

AN ANALYSIS OF SELF-CONCEPT OF  
ACADEMIC ABILITY (S.C.A.A.)  
AS RELATED TO SOCIAL-PSYCHOLOGICAL  
VARIABLES, COMPRISING SCHOOL  
CLIMATE, IN WHITE AND BLACK  
ELEMENTARY CHILDREN WITHIN  
DIFFERENTIAL SCHOOL SETTINGS

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Grace G. Henderson

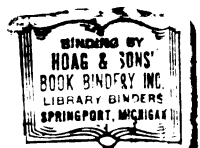
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## ABSTRACT

### AN ANALYSIS OF SELF-CONCEPT OF ACADEMIC ABILITY (S.C.A.A.) AS RELATED TO SOCIAL-PSYCHOLOGICAL VARIABLES, COMPRISING SCHOOL CLIMATE, IN WHITE AND BLACK ELEMENTARY CHILDREN WITHIN DIFFERENTIAL SCHOOL SETTINGS

By

Grace Gist Henderson

The purpose of this study was to measure the relationship between certain social-psychological variables, comprising school climate, and the self-concept of academic ability (S.C.A.A.) of fourth, fifth, and sixth grade students while holding constant, as much as possible, the school mean effects of race, socio-economic status (S.E.S.) and achievement levels. Specifically, it was designed to ascertain if school climates had a differential effect upon the students attending schools of similar racial and socio-economic composition, and/or varying achievement and grade levels.] If so, which of the social-psychological variables, comprising school climate, most strongly affected the S.C.A.A. of the student.

School Climate, as operationally delimited in this research, constituted the following nine social-psychological variables:  
Reported Student Press for Competition or Individual Performance (R.S.P.C.).  
Reported Teacher Press for Competition or Individual Performance

(R.T.P.C.), Importance of the Student Self-Identity or Role (I.S.S.I.), Reported Academic Norms of Schools (NORMS), Sense of Control (SEN-CON), Perceived Peer (Best Friend) Expectations and Evaluations (P.F.E.E.), Perceived Teacher Expectations and Evaluations (P.T.E.E.), Perceived Principal Expectations and Evaluations (P.Prin.E.E.), and Perceived Parent Expectations and Evaluations (P.P.E.E.). The above school climate variables were utilized in this study's analysis as the independent variables, with S.C.A.A. being the dependent variable.

Data were obtained from a non-random sample, comprised of 1,288 fourth, fifth, and sixth grade students in ten predominately white schools; and, 1,339 of the same, in seven predominately black schools. Schools were selected on the basis of mean student achievement and S.E.S. levels, as measured by the State of Michigan School Assessment Test Index Scores.

Schools were defined as predominately white or predominately black based upon a seventy percent or better majority composition of the student body for either race. Each school was defined as either high S.E.S. or low S.E.S. based upon the state assessment mean of forty-nine; schools scoring forty-nine and above or schools scoring below forty-nine, respectively. Achievement level was defined as high or low based upon the state assessment mean of fifty; schools scoring fifty and above or schools scoring below fifty, respectively. Taking into account the mitigating circumstances, and resultant scarcity of high achieving and/or high S.E.S. black schools, the sample selection criteria was relative to the school population.



The School Social Environment Student Questionnaire, comprised of sub-scales designed to measure each school climate variable and S.C.A.A., was administered to the students sampled. This analysis was divided into two stages. The first stage of the analysis constituted hypotheses one through six; and, determined any interaction effects between races, achievement levels, S.E.S. levels, grade levels, and sexes (R,A,S,G,X) manifested in S.C.A.A. (hypothesis one), and tested, separately, the effects of R,A,S,G,X, on S.C.A.A. (hypotheses 2-6). The second stage of the analysis constituted hypotheses seven through eleven; and, determined what effect(s) school climate variables had on S.C.A.A. with respect to R,A,S,G, and X.

The major statistical tools employed were a univariate analysis of variance tests, least square estimate of effects, for significant univariates (first stage) and least square regression analysis and least square step-wise deletion of variables (second stage). In all of the tests, the decision rule was to reject the null hypothesis at the .05 level, with the exception of the equal multiple correlations test (two-tail test with rejection at the .025 level).

The following speculative inferences and tenable conclusions were derived from the interaction effects and analyses, respectively.

1. The female students had a higher S.C.A.A. than male students in grades fourth through the sixth, and in predominately black, and low S.E.S. schools. In predominately white and high S.E.S. schools however, the males had a higher S.C.A.A., in the fifth grade. Also, the females S.C.A.A. lowered at each successive grade level in predominately white, and predominately black schools. It varied from fourth through sixth grades in the students in low S.E.S. and high S.E.S. schools; and, was higher in low achieving than in high achieving schools.

2. The male students' S.C.A.A. varied in all school settings. It varied in the students in predominately white, predominately black, and high S.E.S. schools, and fourth through sixth grades; and, was highest, of both sexes, in the fifth grade in predominately white and high S.E.S. schools. The male students' S.C.A.A. was lower at each successive grade level in low S.E.S. schools; and, was the same in both low and high achieving schools.
3. Students in predominately black schools, students in high S.E.S. schools, and female students had a higher S.C.A.A. than the students in predominately white schools, students in low S.E.S. schools, and male students.
4. The school climate variables are significantly related to the S.C.A.A. of all students in schools of different racial and S.E.S. composition, of different achievement and grade levels, and of both males and females.
5. The school climate variables significantly accounted for the variance of S.C.A.A. differently in the students within: predominately black schools, predominately white schools, high achieving schools, and low achieving schools.
6. The school climate variables which most strongly affected the S.C.A.A. of all students, in toto, and the students in schools of high S.E.S. and low S.E.S.; fourth, fifth, and sixth grades; and males and females, were the "significant others" variables--perceived expectations and evaluations for peers, teachers, and parents (P.F.E.E., P.T.E.E., and P.P.E.E.) respectively.
7. The school climate variables affecting the S.C.A.A., were different for the students in predominately black (BLACKS) than in predominately white schools (WHITES); and, for the students in high achieving (S.H-ACH.) than in low achieving (S.L-ACH.) schools.
  - a. BLACKS → P.F.E.E., P.T.E.E., and P.P.E.E.
  - b. WHITES → R.S.P.C., P.F.E.E., P.T.E.E., P.P.E.E., and P.Prin.E.E.
  - c. S.H-ACH.→ P.F.E.E., R.T.P.C., P.T.E.E., P.P.E.E., and P.Prin.E.E.
  - d. S.L-ACH.→ P.F.E.E., P.T.E.E., and P.P.E.E.

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By

Grace Gist Henderson

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## DEDICATION

To my husband, Ronald, who spent many hours assisting me in the completion of this thesis. His supportive strength, analysis skills, and constructive criticisms were invaluable. His love and encouragement was, and is, indispensable. Without such faith, advocacy, and understanding, this thesis would not have been completed. It is his, as well as mine.

To my father, Andrew Gist, with much love, and the realization of what the achievement of this endeavor means to you; as well as, to the rest of our family. Your unspoken love, and pride in me has encouraged me throughout my academic career, and my life. To my Aunt Lee, who is the "rock of Gibraltar" in our family, your love and faith in me has always been there, whenever needed; it has never waived. You have meant, and mean more to me than you'll ever know.

To the memory of my mother, who only wanted, and encouraged her children to strive, and to work to the best of their abilities in achieving the goals that they set for themselves; and, to be happy. Her devoted nurture and care instilled within us early, the value and the responsibilities, that an education brings. Hopefully, her faith, and patient understanding love, will not have been for naught for her eldest of six.

Grace Gist Henderson

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## CHAPTER I

### INTRODUCTION

Contemporary concern as to what effect the social environment (climate) of the school has on the learner has received increasing attention, since quality education still remains an elusive goal; and, educators seek to identify and implement needed changes in the educational system that would meet the personal and academic needs of all its students.

This humanistic perspective is essential, because as research evidence indicate, (see Chapter III), academic achievement is not determined by intelligence alone; but, is also affected by a wide variety of social-psychological factors, of which self-attitudes (i.e. self-concept) are one.

Indications are that academic success or failure is significantly influenced by the ways in which students view themselves (self-concept). Research evidence clearly shows a persistent and significant relationship between the self-concept and academic achievement; and, between the specific self-concept--self-concept of academic ability--and academic achievement (see Chapter III). Thus, the student's self-concept, seemingly, plays a crucial role in shaping his achievement. The

data give reason to assume that enhancing the self-concept is a vital influence in improving academic performance. Meaning, those who possess positive images of self and others, tend to develop higher levels of school success. (Anderson and Johnson, 1971).

Up to recently, considerable research has concentrated more on individual differences rather than the interaction between school social environment and student behavior. Although research evidence indicate that students who report low self-concepts rarely perform at above average levels, as would be expected; why some students with high self-concepts fail to succeed in school remains to be explored. Although the data do stress a strong reciprocal relationship, research evidence is not clear-cut as to which comes first--a positive self-concept or scholastic success; a negative self-concept or scholastic failure. If, however, in accordance with the research evidence, academic achievement may be raised by changing a student's self-concept, does the self-concept vary, or remain the same, in commensurate with achievement? In essence, what happens to the self-concept under the impact of the school?

#### Statement of the Problem

The lack of academic success among the minorities, of which the majority is black, has resulted in the inquiry of the social-psychological process regarding the relationship between the school social environment (school climate) and the student's self-concept. Research investigation into the domain of school climate, with regards to academic achievement, has motivated great scrutiny by researchers (Coleman, et al, 1966;



McDill, et al, 1967; Sinclair, 1970; Wilson, 1969; Brookover, et al, 1973). The above contend that school climate, in( regardless of ethnic or social class backgrounds, can provide an atmosphere that facilitates academic achievement.

Exploration of the relationship of school social environment (school climate) and academic achievement has indicated, that the basic nature of the norms, values, and goals held by educational institutions affect the nature of school climate; and, subsequently, the behavior and attitudes of student and staff (Walz and Miller, 1969).

