the Non-Title I students.

The subjects of the study were 172 pupils from the fourth, fifth and sixth grade classrooms in Charles L. Gideons Elementary School in Atlanta, Georgia. Seventy-five students were Title I and ninety-seven were Non-Title I students; 26 of these students were white and 146 were black. The specific composition of subjects by race is provided in Table 1 of Chapter III. Both groups were given the Coopersmith Self-Esteem Inventory to determine their level of self-concept. The achievement scores on the Iowa Test of Basic Skills were obtained from the Principal's office. The purpose of the study was to determine whether the relationship between self-concept and achievement in mathematics is affected by race or enrollment in Title I.

Findings

Hypothesis I predicted a relationship between self-concept and achievement in mathematics for the total population. The results of the data
analysis (Chapter III, Table 2) reveal that a relationship between self-concept and achievement in mathematics does exist for the students studied. The value of $r = .22$ was significant at the .01 level.

Hypothesis 2 in this study states: There is no significant difference in the relationship between self-concept and achievement in mathematics of black and white children. The results of the data analysis (Chapter III, Table 3) do not support the hypothesis because the relationship was significant in the white students, not in the black students.

Hypothesis 3 in this study states: There is no significant difference in the relationship between self-concept and achievement in mathematics among Title I and Non-Title I students. The results of the data analysis (Chapter III, Table 4) support the stated hypothesis.

Conclusions

The following conclusions were drawn from the findings in this study: (1) With regard to the total population, a positive relationship does exist between self-concept and achievement. That is, as one's self-concept increases so will his achievement. The correlation coefficient representing this relationship was significant at the .01 level; (2) There was a significant difference in the relationship between the self-concept and achievement in mathematics among black and white students; and (3) There was no significant difference in the relationship between self-concept and achievement in mathematics among Title I and Non-Title I students.

Discussion

The finding based on Hypothesis 1 is consistent with the review of related literature. Thus a positive relationship does exist between a child's self-concept and achievement. If a child develops a positive
self-image within himself, then his behavior will reflect this change.

The finding based on Hypothesis 2 reveal that white children in fourth, fifth and sixth grades have a higher concept of themselves than the black population. With both black and white students participating in Title I and Non-Title I programs, one might assume that a greater influence is asserted by the home of the white population. A possible reason for a lower concept among the black population has to do with their culture. For decades society has told the black population that they were second class citizens and the mere color of their skin made them inferior to the white race.

It should be noted that the total population in this study had a much lower self-concept score than the population on which the test was standardized. This might be attributed to the fact that high and low achievers from varying backgrounds were included in the standardization of the test.

Based on the findings and conclusions, the investigation indicates that children enrolled in Title I achieve at the same level as children who were not enrolled in this program. The level of self-concept in the study for Title I students was the same as those of Non-Title I students. Based on this data, it would be misleading to suggest that Title I programs have not had any effect on raising the self-concept and achievement on these children. It should be noted that no previous measure of self-concept was obtained prior to the students entering the Title I program.

What can be suggested is that Charles L. Gideon's Title I mathematics classes are producing composite achievement scores and self-concept scores equal to those in Non-Title I classes.

Although Title I appears to be producing composite achievement scores
and self-concept scores equal to those of Non-Title students, one must remain cognizant of the fact that the evidence provided by the achievement data in Chapter III suggest that, on the whole, the children within the investigation are achieving at a low level.

The overall Title I program is made up of disadvantaged children with black students constituting 90% of the total. Because of the disadvantaged children's unique background, qualified teachers must be sought to teach them. The traditional method of teaching geared toward the middle class child will not suffice. Many of our teachers are placed in the Title I program using the regular classroom. An effective Title I program must change the substance as well as the form of the instructional program it offers if it is to meet the needs of the growing disadvantaged segment in our schools.

The guidelines do not provide evidence to show that Title I personnel will be or have been trained in the areas of diagnostic teaching or the careful planning of individualized instructional programs for the disadvantaged. This would suggest that the population for whom the Title I program, as a whole, was designed may have benefited more from the program if the personnel working with them had been trained to determine the instructional needs of each child in the program. The teacher is the single major influence within the educational world, whether it be compensatory or not. It is the interaction between the teacher and the learner that a child succeeds or fails. The teacher can assist the child in developing a positive self-image of himself or a negative one.

Based on the findings in this investigation, increased self-concept and achievement have not been met. One must realize that additional funds will not do the job, if the money is spent in a program that is not
producing desired results. One must realize that not all Title I programs operate in the same manner or produce the same results. A program that was judged to be effective only produced a year's gain of .07. This indicates that the child is still underachieving, but the gap is not as wide as it would have been. A close look should be taken to evaluate each program and how it can be effectively implemented to meet the needs of its population. In some instances, this would entail additional funds, reduction in class size, better teachers and curriculum experimentation.

**Implications**

Title I programs and activities which directly enhance a child's self-concept and his achievement need to be identified with clarity so that each Title I program in Atlanta, Georgia can be adjusted.

In reviewing the related literature, evidence points to the fact that the teacher is the single key to success. As the teacher interacts with the student, she transmits her feelings, interests, knowledge and attitude to the student.

One must remember that it cannot be said that Title I programs have not had any effect on raising the self-concept and achievement of the students studied. No previous measure had been ascertained before the implementation of the Title I program in the school.

**Recommendations**

The following recommendations appear to be appropriate, based on the study:

1. More research should be conducted to determine the effect of Title I on the achievement of the students in Title I.
(2) More study should be conducted to identify factors which contribute to high self-concept and achievement in children of the disadvantaged.

(3) A thorough evaluation of each Title I program needs to be implemented once every two years to determine if the desired goals are being met.