Recent research data (Soares and Soares, 1969; Kerensky, 1967; Carter, 1968; Zirkel and Moses, 1971; DeBlassie and Healy, 1970; Rosenberg and Simmons, 1971; Hara, 1972; Gaston, 1972) have yielded results which conflict with the stereotypic view, and tend to shed doubt upon the proposition that, ethnic minority groups report negative self-concepts; and hence, low-achievement because of their socio-economic circumstances.

In light of what we know about the self and scholastic success, the above findings have serious implications for the school, as well as the student, if a child becomes convinced that school is a place where he cannot hope to succeed. Since self-concept is related to achievement, and, there is a relationship between school climate and achievement; it is important to know how the school climate is related to the self-concept of students; and, how this relationship is affected in different types of schools.

We need to know what in the school social environment (school climate) is related to the self-concept, so that the self-concept can be enhanced; and, through this, possibly, achievement. With respect to achievement,

the specific self-concept--self-concept of academic ability, hereafter, referred to as S.C.A.A.--is, apparently, a more relevant variable in school performance than a global or general self-concept (Paterson, 1966; Brookover, et al, 1967). Judging from other evidence supporting the above (see Chapter III), this writer concurs with the view that S.C.A.A. represents a more accurate assessment of the student's perceptions of his ability to achieve; and, is therefore, a meaningful factor in measuring achievement for all students.

Also, we need to look at and re-examine the assumptions that formulate the criteria used for measuring academic success or failure (i.e. generally, but specifically, as operationalized in this study) to determine its validity in educational environmental studies. Although the efficacy of self-concept, as it relates to academic achievement, seems to be well established, the instrumentation of self-concept studies has been called into question (Greenberg, 1970; and Zirkel, 1971). This will be discussed further in Chapter II.

There is very little evidence to indicate what effect the school social environment (school climate) has on the self-concept of the student; and, virtually no evidence is available on the ways in which elementary school environments affect the student's self-concept. Research questions regarding this interaction have been indicated, in recent studies, as an area which sorely need exploration (Morse, 1964; Brookover, et al, 1965, 1967; Yamamoto, et al, 1969; Cooper, 1972; Linton, 1972).

. . . Surely school curriculums and practices do affect how children see themselves, as well as what they think of education and school personnel . . . . However, hard data in this are lacking (Carter, 1970:54).



The current lack of research in this area has led to the present study.

### Purpose of the Study

Specifically, the purpose of this study is designed to measure the relationship between certain social-psychological variables, comprising the school climate, and the S.C.A.A. of fourth, fifth, and sixth grade students. Hopefully, this research study will ascertain if school climates affect the S.C.A.A. of students differently, in different types of schools, and/or at different grade levels. If so, which of the social-psychological variables, comprising the school climate, most strongly affect the S.C.A.A. of the student; and, hence suggest what kind of atmosphere would encourage and reinforce education, which would be responsive to the needs of all its students.

### Variables Utilized in the Study

School climate, as previously mentioned, is a social-psychological construct in this research. It is the interaction of the principal, teachers, and students within the school who produce an atmosphere that will enhance or mitigate against academic achievement. Parents also provide input into the school climate as a significant other of the student (Henderson, 1972: 3-4). Meaning, that school climate, for the purpose of this research, is in the realm of symbolic-interaction (self-other interaction) and, is the individual's interpretation/perception of "others"(teachers, students, principal, and parents) expectations,

evaluations, and behavior (reference group theory) which govern his action within the school, in his role of the student (role theory). The variables which constitute, and will be used to measure school climate, are as follows:

1. Reported Student Press for Competition or Individual Performance
2. Reported Teacher Press for Competition or Individual Performance
3. Importance of the Student Self-Identity or Role
4. Reported Academic Norms of Schools
5. Sense of Control
6. Perceived Peer Expectations and Evaluations
7. Perceived Teacher Expectations and Evaluations
8. Perceived Principal Expectations and Evaluations
9. Perceived Parent Expectations and Evaluations

The above variables were the data collected from the students and, utilized for this study's analysis as the independent variables. School climate is a matter of supposition as the review of literature will elucidate.

#### Justification for Research

Inquiry into the realm of elementary school climate, as it relates to the S.C.A.A. of the student, is of utmost importance. Determining and understanding the influence of school climates on students at the elementary level is crucial because of the implications and effects it would have on the learner throughout his school career.

As a child, an individual develops a conception of himself from the reactions of other individuals toward him. In the process of interacting with others, the individual comes to take the role of the other, basing his beliefs, evaluations, and expectations of himself on the beliefs, evaluations, and expectations that significant people in his life have of him. The resulting self-attitudes (self-concept) function to direct his behavior (Johnson, 1970:98).

Given the evidence that the self-concept concerning achievement is related to academic achievement, and that a student's perceptions of others indirectly influences his academic achievement through their influencing the self-concept (Brookover and Gottlieb, 1964), it would be functional for educators to know exactly what factors affect the self-concept and thus, academic success. Based on such knowledge, appropriate alterations of the school environment/climate of students can be planned and implemented, accordingly. "Different environments affect children in different ways, and to ignore variation in school climates is to limit our understanding of the various ways students think and feel" (Sinclair, 1970:53). "Just as individuals undergo changes and growth, one presumes a classroom group evolves and alters over time" (Morse, 1964:195).

Additionally, exploration in this area is also crucial because of the paucity of research that addresses itself to elementary school climate. It is postulated that each school has a social climate, which in turn is made up of a whole spectrum of more-or-less recognizable subcultures (e.g. academic and social) affecting student behavior and performance (Knapp and Greenbaum, 1953). "Since the school climate is a cluster of variables including factors such as school norms and values, peer group norms and values, and the like, research on the effects that the above have upon behavior, is applicable to the effect of school climate on behavior" (Johnson, 1970:238); and thus, academic achievement. However,

most studies of organizational climate have confined themselves to the college level, a few have investigated high schools, and practically none have dealt with elementary schools. . . . The climates of the elementary and high schools therefore, may or may not be congruent with the needs of the students, and perhaps affect their behavior more than do the climates of colleges (Johnson, 1970:231).

There is empirical support to assume that one may raise academic achievement by changing a student's self-concept (Johnson, 1970:94-99). The evidence available indicates that, most of the ways in which a student's self-concept, concerning his ability to achieve, may be changed, is in a school setting; and, involves modifying the images and expectations that significant others--parents, peers, and teachers--have of the student's abilities. Again, however, one must take into account the exact conditions under which the relationships will hold. There is some evidence which postulates that it is only when the teacher really believes that the child is capable of achievement, that his expectations affect the child's self-concept (Johnson, 1970:99).

Also, with regard to research endeavors, there is nothing in the literature to indicate what relationship exists between school climate and S.C.A.A. Thus, inquiry into this realm is literally virgin territory; especially, at the elementary school level. Finally, due to the state of our society in regards to antipathy against busing, defacto housing, and white/black backlash, total integration of the school has not been realized, and equal educational opportunity remains an elusive goal.

Due to the socio-economic inconsistencies within the United States, the great majority of blacks are in the lower class; whereby, the greater majority of whites are in the middle class. As previously indicated, Black schools are usually classified as low S.E.S. with concomitant achievement level. Because of the above, educators are prone to assume that the minority groups suffer from negative images of the self, based on their status within society. However, judging from the recent research evidence, previously cited,

it now seems hazardous to assume that black and/or poor children have lower self-concepts than children in better environments; and hence, low academic achievement. Therefore, strategies must be formulated to eradicate the dysfunctionality of black and/or poor schools.

Deutsch (1963) argues that it is often in the school that "highly charged" negative attitudes toward learning evolve; and, the principle that, negative self-concepts should be prevented, is ignored by many schools. Purkey (1970) sums up the above concern in the following manner:

All too often, schools are places where students face failure, rejection, and daily reminders of their limitations. Because some schools are unable to adjust themselves to individual differences of students, . . . . Competitive evaluations, which ignore varying sociological backgrounds and individual differences in ability, often begin in the first grade and continue throughout school (p. 40).

### Significant Questions Underlying this Study

#### General

1. Do sixth graders have a higher or lower S.C.A.A. than fifth, than fourth, graders?
2. Do males have a higher or lower S.C.A.A. than females?
3. Do various characteristics of school climate have any effect on the student's S.C.A.A.?
4. Does school climate have a different effect on the student's S.C.A.A. in schools with different racial and socio-economic composition and with different levels of achievement?
5. Do the students in these schools, in grades fourth, fifth, and sixth, perceive the learning process in the same manner?
6. Can a positive school climate be structured in any school setting?

#### Specific

1. What relationship exists between school climate and the student's S.C.A.A.? Is there any difference between grade levels and sex?



2. Does the school climate, as perceived by the fourth, fifth, and sixth grade students, have a different effect on the student's S.C.A.A. in schools with different racial and socio-economic composition, and with different levels of achievement?
3. Does the school climate affect the S.C.A.A. of the black students differently than of the white students in schools with different levels of S.E.S. and achievement?
4. Which of the social-psychological variables, comprising the school climate, most strongly affect the S.C.A.A. of the student?

#### Statement of the Hypotheses

The hypotheses, which are the core components for analysis in this study, are stated below as follows:

General Hypothesis I: There will be differences in the S.C.A.A. score among race, grade level, socio-economic status level, and between sex, in the students in schools of different achievement levels.

1. The self-concept of academic ability score (S.C.A.A.) will be different at each grade level.
2. The S.C.A.A. score will be different among the males than among the females.
3. The S.C.A.A. score will be different among the students in high S.E.S. schools than among the students in low S.E.S. schools.
4. The S.C.A.A. score will be different among the students in high achieving schools than among the students in low achieving schools.
5. The S.C.A.A. score will be different among the students in predominantly white schools than among the students in predominantly black schools.

General Hypothesis II: The school climate variables will be differently related to the S.C.A.A. of fourth, fifth, and sixth grade students in schools of different racial and socio-economic composition, and with different levels of achievement.

6. The school climate variables will be differently related to the S.C.A.A. of students in black schools than in white schools.
7. The school climate variables will be differently related to the S.C.A.A. of students in low achieving schools than in high achieving schools.
8. The school climate variables will be differently related to the S.C.A.A. of students in low S.E.S. schools than in high S.E.S. schools.



9. The school climate variables will be differently related to the S.C.A.A. of students in the sixth grade than in the fifth grade, or fourth grade.
10. The school climate variables will be differently related to the S.C.A.A. of female students than of male students.
11. The school climate variables affecting the S.C.A.A. of white students will be different from those affecting black students.

### Significance of the Research

In view of all the research evidence available, this line of research appears to be very crucial, as perceived by this writer. Equal educational opportunity and/or quality, education has, and presently remains, a complex and, seemingly, unsolvable problem within the United States today. Much research has been done in an attempt to determine, and to eradicate, the causes responsible for the low rate of academic success, especially, among the minority groups, of which the majority is black. It has been empirically established that a student carries with him certain attitudes about himself, and his abilities which play a primary role in how he performs in school (Purkey, 1970:25).

Hopefully, research in this area will challenge previously held assumptions, with regards to academic success or failure; and, will provide a systemic base to educators which would help them determine if, through the manipulation of certain social-psychological and structural variables, what kind of school climate would be necessary, and would be positively responsive to the needs of all of its students. The above will be accomplished, hopefully, by providing information in the following crucial areas:

1. To provide insight into a sphere which presently lacks such knowledge--the phenomenon of the S.C.A.A. in the elementary school.



2. To add further credence to the line of research which posits that school climate is related to academic achievement.
3. To provide some basis for knowing what could be changed in the school environment (school climate), in order to change the self-concept of academic ability.
4. Lastly, but most importantly, a systematic inventory of school climate variables will be given; which may provide insight into the differences of the respective student population with regards to school climate and S.C.A.A.

#### Delimitations of the Study

The research design of this study was founded, in part, upon the data obtained from the State Assessment Program of the State of Michigan, Department of Education. A state-wide assessment program had begun in 1969-1970 for all of the elementary schools in the state of Michigan; and, tests were administered to all of the fourth graders, measuring achievement and S.E.S.

The sample of this study was selectively based; and thus, non-random in that, the schools were matched, as close as the population would allow, on similar racial and S.E.S. composition; but, significantly different levels of achievement. Therefore, the state assessment data made it easy for us to control for race, achievement level, and S.E.S. level in our sample selections; and, our sample was based on these specific characteristics. A predominately black or white school was designated as such, based upon a seventy percent majority/composition of the student body for either race. Achievement level and S.E.S. level were determined by the state assessment test index scores.

Because of the sampling difficulties in matching blacks and whites on the indices of achievement level and S.E.S. level, the sample consists of seventeen (17) schools; and, stratification of the sample involves just one school in the data matrix cells, in some cases.

		Black	White
High Achievement	High S.E.S.	1	3
	Low S.E.S.	3	2
Low Achievement	High S.E.S.	1	3
	Low S.E.S.	2	2

Figure 1.--Design of Schools Comprising the Sample

As previously mentioned, the purpose of this research is to determine the relationship between S.C.A.A. and the social-psychological variables, comprising school climate, in schools of different racial and S.E.S. composition and with different levels of achievement. The analysis of this study will be done in two stages.

The first stage of the analysis is designed to determine what relationship(s) exists between the student's S.C.A.A., as perceived by the students, and race, achievement level, S.E.S. level, grade level, and sex. It is also, however, the preliminary procedure to the second, or most crucial part, of this study's analysis. Although the literature is replete with research findings regarding the relationship of the global or individual self-concept to the above five categories, there is not an abundance of knowledge relating the S.C.A.A. to the above five categories; more specifically so, at different grade levels and between sex. Thus, the purpose here is to provide insight into this area either in the form of generating further research, or significant findings.

The second stage of this analysis is designed to determine what relationship exists between the perceived S.C.A.A. of fourth, fifth, and sixth grade children and the social-psychological variables, comprising school climate, in school settings of different racial and S.E.S. composition, and with different levels of achievement. The design of the study is represented in Figure 2.

Racial Composition	Achievement Level and S.E.S. Level		Grade Level and Sex					
			4th		5th		6th	
			M	F	M	F	M	F
Black	High Achievement	High SES						
		Low SES						
	Low Achievement	High SES						
		Low SES						
White	High Achievement	High SES						
		Low SES						
	Low Achievement	High SES						
		Low SES						

Figure 2.--Research Design of Study

The instrument, utilized in this study, was the School Social Environment Student Questionnaire, developed by Wilbur B. Brookover and Richard Gigliotti; and, was designed for the larger School Social Environment study, of which this research is a part, (see Appendix A). The data were collected during the academic school year of 1970-1971, and used the 1969-1970 state assessment information. The questionnaires were administered to all of the fourth, fifth, and sixth grade children of the selectively sample schools; whenever, possible. This procedure accomplished three things: (1) a greater sample of the student population was obtained; (2) the fifth grade children were the strata of population of greatest interest because of the state assessment information; and (3) the sixth grade children, having the greatest familiarity with the school, would be most representative of the actual school climate based on their perceptions of the school climate. Therefore, all of the fifth grade student populace was included in the sample; and, as many of the fourth and sixth grade children as time and finances permitted. Administration of the questionnaire was done in the student's respective classroom group, by one of four trained staff persons who visited each classroom, just once.

It is with regret, however, that this investigator reports that the school, as a socio-cultural system, was not examined in this present study. As Shinn (1972) posits;

Study of the school in the American society is a study of human behavior within a socio-cultural system (not of the whole culture) which is in context, made up of a myriad of social-interaction in vivo, in (a) natural setting, within the larger community. The cultural interplay between the community and the school is an on-going event with no conspicuous demarcation where the involvement of both begin and end in the educational process of the child (p. 364).





Exploration in this arena would prove to be most significant; and, it is felt to be mandatory by this investigator.

This investigator realizes that the design of the study, which was intended to control those factors which confound comparative investigations within school settings, coupled with the non-random assignment of the sample, will necessitate qualifications of any results which might emerge. However, considering the sacrifice of generalizability, there is no wish to make comparison to any population other than with the selected sample schools. This study is more than just exploratory, however; and, utility is still claimed because of the significance and impetus it has for continuing research effort in this area.

This sample enabled the investigator to examine certain social-psychological variables, comprising school climate, to maximize those differences which may affect the S.C.A.A. of the student beyond the effects of race, S.E.S., and achievement. In this way, it was designed to determine which of the social-psychological variables most affect the S.C.A.A., so that the S.C.A.A. can be enhanced; and perhaps, academic achievement. An additional note here, with regard to generalization and non-random sampling. As one social scientist pointed out to this investigator; and, with whom she concurs: "The notion, that you either do not have a strictly random sample of some population and, therefore, cannot generalize at all; or that you have a random sample and can, therefore, generalize at will, is rejected--the actual situation of research is always somewhere in between."

This study makes no claim as to examining all, or even the most significant, social-psychological variables having an effect on the

S.C.A.A. It is hoped, however, that those variables not showing significance will be eliminated in future research endeavors. And also, that the research delineated from this study will attempt to have a number of important implications for theory, future research, and implementation regarding the educational impact the elementary school environment has on the learner; and, the significance of the S.C.A.A. in this process.

### Definition of Terms Relevant to the Study

#### School Climate

School climate has previously been defined (pp. 5-6). As delimited in this research, school climate is the same as school social environment; and, can be used interchangeably.

The next nine definitions will explain the meanings of the social-psychological variables comprising the school climate; after which S.C.A.A., as the dependent variable in this study, will be defined.

#### Reported Student Press for Competition or Individual Performance (R.S.P.C.)

This construct is defined as an atmosphere of pressure/influence exerted on the student, by the climate of the school, to compete and/or strive for individual performance, as perceived by the student.

#### Importance of Student Self-Identity or Role (I.S.S.I.)

This concept refers to the "relative degree of investment placed in the identity student, for self-esteem maintenance" (Gigliotti, 1969:7). Meaning, to what extent or measure is the commitment that a student places in his role, as a student, in relation to the maintenance of his global or overall self-concept.

### Academic Norms of School (NORMS)

Academic norms of the school refers to the overall demand, within the school, for academic performance, as perceived by the students. The reporting by the students was based on their observation of fellow students in class, in the entire school, and of their teachers.

### Sense of Control (SEN-CON)

Refers to the student's feeling of control over his environment (his destiny). Coleman, et al (1966:288) explain sense of control in the following manner:

If a child feels that his environment is capricious, or random, or beyond his ability to alter, then he may conclude that attempts to affect it are not worthwhile, and stop trying. Such a response to one's environment may be quite unconscious, but merely a general attitude that has developed through long experience. The particular relevance of this factor for groups that have been the subject of discrimination is that they have objectively had much less control of their environment (their goals or destiny) than have members of the majority group.

### Reported Teacher Press for Competition of Individual Performance (R.T.P.C.)

This construct refers to the atmosphere of pressure/influence exerted on the student, by the teacher, to compete and/or strive for individual performance, as perceived by the student.

### Perceived Expectations and Evaluations of Peers, Teachers, Principal, and Parents (P.F.E.E., P.T.E.E., P.Prin.E.E., P.P.E.E.)

Perceived Expectations of the above refers to the "expectations which an individual perceives another person holds of him, in respect to academic tasks, as compared with others in his school class" (Henderson, 1972:67).

Perceived evaluations of the above refers to the "evaluating definitions which an individual perceives another person holds of him, in respect to his ability in academic tasks in general, as compared with others in his school class" (Auer, 1971:53).

### Self-Concept of Academic Ability (S.C.A.A.)

S.C.A.A. refers to the behavior in which one indicates to himself his ability to achieve in academic tasks as compared to others involved in the same tasks. S.C.A.A. is conceived of being one of a number of self-concepts which an individual may have of himself. There is the possibility of a different self-concept for each of the roles which a person performs (Brookover, et al, 1967:22).