(4) Finally, a diagnostic tool for pointing out the disadvantaged child's strengths and weaknesses should be designed.
APPENDIX
## SELF-ESTEEM INVENTORY (SEI)

Please mark each statement in the following way:

- If the statement describes how you usually feel, put a check (✓) in the column, "Like Me."
- If the statement does not describe how you usually feel, put a check (✗) in the column, "Unlike Me."

There are no right or wrong answers.

<table>
<thead>
<tr>
<th></th>
<th>Like Me</th>
<th>Unlike Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I spend a lot of time daydreaming.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>2. I'm pretty sure of myself.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>3. I often wish I were someone else.</td>
<td>✓</td>
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<tr>
<td>4. I'm easy to like.</td>
<td>✓</td>
<td></td>
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<tr>
<td>5. My parents and I have a lot of fun together.</td>
<td>✓</td>
<td></td>
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<tr>
<td>6. I never worry about anything.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>7. I find it very hard to take in front of the class.</td>
<td>✓</td>
<td></td>
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<tr>
<td>8. I wish I were younger.</td>
<td>✓</td>
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</tr>
<tr>
<td>9. I can make up my mind without too much trouble.</td>
<td>✓</td>
<td></td>
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<tr>
<td>10. There are lots of things about myself I'd change if I could.</td>
<td>✓</td>
<td></td>
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<tr>
<td>11. I'm a lot of fun to be with.</td>
<td>✓</td>
<td></td>
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<tr>
<td>12. I get upset easily at home.</td>
<td>✓</td>
<td></td>
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<tr>
<td>13. I always do the right thing.</td>
<td>✓</td>
<td></td>
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<tr>
<td>14. I'm proud of my school work.</td>
<td>✓</td>
<td></td>
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<tr>
<td>15. Someone always has to tell me what to do.</td>
<td>✓</td>
<td></td>
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<tr>
<td>16. It takes me a long time to get used to anything new.</td>
<td>✓</td>
<td></td>
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<td></td>
<td>Like Me</td>
<td>Unlike Me</td>
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<tr>
<td>17. I'm often sorry for the things I do.</td>
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<td>18. I'm popular with kids my own age.</td>
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<td>19. My parents usually consider my feelings.</td>
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<td>20. I'm never unhappy.</td>
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<tr>
<td>21. I'm doing the best work that I can.</td>
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<td>22. I give in very easily.</td>
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<td>23. I can usually take care of myself.</td>
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<tr>
<td>24. I'm pretty happy.</td>
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<td>25. I would rather play with children younger than me.</td>
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<td>26. My parents expect too much of me.</td>
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<td>27. I like everyone I know.</td>
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<td>28. I like to be called on in class.</td>
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<tr>
<td>29. I understand myself.</td>
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<tr>
<td>30. It's pretty tough to be me.</td>
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<tr>
<td>31. Things are all mixed up in my life.</td>
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<td></td>
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<tr>
<td>32. Kids usually follow my ideas.</td>
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<tr>
<td>33. No one pays much attention to me at home.</td>
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<td></td>
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<td>34. I never get scolded.</td>
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<td>35. I'm not doing as well in school as I'd like to.</td>
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<td>36. I can make up my mind and stick to it.</td>
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<td>37. I really don't like being a boy - girl.</td>
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<td>38. I have a low opinion of myself.</td>
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<tr>
<td>39. I don't like to be with other people.</td>
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<tr>
<td>40. There are many times when I'd like to leave home.</td>
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<tr>
<td></td>
<td>Like Me</td>
<td>Unlike Me</td>
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<tr>
<td>41.</td>
<td>I'm never shy.</td>
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<tr>
<td>42.</td>
<td>I often feel upset in school.</td>
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<tr>
<td>43.</td>
<td>I often feel ashamed of myself.</td>
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<tr>
<td>44.</td>
<td>I'm not as nice looking as most people.</td>
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<tr>
<td>45.</td>
<td>Kids pick on me very often.</td>
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<tr>
<td>46.</td>
<td>If I have something to say, I usually say it.</td>
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<tr>
<td>47.</td>
<td>My parents understand me.</td>
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<td>48.</td>
<td>I always tell the truth.</td>
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<tr>
<td>49.</td>
<td>My teacher makes me feel I'm not good enough.</td>
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<tr>
<td>50.</td>
<td>I don't care what happens to me.</td>
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<tr>
<td>51.</td>
<td>I'm a failure.</td>
<td></td>
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<tr>
<td>52.</td>
<td>I get upset easily when I'm scolded.</td>
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<tr>
<td>53.</td>
<td>Most people are better liked than I am.</td>
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<tr>
<td>54.</td>
<td>I usually feel as if my parents are pushing me.</td>
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<tr>
<td>55.</td>
<td>I always know what to say to people.</td>
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<tr>
<td>56.</td>
<td>I often get discouraged in school.</td>
<td></td>
</tr>
<tr>
<td>57.</td>
<td>Things usually don't bother me.</td>
<td></td>
</tr>
<tr>
<td>58.</td>
<td>I can't be depended on.</td>
<td></td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY

Books


**Periodicals**


VITA

Thelma Simmons Woodfork

Education

B.S. Degree - Lane College, Jackson, Tennessee
B.A. Degree - West Georgia College, Carrollton, Georgia
M.A. Degree - West Georgia College, Carrollton, Georgia
Ed.S. Degree - Candidate: School of Education
Department of Education
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Experience

Teacher - Emerson Elementary School (three years)
Emerson, Georgia
Paul L. Dunbar Elementary School (one year)
Atlanta, Georgia
Charles L. Gideons Elementary School
Atlanta, Georgia

Personal

Married to the Reverend Jerry Woodfork and mother of one daughter, Erica.