A conceptual model is in order to illustrate how the nine (9) social-psychological variables, comprising school climate, utilized in this research are related; and, to show what relationship school climate may have, via symbolic-interaction (self-other interaction), on S.C.A.A., see Figure 3.

### Symbolic-Interaction

An individual using his perceptions of the evaluations, expectations and behavior of "others" as a basis upon which he forms beliefs, attitudes, and values about himself; and applying it to any particular, or set of situations with which he might come into contact (Schneider, 1973:23). It can also be called self-other interaction.

Perceived Expectations and Evaluations within  
the Social System

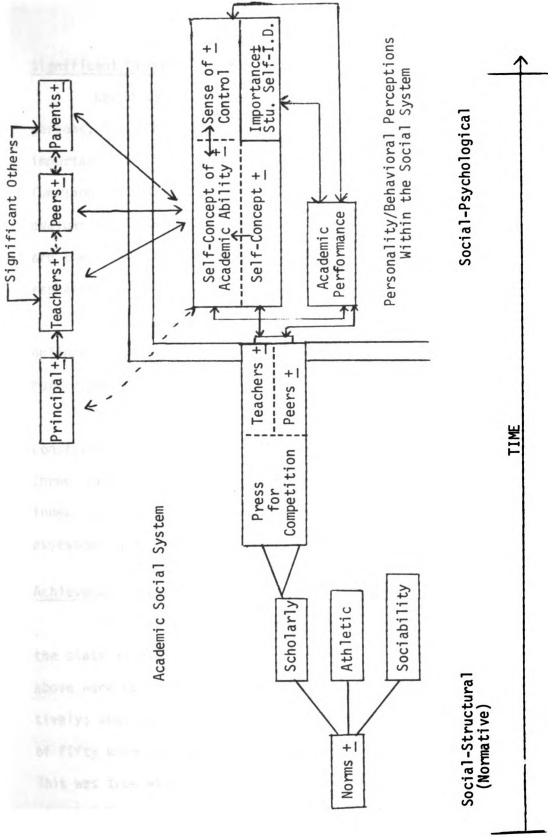


Figure 3.---The Symbolic-Interaction Relationship Between School Climate and S.C.A.A.

### Significant Others

Based upon the interaction between the individual and other persons, "significant others" are identified as being the most important persons in the life of the individual; and, these "others" function to direct his behavior; based upon the expectations and evaluations that they have of the individual. Parents, teachers, peers, are the three (3) significant others most frequently identified in the research literature.

The above constructs, as delimited in this research, were defined accordingly. The next set of definitions delineate some of the more commonly used terms that are found in the literature on the self.

The following three (3) definitions explicate how these constructs were delineated in this research. Specifically, two of the three constructs were determined by the state assessment test index scores, and one of them was information obtained from the state assessment program.

### Achievement Level

The mean achievement level was defined as fifty, based upon the state assessment test index scores. The Schools scoring fifty and above were considered average achieving and high achieving, respectively; and, defined accordingly. Those schools scoring below the mean of fifty were considered below average and defined as low-achieving. This was true with the exception of two black schools (Schools 13 and 17), which were designated high achieving with an index score of 49.6 and 47.2, respectively.

### Socio-Economic Status (S.E.S.) Level

The mean S.E.S. level was defined as forty-nine, based upon the state assessment test index scores. Thus, schools scoring forty-nine and above were defined as high S.E.S; and, schools scoring below the mean of forty-nine were defined as low S.E.S. The sample selection criteria of black schools were not entirely similar with that of white schools, taking into account the mitigating circumstances, and resultant scarcity of high achieving and/or high S.E.S. black schools.

### Race

Racial composition of each school was the information obtained from the state assessment program, and was the percentage of black and white students in the school. Predominately black or predominately white schools were designated by a seventy percent or better student body majority for either race.

### Self

Based upon various definitions of the self, a composite definition of the self is "a complex and dynamic system of beliefs which an individual holds true about himself, each belief with a corresponding value. It is the individual's basic frame of reference in which all behavior, without exception, is dependent upon" (Purkey, 1970:7).

### Self-Concept

Consisting of a complex set of elements which are organized into a systematic relationship, the self-concept is symbolic behavior in which the individual expresses clearly a program of action for himself as an object in relation to others. In essence, what an



individual believes he is. In the literature, terms frequently used to connote the above are "global self-concept," "self-esteem," "self-attitude," and "self-image" (Brookover, 1967:8).

### Self-Awareness

. . . "the self is not initially there at birth; but, arises in the process of social experience and activity" (Mead, 1934:135). Thus, this concept, in early infancy, depicts the infant's vague feelings of comfort and discomfort. As he develops, he begins to make distinctions between his own body and other objects in his environment (Kaluger and Unkovic, 1969:152). The bodily sense remains a lifelong anchor for our self-awareness, though it never, alone, accounts for the entire sense of self (Allport, 1968:27). Therefore, self-awareness, in its fullest sense, is not just cognitive awareness, then. One of its fundamental characteristics is an evaluative or judging attitude toward the self, in which the self is regarded as an object of importance and preferably of worth (Hilgard, 1968:375).

### Self-Image

Self-images are initially based on the interactional relationships the child has learned before the development of the self. Ideas, signs, impressions, conveyed by parental words and gesture are copied and imitated. In essence, the messages the parent emits, provides the symbols, via the language, from which the "other" is formed, and applied to the self. (Wilson, 1971:121-123). The images people have of one another are built up through the process of symbolic-interaction; and, is formed on the basis of perceiving how others react to him (Cooley, 1902). The self-image is like the picture

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which the individual sees at a given moment, like the photograph that records one's appearance at an instant of time. It may change from moment to moment; and, there may be multiple self-images simultaneously in effect, when the individual is aware that his behavior at a given moment looks different to his son, his mother, and his wife.

"The distinguishing content of any individual's self-conception is established during the interplay between the succession of self-images and his goals and values. Values and images are thrown into unique juxtaposition by his distinctive set of interactive experiences. Each person's self-conception is a selective working compromise between his ideals and the images forced upon him by his imperfect behavior in actual situations" (Turner, 1968:94).

### Self-Perceptions

The person's observation of and/or understanding about himself (i.e. "Who am I"). In the process of interaction with other people, the child begins to recognize that others react to him in certain ways and he begins to react to his own actions and personal qualities as he expects others to react. In essence, he learns to think of himself as having characteristics and abilities that are perceived by others (Johnson, 1970:82). This emerging capacity to take the point of view of others and to see oneself as an object, gives rise to beliefs and attitudes about oneself, in short, a self-concept.

### Self-Attitudes

Self-attitudes is the development of a sense of self; and, the individual's ability to react to himself. What he now calls self is

a combination of elements which at an earlier period in his life, he called someone else. By imitating and copying, based upon his interaction with the social environment, he found that they applied to him too.

In essence, self-attitudes are an attitude system--a pattern of attitudes and values that will affect the individual's personality and behavior--based upon the attitudes held by other persons toward oneself and toward one another (Deutsch and Krauss, 1965:145, 187-188).

Self-attitudes develop through social interaction, and as the child interacts with objects and persons, he comes to perceive himself as an object, separate and distinct from other objects and persons (Lindesmith and Strauss, 1968).

### Self-Evaluation

Self-evaluation is one's esteem or appraisal or regard based upon interaction with others who are significant to him. Cooley's (1902) "looking-glass self" is the mechanism utilized to accomplish this. It's the individual's opinion of what he thinks, and/or believes, and/or judge what his worth and value is as a person; based upon his perceptions of how others react toward him. For example:

learns → imitates → accommodates to new suggestions from  
family, etc.

motivation → adaptation → self-evaluation

desire → perceived → conscience  
reality

In essence, it's a self-realization process based upon his own feelings about himself, perceived feelings others have of him, and the evaluation of these feelings.

A schematized outline, delineating the above concepts on the self-concept, follows. This is done merely to illustrate how these concepts fit into the social system of the self (Figure 4). This figure does not, however, include the time dimensional aspect, because it does not depict the entire sequential development of the self. The self, however, is dynamic and continually changes in the process of self-other interaction. Meaning, the positive or negative values which are associated with those qualities and relationships as they are perceived as existing in the past, present, or future.

It is important to note here that the above definitions are derived from various resources encountered by the writer and are interpreted as depicted above. However, this does not mean that these definitions are applicable to the authors' definitions whose research will be reviewed in Chapter III. On the contrary, as Chapter II will illustrate, the confusion surrounding the self-concept literature makes it highly difficult for this writer to generalize and/or even imply that those authors defined and utilized their constructs of the self the same or similar to this writer.

The purpose here was to provide some clarification of the self terminology by defining the most utilized constructs of the self, as depicted in the literature, as well as the constructs delineated

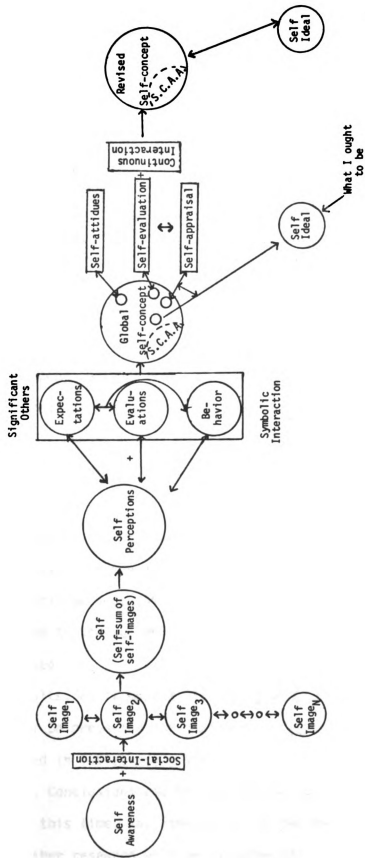


Figure 4.--Some Dimensional Components of the Self-Concept

in this study; and, to provide a schematized outline illustrating and elucidating some of the dimensional components of the self-concept based upon their frequent usage.

### Overview

This study is designed to examine the relationship of social-psychological variables, comprising school climate, and S.C.A.A. In Chapter II, the theoretical framework underlying this study will be discussed, along with, a brief expose depicting the confusion surrounding the line of research dealing with the self-concept. Chapter III will consist of the relevant literature, and will be reviewed in four main areas: self-concept and academic achievement, S.C.A.A. and academic achievement, school climate and academic achievement, school climate and self-concept. Emphasis will be on the limited research on the latter two areas and the paucity of research directly related to this study.

In Chapter IV, the research methodology will be explained; design of the study, and characteristics of the sample will be presented, the instrument will be described, data collection procedures, and the hypotheses, to be tested, given. Also, the manner in which the analysis will be implicated.

The results, as it applies to the hypotheses being tested in this study, will be presented and examined in Chapter V. The findings will be presented in Tables and graphs.

Summary, Conclusions and Recommendations will be presented in Chapter VI. At this time, any limitations of the research and implications for further research will be illuminated.

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## CHAPTER II

### THEORETICAL FOUNDATIONS

In depicting the theoretical framework which is the basis for this study, it is, first, necessary to briefly discuss the self-concept as a social-psychological phenomenon; and, it's role in the educational process, as a backdrop, to further explain the usage and the significance of the above. Hopefully, this will clarify any misinterpretation that may have occurred regarding it's specific meaning in this research.

#### Self-Concept, S.C.A.A. and Education

This writer views self-concept as a product of the socialization process, especially as it operates in the home, school, and neighborhood. The source of one's self-concept is, of course, not internal; it is socially learned. The self-concept is developed and maintained through the many experiences of the individual. Whatever it is that impels an individual to act or not to act, a significant role is played, in this determination, by what the person thinks about himself (Wylie, 1961). For whatever the interaction, the child is molded by the repeated behavior of the significant people in his life. Thus, the main forces which shape the self-concept are significant others. Much of a child's behavior repertoire is believed to be acquired through identification with the important adults (persons) in his life (Bandura and Huston, 1961:247).

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Thus, the self-concept is viewed as a social-psychological phenomenon through which structural and contextual factors (i.e. those factors usually treated as independent variables, such as S.E.S.) affect behavior.

The terms "self-concept," and "self" have often been used; and, in many different contexts. Because of this, it is important that it be properly defined as used in this research. This is crucial because the literature on the self-concept is vast; but, confusing. In operationalizing the theory of self-concept to research, there have been many problems; and, in fact, the instrumentation of self-concept studies have been called into question.

Zirkel and Moses (1971:254) note that confusion surrounds the subject of self-concept; partly, because there is no formal set of assumptions, and the underlying rationale, instrumentation and research methodology vary according to the person undertaking the research.

Reasons for the inconsistencies seem to be varied and diverse. Some of these may be attributed to differences in definitions, instruments, research designs, age groups, regions, times, and the individuality of human beings which defies categorization."

This is not to say, however, that the self-concept, itself is questioned. Only the instrumentation by which one measures it, is questioned.

Coller (1972) indicates strongly, that there is a need to clearly determine the relationship among the many measures of self-concept. He feels that the confusion lies in the fact that social scientists tend to use the same term to mean different things; and, mean the same things when they use different terms. He also feels that it is probably not possible to produce a widely accepted literal term

or definition of self-concept, and, that the self-concept should be regarded as merely a technical term for a field of study.

In his research, he indicated that most contemporary theorists define "self" either as a group of psychological processes that govern behavior and adjustment; and/or, as an organized collection of attitudes, beliefs, and feelings a person has about himself. He noted, however, that difficulties occurred when attempting to define self-concept operationally.

The testing objectives of the many instruments are so divergent that self-concept must, in general, be defined operationally as that construct, or set thereof, assessed by the set of so-called self instruments" (p. 67).

An operational definition is defined by Bloom, et al (1971) as "the operations one performs to measure the construct become the definition of the construct." Coller further adds that:

. . . an operational definition for any particular instrument should differ from this highly general definition . . . . it should be more precise, for example. In practice, operational definitions have seldom been offered by the self-concept test constructor (p. 78).

He summarizes his research by stating that, more research is clearly needed to determine the relationship among the many measures of self-concept; it is inappropriate to attempt to validate a self-concept measure by simply comparing it with another self-concept measure. In short, the self-concept area requires a "new look." The bulk of currently available self-concept tests, he feels, are not likely to be of significant value to the educators concerned with either the development or modification of specific educational programs for young children. He recommends strongly, that criterion referenced tests be developed.

Thus, one can, seemingly, from the above discussion understand that it is even more important to operationally define the self-concept than it is to literally define the construct. This will become quite obvious when the literature on self-concept is reviewed in Chapter III. With this in mind, the writer will move on with the discussion concerning this present study.

The current analysis is concerned with how the school social environment (school climate) affects the self-concept of academic ability of its students. Meaning, what happens in the school that would affect a student's perceptions of his ability to achieve academic success?

Self-concept of academic ability as used in this research should not be confused with other definitions of self-concept or self. Mead's behavioristic use of "self-reflective," "self-attitude," "self-consciousness," "self-communication," and "self-as-an object" are most pertinent to our usage. It has not been our intention to measure or infer a self as a subjective phenomenon as in Mead's use of the "self as I." Self-concept is defined as symbolic behavior in which the individual articulates a program of action for himself as an object in relation to others (Brookover, et al, 1967:8).

Meaning, in the process of interaction with other people, the individual begins to recognize that others react to him in certain ways; and, he begins to react to his own actions and personal qualities, as he expects others to react. He learns to think of himself as having characteristics that are perceived by others.

To the extent that a person is able to take the role of others, he can respond to himself from their perspective; and hence, become an object to himself. In this way, the attitudes of significant people become incorporated into the structure of the self and gives rise to

the (global) self-concept. (i.e. beliefs and attitudes about oneself based on taking the point of view of others and seeing oneself as an object).

Much of the research on the self-concept assumes that the self-concept is unidimensional; that is, the person has one major self-concept that influences his behavior. This assumption is questionable. Most theorists now agree that the self-concept is not a unitary conception; but, consists of the symbolic representations a person has made to himself of his various characteristics (e.g. physical, ethnical, biological, etc.) (Deutsch and Krauss, 1965). In other words, a person has many different self-attitudes connected with such things as his physical and biological, etc. characteristics and his possessions and actions. Even more simply, the self-concept is a multidimensional construct that covers and includes the total range of one's perceptions and evaluations of himself. We have as many self-concepts as we have organized sets of attributes and roles.

The implications of this for the school is that an individual's self-attitudes relating to achievement will be complex. Self-concept of academic ability (S.C.A.A.) refers to the behavior in which one indicates to himself (publically or privately) his ability to achieve in academic tasks as compared to others engaged in the same tasks (Brookover, et al, 1967:8).

We perceive of self-concept of academic ability as only one of many concepts of self. Other concepts of self refer to other areas of behavior which may vary from that involving school performance . . . (it) does not refer to some underlying mental structure such as a phenomenological self, as defined by such theorists as Jersild or Maslow. Rather it refers to symbolic behavior, and as such, to an empirical event. Thus when individuals publically define their academic ability, we may observe what we refer to as self-concept of academic ability behavior (Brookover, et al, 1967:8-9).

Thus, in addition to, or instead of a general conception of his academic ability, he will have self-attitudes regarding the various subjects and requirements of the school (e.g. good in English; but, poor in math, etc.). Hence, S.C.A.A. is conceived of as being only one of a number of self-concepts which an individual may have of himself. There is the possibility of a different self-concept for each of the roles which a person performs. Other concepts of self, however, refer to other areas of behavior which may vary from the area of school achievement.

In relating the above to the school social environment (school climate), David Johnson (1970) gives the most concise definition of education from a social-psychological perspective to date.

Education, from a social psychological point of view, is carried on in an organized social environment largely through interpersonal processes. How a student responds in the classroom, for example, will depend upon such factors as the organizational structure and climate of the school, the nature of the classroom norms and procedures, the similarity between the student's goals and the goals of his teacher, and the reactions he thinks his peers, parents, and friends will have to his behavior. It is primarily within the extended teacher-student and student-student interactions in the classroom that education takes place. Classroom interpersonal processes, however, do not take place within a vacuum; they are affected by the organization within which they take place. In addition, schools . . . have positive and negative consequences for its members. (pp. 4-5).

This brief discussion has sought to explain, in depth, the definitions--self-concept and S.C.A.A.--as applied in this research (i.e. from an symbolic-interaction perspective). To do this, it was also, necessary to explicate the concern that surrounds the self-concept literature, in terms of its confusion; especially at the operational level. Also, in relating the above definitions to education, it was elucidated

that the educational process is social-psychological in origin. In relating the two together, implications are that the ways in which a student views himself and his world are products of how others see him; and, are primary forces in his academic achievement. How the perceptions of a student's ability to achieve is affected by the school climate, is the objective of this research.

### Theoretical Framework

The major theoretical perspective underlying this present research is that of symbolic-interaction (self-other interaction). It is obvious, however, from the previous discussion, that role theory and reference group theory are also coupled with symbolic-interaction; and, that both lend themselves to that line of logic posited. Simply, role theory encompasses behavior which deal with the interaction of the individual and his environment. The behavior of these individuals are influenced by the expectations, evaluations, and behavior of "others" (reference group). However, this writer contends, in the spirit of W. I. Thomas, John Dewey, Mead, and others, that it is the interpretation of these expectations and acts of others, and not the actual behavior of others, which most influences the individual's behavior. Each of the three rubrics will be delineated as to their explication in this research.

### Symbolic-Interaction

Theoretical foundations for this research is derived from a symbolic-interactionist theory of the self which is summarized by David Johnson (1970) as follows:



The actual responses of others to the individual will be important in determining how the individual will perceive himself; this perception will influence his self-conception which, in turn, will guide his behavior (p. 85).

The above theory was derived from the symbolic-interactionist theorists George Herbert Mead (1934), Charles Cooley (1902), and formalized by J. W. Kinch (1963). They contend that it is not the actual behavior of others which directly determine an individual's actions; but, the individual's interpretation of the expectations and acts of others which most influence his behavior.

Self-attitudes develop through social interaction and as the child interacts with objects and persons he comes to perceive himself as an object separate and distinct from other objects and other persons (Lindesmith and Strauss, 1968).

Cooley, in noting that the individual's self-concept is determined by his perception of other people's evaluation of him, developed the concept of the "looking-glass self."

As we see our face, figure, and dress in the glass, and are interested in them because they are ours, and pleased or otherwise with them . . . . as in imagination we perceive in another's mind some thought of our appearance, manners, aims, deeds, character, friends, and so on, and are variously affected by it. (p. 184)

Mead suggests that one's self-concept is at least partially determined by his perception of the evaluation of those persons he interacts with.

The organization of the self is simply the organization, by the individual organism, of the set of attitudes toward its social environment . . . . and toward itself from the standpoint of that environment . . . . which it is able to take (p. 91).

An excellent summary of Mead's position has been prepared by Bernard Meltzer (Manis and Meltzer, 1967:19-20). He writes:

The human individual is born into a society characterized by symbolic interaction. The use of significant symbols by those around him enables him to pass from the conversation of gestures which involves direct, unmeaningful response to the overt acts

of others to the occasional taking of the roles of others. This role taking enables him to share the perspectives of others. Concurrent with role-taking, the self develops, i.e., the capacity to act toward oneself. Action toward oneself comes to take the form of viewing oneself from the standpoint, or perspective, of the generalized other (the composite representative of others, of society, within the individual), which implies defining one's behavior in terms of the expectations of others. In the process of such viewing of oneself, the individual must carry on symbolic interaction with himself, involving an internal conversation between his impulsive aspect (the "I") and the incorporated perspectives of others (the "ME"). The mind, or mental activity, is present in behavior whenever such symbolic interaction goes on - whether the individual is merely "thinking" (in the everyday sense of the word) or is also interacting with another individual. (In both cases the individual must indicate things to himself.) Mental activity necessarily involves meanings, which usually attach to, and define, objects. The meanings of an object or event is simply an image of the pattern of action which defines the object or event. That is, the completion in one's imagination of an act, or the mental picture of the actions and experiences symbolized by an object, defines the act or the object. In the unit of study that Mead calls "the act," all of the foregoing processes are usually entailed. The concluding point to be made in this summary is the same as the point with which I began: Mead's concepts intertwine and mutually imply one another. To drive home this important point, I must emphasize that human society (characterized by symbolic-interaction) both precedes the rise of individual selves and minds, and is maintained by the rise of individual selves and minds. This means, then that symbolic-interaction is both the medium for the development of human beings and the process by which human beings associate as human beings. Finally, it should be clearly evident by now that any distinctively human act necessarily involves: symbolic interaction, role-taking, meaning, mind, and self. Where one of these concepts is involved, the others are, also, necessarily involved. Here we see, unmistakably, the organic unit of Mead's position.

Kinch defines the self-concept as "the organization of qualities that the individual attributes to himself." His theory states that "the individual's conception of himself emerges from the social interaction and, in turn, guides or influences the behavior of that individual." (p. 481). The six basic postulates of his formalized theory are as follows:

1. The individual's self-concept is based on his perception of the way others are responding to him.
2. The individual's self-concept functions to direct his behavior.
3. The individual's perception of the responses of others toward him reflects the actual responses of others toward him.
4. The way the individual perceives the responses of others toward him will influence his behavior.
5. The actual responses of others to the individual will determine the way he sees himself (his self-concept).
6. The actual response of others toward the individual will affect the behavior of the individual.

Johnson (1970:82-83) offers, what this writer views as, a succinct definition of the self-concept from a symbolic-interaction perspective.

. . . as a child, an individual develops a conception of himself from the reactions of other individuals toward him . . . . In the process of interacting with others, individuals come to take the role of others, basing his beliefs, evaluations, and expectations of himself, on beliefs, evaluations, and expectations that significant people in his life have of him. . . the resulting self-attitudes yield the self-concept which functions to direct his behavior.

Therefore, in summation, changes in the perceived evaluations by others should result in changes in self-concept; and, be manifested in changes in behavior.

### Role Theory

The concepts of self and role have long been theoretically and empirically linked in the literature of socialization. This linkage has, for the most part, taken the form of role, as the independent variable, and self as the dependent variable. Such a sequence is implicit in Cooley's "looking-glass self;" and, in the dictum that the self is social. Because role has been used in many different

frames of references, it has been defined, accordingly. However, without attempting to elaborate on all of these definitions, it is important to emphasize that "role is a regular way of acting, expected of all persons occupying a given position in the social order as they deal with specified categories of others" (Wilson, 1971:186-187). Thus, each person has a number of roles, not always compatible, associated with his various positions (statuses) in the social structure. "Role concerns the behavior of persons and its relation to the behavior of others in a social system" (Brookover, 1970:2).

Therefore, the occupation of a role category by an individual, not only defines his own behavior; but, also the behavior of other persons toward him, including the kinds of characteristics they will attribute to him. And, as the individual moves through various positions in the social structure, attributes appropriate to these role categories are incorporated into his self-concept.

In the process of interaction with his social environment, a person not only takes on characteristics as a consequence of the roles he enacts, he also begins to experience a sense of self. He begins to recognize that others react to him, and he begins to react to his own actions and personal qualities as he expects others to react. This emerging capacity to take the point of view of others and to see oneself as an object give rise to beliefs and attitudes about oneself--in short, to a self-concept (Deutsch and Krauss, 1965:181).

This present study is concerned with the behavior of persons occupying the position (role) of students in the academic social structure or academic social system called a school. The above discussion depicted the relationship between the self-concept and role and illustrated how "interaction" linked the two constructs together.

In providing a theoretical perspective for the above relationship, James (1892), Cooley (1902), and Mead (1934) have been the major contributors who have illustrated, through the process of interaction with others, the relationship of the individual and his social environment.

Role theorists, far more than those of other theoretical persuasions, have developed and employed the concept of self as a cognitive structure which emerges from the interaction of the human organism and its social environment (Deutsch and Krauss, 1965:181).

"Within a culture, each position has associated with it a set of norms or expectations. These expectations specify the behaviors which an occupant of that position may appropriately initiate toward an occupant of some other position and, conversely, those behaviors which an occupant of the other position may appropriately initiate toward the first. The concept of role is related to these expectations" (Deutsch and Krauss, 1965:175). Therefore, through the process of interaction with "others," the individual assesses and evaluates his competency, in carrying out the behaviors which he perceives are appropriate to the role, based upon the norms and expectations held by others. Like the self-concept, role behavior is a dynamic phenomenon which changes over time based upon the interactions with different "others" in the social system.

Deutsch and Krauss (1965:175-176) present three conceptualizations which depicts the above, in an operational manner.

1. Prescribed role consists of the system of expectations which exist in the social world surrounding the occupant of a position and expectations regarding his behavior toward occupants by some other position.

2. Subjective role consists of those specific expectations the occupant of a position perceives as applicable to his own behavior when he interacts with the occupants of some other position.
3. Enacted role consists of the specific overt behaviors of the occupant of a position when he interacts with the occupants of some other position.

Although the perspective of each conceptualization is slightly different, they would be closely related when empirically measured. Each conceptualization also illustrates the dynamic interaction between the human organism and his social environment.

. . . ., in a coherent and well-integrated social system, the members correctly perceive the social norms that govern their behavior: their subjective roles are similar to the prescribed roles. Similarly, peoples' actual behavior tends to correspond to what they believe is expected of them: the enacted roles and the subjective roles coincide (pp. 175-176).

Brookover and Gottlieb (1964:469) illustrate how role theory is incorporated in this present study; and also provide a foundation for the next theoretical perspective to be discussed--reference group theory.

. . . We postulate that the child acquires, by taking the role of the other, a perception of his own ability as a learner of various types of skills and subjects which constitute the school curriculum. If the child perceives that he is unable to learn mathematics or some other area of behavior, this self-concept of his ability becomes the functionally limiting factor of his school achievement. "Functional limit" is the term used to emphasize that we are speaking not of genetic organic limits on learning but rather of those perceptions of what is appropriate, desirable, and possible for the individual to learn. We postulate the latter as the limits that actually operate, within broader organic limits, in determining the nature or extent of the particular behavior learned.

Therefore, role theory provides additional theoretical credence to this present study in which symbolic-interaction is the primary theoretical perspective posited. To the extent that the "other" is a significant/

important person in the life of the individual, would determine to what degree or depth their expectations and evaluations, of him, would have in influencing his behavior. In essence, what is the source of an individual's values or perspectives (i.e. beliefs and attitudes); to whom does he compare himself in making a judgment about himself; whose acceptance does he seek? Hence, what "others" and/or groups constitute the individual's frame of reference?

### Reference Group Theory

Reference groups are obviously of great importance to this present study in that, the student's academic performance is related to the expectations, evaluations, and behavior that "significant others" hold of him, as a learner. These would be the persons whom the student perceives as significant to him in the school social system. Therefore, the identification of such persons or groups who define the expectations and evaluations for a particular person (student, in this case) is essential in understanding who plays a significant role in influencing the student's behavior. The research literature identifies parents, teachers, and peers as being the "significant others" in influencing the student's behavior. They will be discussed in depth in Chapter III.

Reference group, from this writer's perspective, defines the role behavior of the individual in that, in the process of self-other interaction (symbolic-interaction) the individual takes the role of another in carrying out some behavior of his own. When this self-other relationship, via role-taking, includes the adoption of the attitudes

and/or viewpoint of the "other," it becomes an automatic determiner in formulating what the individual's own behavior will be in a given situation; based upon a comparison of what he perceives are the expectations and evaluations of the "other" and the expectations and evaluations which the "other" holds for him. The relevance of reference groups may vary over time, and may vary in specific situations.

Turner (1966:151-159), in summarizing the various perspectives on reference-group behavior posited by several researchers (Hyman, 1942; Kelly, 1952; Shibutani, 1955; Newcomb, 1950; Hartley, 1951), illustrates that the concepts of role-taking (i.e. taking the role of another) and reference group are closely related; and, that reference group theory encompasses the ways in which individual-group relationships shape the roles and role behaviors of the individual. He posits that reference group behavior is somewhat more inclusive than role-taking, since one may not always take the role of a member in a reference group. Basically, however, reference group and, what he calls "relevant other" refer to the same phenomena essentially. He defines reference group as "a generalized other which is viewed as possessing member roles and attributes independently of the specific individuals who compose it" (p. 158-159). Thus, reference groups are the groups by whom the actor sees his role performance observed and evaluated; and, he attends to the evaluations and expectations which members of the group hold toward him (p. 158).

Therefore, as delineated in this research, significant others and reference groups are essentially the same, and thus, provides credence for its utilization in this research. Johnson (1970:88)



offers a succinct explication that illustrates the relationship between the three theoretical perspectives presented here; and, their relation to this present study.

When one applies the self-concept theory of the symbolic-interactionists to academic achievement, it is postulated that a child's self-attitudes concerning achievement, in general and in specific subjects, are acquired during interaction with significant others who hold expectations of the child as a learner.

Based on the above, school climate would constitute the interaction of teachers, students, and the principal within the school who would produce an atmosphere that would enhance or mitigate against academic achievement. The parents would also be an important part of this interaction process of school climate, as they are a "significant other" of the student. Meaning, that based upon the above, self-other interaction, the students' interpretation/perception of teachers, students, principal, and parents expectations, evaluations, and behavior (reference group) would serve to govern his action/behavior within the school, in his role as a student (role theory). Therefore, the school is a socio-cultural system in that, "it is a study of human behavior within a socio-cultural system; much of the culture is learned through the schools" (Shinn, 1972:364).

Education, in sum, is the process by which both the obvious aspects of culture and its hidden minutiae are transmitted from one generation to another and passed on through time. It is partly a conscious and deliberate process, of the teacher and the pupil. Education does not cause or create culture, for it is itself a part of culture: cultural patterns set the attitudes of education and training. Yet, insofar as each of us is a piece of our own culture, the educational process to which we have been subjected has created that part in us (Goldschmidt, 1966:364).

### Summary

The theoretical credence underlying this present research was explicated in this chapter. Symbolic-interaction, the major theoretical perspective, reference group theory, and role theory, were the social-psychological theories delineated. Also, included was a brief discussion surrounding the confusion of the self-concept literature; especially in the area of instrumentation and/or operationalization. The educational process, and the atmosphere within this process (school climate) was then viewed from a social-psychological orientation; which, explicitly indicates that, the academic perceptions of students and the school climate are definitely connected in the learning process.

## CHAPTER III

### REVIEW OF THE RELEVANT LITERATURE

#### Introduction

The present study, while not a replication of any previous research, has nevertheless evolved from the experiences of earlier researchers concerned with the relationship of self-concept to academic achievement in general; and specifically, from the experiences of those concerned with school social environment and its affect(s) on achievement and the student. This study focuses upon the social environment (climate) of the elementary school and its relationship to the S.C.A.A., as perceived by the children, in differential school settings.

As substantiated, in Chapter II, the term self-concept has often been used, and in many different contexts; both, literally and operationally. The literature relevant to S.C.A.A. and elementary school climate will be reviewed in this chapter. As indicated, in Chapter I, the above relationship has not been empirically examined and is literally virginal with regard to research endeavors. Also, the paucity of research literature available on elementary school climate is noteworthy. Thus, research literature pertaining to this study is virtually nil; and, the following format will be used which would establish foundation and credence mandatory for this research.

The review of relevant literature will be divided into several sections in order to provide an outline in the general direction of the projection intrinsic in this research. Section I will be a review of the pertinent research on self-concept and academic achievement, since 1960. Ruth Wylie's excellent comprehensive review of The Self-Concept: A Critical Survey of Pertinent Research Literature, indicated that only a few of the studies reviewed could be properly described as research into the self-concept; hence, concentration of the literature after this period. However, mention of several of those studies will be included in the review. Section II will illuminate on the research of S.C.A.A. and academic achievement. Since the above two sections are closely related, mention of the research findings, which dealt with both relationships, will appear in Section I, whenever possible.

Section III will address itself to the limited literature available on school climate and academic achievement, especially at the elementary level. Section IV will review the literature pertaining to school climate and self-concept. In this section, an attempt will be made to include some of the literature that focuses on the social-psychological variables operationalized in this research. Because of the tangential nature of the review of literature, emphasis will be on the limited research on the latter two sections and the paucity of research directly related to this study. The literature will be presented, in many instances, in simply, an epitome or a roster-type form, except where elaboration is deemed mandatory to this research.

The abundance of research literature pertaining to this line of research, and the nature of this present study, deemed essential, the

the inclusion of an outline depicting the contents of Section I, to alleviate any confusion.

### Section I - Self-Concept and Academic Achievement

#### A. Self-Attitudes and Achievement

1. Self-Perceptions and Student Success
2. Self-Perceptions and Student Failure

#### B. Effects of Self-Concept on Achievement

#### C. Effects of Achievement on Self-Concept

#### D. Self-Concept and Academic Performance

1. Racial/Ethnicity Differences
2. S.E.S. Differences
3. I.Q. Differences
4. Achievement Level Differences (i.e. age/grade)
5. Sex Differences

#### E. Significant Others

1. Parents
2. Teachers
3. Peers

#### F. Changing the Self-Concept

### Self-Concept and Academic Achievement

Since 1960, exploration of the relationship between the self-concept and academic achievement has resulted in numerous research endeavors. There is empirical support for this postulated relationship from a large number of studies that have found a significant correlation between self-attitudes and academic achievement. These efforts have mainly sought to explain the relationship between the self-concept and academic success, and the differences between the perceived self-concept of the successful student and the unsuccessful student.

The data give reason to assume that enhancing the self-concept is a vital influence in improving academic performance. Meaning, those who possess positive images of self and others tend to develop higher levels of school success (Anderson and Johnson, 1971; Kubiniec, 1970).

Basically, the concern of these studies were of the self-concept as a social-psychological factor which influenced the student's behavior. with specific reference to the student's academic performance. Other research in this direction have investigated the relationship of self-concept to academic achievement by examining student performance differences in achievement with regard to race/ethnicity, socio-economic status, grade level, cause and effect, sex, educational expectations, evaluations, and aspirations, measured intelligence, and the role of significant others.

#### Self-Attitudes and Academic Achievement

Johnson (1970:88) postulates "that one's self-attitudes concerning achievement function to direct his academic performance." There is abundant testimony relating to the correlation between self-attitudes and achievement.

For generations, wise teachers . . . believed that the students who feel good about themselves and their abilities are the ones who are most likely to succeed. Conversely, it appeared that those who see themselves and their abilities in a negative fashion usually fail to achieve good grades. Academic success or failure appears to be as deeply rooted in concepts of the self as it is in measured mental ability, if not deeper (Purkey, 1970:14).

In fact, Brookover, et al (1967) concluded from his extensive research on self-concept of ability, and school achievement, that the assumption that human ability is the most important factor in achievement is

questionable; and, that the student's attitudes limit the level of his achievement in school.

Rosenberg (1965) conducted a study of self-attitudes among eleventh and twelfth grade students in ten New York public high schools. The major objective of the study was to specify the direction of certain social factors on the self-esteem of the student, and to specify the direction of certain social factors on significant attitudes and behaviors, of which school achievement was one. He found a positive correlation between high school achievement and self-esteem.

Wattenberg and Clifford (1964) studies kindergarten children to see if there was any relationship between self-concept and reading process. Mental ability and self-concept were tested; and, two and one-half years later, reading progress was measured, and self-concept measures were repeated. Rating the children as to their feelings of competence and worth, the researchers found that kindergarten self-concept is significantly related to mental ability. Bledsoe (1964) found that fourth and sixth grade boys' self-esteem and academic achievement were positively correlated to a significant degree. Correlations for girls, however, were much lower and generally not statistically significant.

Campbell (1966), in a study of self-esteem and achievement, found a relationship between the two for the total group of fourth, fifth, and sixth grades in a suburban school. The author concludes, however, that there was not a high enough correlation to predict achievement from self-esteem and intelligence. In a study involving Black students, Caplin (1966) found, that children who professed more positive self-concepts, tended to have higher academic achievement. Campbell

(1967) reported a low positive correlation between the Coopersmith Self-esteem Inventory, a self-report questionnaire, and the achievement of fourth, fifth, and sixth grade students. Also, Irwin (1967) studied the self-reports of freshmen college students, and reported significant relationships between reported self-concept and academic achievement. He summarized his research by stating: "It may well be that a positive conception of one's self as a person is not only more important than striving to get ahead and enthusiasm for studying and going to school, but that it is a central factor when considering optimal scholastic performance" (p. 271). Gill (1969) found patterns of achievement significantly related to the perceived self in public-school students. He concluded by stating: "The results of this study support the conclusion with such convincing uniformity that the importance of the self-concept in the educational process seems to need more emphasis than is presently given to it" (p. 6).

Quimby (1967) tested the self-concept by a Q-sort method of achievers and underachievers who had been selected on the basis of grade point average. She found a relationship between low self-ideal and underachievement. She assumed that the student with an adequate self-concept, feeling that he can succeed, will put forth the necessary academic effort; the student with an inadequate self-concept, feeling that he cannot succeed, will not put forth the necessary academic effort. Finally, Williams and Cole (1968) found significant positive correlations between self-concept measures and conception of school, social status at school, emotional adjustment, mental ability, reading ability, and mathematical achievement.



Thus, the correlational relationship between self-attitudes and academic achievement is supported; however, this relationship does not indicate causation. Academic achievement could cause positive self-attitudes, just as positive self-attitudes could cause academic achievement, or, they both could be caused by a third variable, such as social class. The question of causation, though, remains unanswered, and deserves further exploration. Also, the studies reviewed, did not demonstrate the conditions under which the relationship between self-attitudes and achievement would be high; and, the conditions under which it would be low. In some instances, it is clear. However, the correlation or size of the relationship between two variables, is relative to the circumstances under which it was obtained; and, should be interpreted in the light of those circumstances. Meaning, one has to stipulate what type of self-attitudes, measured by what instruments, in what population; and, to consider what kind of achievement, measured by what instruments, or judged by what standards. The implication being, that while one researcher might find a certain correlation in the population he studied between self-attitudes and achievement, the correlation could be much higher or lower in other populations, and under different conditions. Thus, even though one speaks of a general relationship between self-attitudes and achievement, one should take into consideration the above, that the interpretation of such a relationship is always relative to the situation under which it was found; its size does not represent any absolute fact (Johnson, 1970:92).

Research evidence clearly shows a persistent and significant relationship between the self-concept and a selective capsule of

pertinent research endeavors in his book, Self-Concept and School Achievement. This little book deals, simply, with the theoretical conceptions, empirical endeavors, developmental aspects, and implementation and/or change, of the self-concept. Its purpose was to be used as a constructive tool by the teacher. However, anyone connected with the educational process can make use of such knowledge. The literature to be presented, review the relationships between the self-perceptions of the successful student, and the unsuccessful student, respectively. It will be presented in the same type of format, as previously indicated.

#### Self-Perceptions and Student Success

The conclusion, that the successful student is one who is likely to see himself in essentially positive ways, has been verified by a host of studies. Gowen (1960), in an early investigation of factors of achievement in high school and college, reported that achievers are characterized by self-confidence, self-acceptance, and a positive self-concept. Brunkan and Sheni (1966), considered effective and ineffective readers at the college level, and found, that the efficient and effective readers characterized themselves in favorable ways; which, was not true of the ineffective readers.

Farls (1967) studied intermediate-grade students; and, found that high achieving boys and girls reported significantly higher self-concepts in general, and self-concepts as students, than low-achieving boys and girls. Also, Davidson and Greenberg (1967) investigated successful learners among lower-class children, and the correlates of school achievement within this group. On three different and distinct

aspects of the self--personal competence, academic competence, and social competence--the high achievers rated themselves significantly better than did the low achievers.

Williams and Cole (1968) explored the relationship between the reported self-concepts and school adjustment of 80 sixth-grade students; and found significant positive correlations between their self-concepts, and such variables as reading, and mathematical achievement. Finally, Farquhar (1968) studied eleventh-grade high school student in relationship to self-report and achievement. His study showed that over and underachievers respond with significant differences to items designed to measure their reflected self-concept; and, that students with high academic productivity, tended to have high self-concepts.

A composite portrait of the successful student would seem to show that he has a relatively high opinion of himself and is optimistic about his future performance (Ringness, 1961). He had confidence in his general ability (Taylor, 1964) and, as we shall see in Section II, in his ability as a student (Brookover, 1969). He feels that he works hard, is liked by other students, and is generally polite and hones (Davidson and Greenberg, 1967). Judging by these statements, successful students can generally be characterized as having positive self-concepts, and tending to excel in feelings of worth as individuals. This is in stark contrast to the self-image of the majority of unsuccessful students, as we shall see.

### Self-Perceptions and Student Failure

Most studies dealing with the unsuccessful student have focused on the problem of underachievement; the underachiever being one whose

classroom performance tends to be below his aptitudes, as measured by mental ability tests. Meaning, he is the student who has the ability to succeed in school; but who does not perform up to expectations. Fewer studies have considered the nonachiever, the one who lacks the ability to meet the demands of school. There is ample evidence, however, to support the conclusion "that unsuccessful students in either group perceive themselves and their relationships to the world around them differently than those who succeed" (Purkey, 1970:20).

In 1960, Shaw, Edson, and Bell conducted a study to determine differences between achievers' and underachievers' perceptions of themselves, using high-school juniors and seniors. The Sarbin Adjective Checklist was administered to each subject in order to measure the perceived self. A major conclusion was that, male achievers feel relatively more positive about themselves than male underachievers. There seemed to be some contradictions in the adjectives checked by the females; thus, no simple generalization(s) could be made about the female groups. A related study of the relationship between academic underachievement and self-concept was done by Fink (1962), who studied two groups of ninth-grade students paired for achievement and underachievement. The achievers were rated as being far more adequate in their concepts of themselves. He concluded that there was a significant relationship between self-concept and academic underachievement; and, that this relationship appears stronger in boys than girls.

Studies which support the notion that underachievers tend to have negative self-concepts are numerous. Goldberg (1960) studied underachievers in grades nine through twelve. He found that the underachiever

perceived himself as less able to fulfill required tasks, less eager to learn, less confident, and less ambitious. Shaw (1961) and Shaw and Alves (1963) report that bright underachieving males have more negative self-concepts than do students who are equally bright, but achieving. Combs (1964), in a study exploring the way in which achievers and under-achievers perceive themselves and their relations to the world around them, concluded that the underachiever fails to achieve because he lacks a feeling of personal adequacy, and has a feeling of being rejected by his peers and adults. McKenzie (1964) in a study comparing over- and under-achievement with normal achievement, found that underachievers tended to internalize their conflicts, and were characterized as being impulsive, lacking long-range goals, and having low self-esteem.

Harding (1966) concluded that a student's attitude toward his ability to achieve in academic endeavors was a critical variable in predicting whether the student would continue in school or whether he would drop out. Carlton and Moore (1966, 1968) found in their studies of reading ability in relation to self-concept, that just as poor performance lowers self-regard, successful performance raises it.

Judging by the preponderance of available research, it seems reasonable to assume that unsuccessful students, whether underachievers, nonachievers, or poor readers, are likely to hold attitudes about themselves and their abilities, which are pervasively negative. "They tend to see themselves as less able, less adequate, and less self-reliant than their more successful peers. This is particularly true of boys, and it is also true, but to a lesser extent of girls" (Purkey, 1970:22). Students with negative self-images of ability rarely perform well in

school (See Brookover, [1967] in Section II). The basic question of whether children see themselves negatively because of their poor school performance, or whether they perform poorly in school because they see themselves negatively, is unresolved. There is some literature, however, which pertains to this question of cause and effect. It will be discussed within the next two categories. Hopefully, this dissertation will provide some insight into this sorely needed area.

A great deal of caution is needed before one assumes that either the self-concept determines scholastic performance or that scholastic performance shapes the self-concept. It is quite possible that the relationship between the two is caused by some factor yet to be determined. The available evidence suggests that there is a continuous interaction between the self, and academic achievement; and, that each directly influenced the other. Perhaps, this current research will lead us steps closer to the determinant of this relationship.

#### Effects of Self-Concept on Achievement

Several studies have concluded that self-concepts stand in a causal relationship to academic achievement. Lamy (1965), in an investigation of the relationship between children's perceptions of themselves and their world while in kindergarten, and their subsequent achievement in reading in the first grade, found that these perceptions, which were obtained by trained observers, gave as good a prediction of later reading achievement as intelligence test scores. When I.Q. and self-evaluations were combined, the predictive was even greater. Lamy concluded by suggesting that the perceptions of a child about himself and his world are not only related to; but, may in fact be causal factors in his subsequent reading achievement.

Other studies have pointed to the value of attitudes toward the self in the prediction of future performance in school. Barrett (1957), in his study of gifted children, reported that feelings of inadequacy among bright underachievers act as depressors which cause them to withdraw and refuse to compete. Morse (1963) found that the reported self-concept of academic ability (S.C.A.A.) was a better predictor of classroom achievement than I.Q., and that this was true for both Black and White students (see Section II). Haarer (1964) worked with ninth graders and found that the reported S.C.A.A. was better than the I.Q., as a predictor of the achievement of both public school male students, and institutionalized delinquent boys. Brookover and his associates (1962, 1965) concluded from their studies that changes in the professed S.C.A.A. are associated with parallel changes in academic achievement, (see Section II).

Harding (1966) reported that attitudes toward their own ability to achieve in academic endeavors, was an essential factor in predicting whether high school students would or would not quit school. Keefer (1966), in studying self-predictions of academic achievement by college students, found they were better predictors of collegiate achievement than high school grades and American College test scores; and, that they lost predictive accuracy after the freshmen year, than did the more traditional measures of grades and achievement test scores. Finally, Ludwig and Maehr (1967) found that professed changes in the self-concept resulted in changes in preference and choice among junior high school boys.

In conclusion, it appears that a student carries with him, certain attitudes about himself and his abilities, which play a primary

role in how he performs in school. However, this is a two-way street. Academic performance has a heavy impact, also, on the self-concept.

### Effects of Achievement on Self-Concept

A number of researchers (e.g., Borislow, 1962; and Dyson, 1967) have explored the conditions under which success and failure affect a person's evaluations of himself. There is general agreement among the common-sense oriented researchers, that students who underachieve scholastically, or who fail to live up to their own academic expectations, suffer significant losses in self-esteem. An example of this type of study is that of Gibby and Gibby (1967); who explored the effects of stress induced by academic failure upon seven grade students. The study explored two broad aspects of the effects of stress resulting from failure: (1) the effects upon the self-concept; and (2) the effects upon intellectual productivity. The results indicated that, under the stress of the failure situation, able children performed less effectively. The negative effect of failure was manifested in both the reported self-concept, and the measured "cognitive function."

The tendency to acquire a lower self-evaluation following failure appears to be as true of the underachiever as it is for the achiever. Centi (1965) reported a very strong pattern of such behavior among low achievers, in his study of first semester college freshmen. As previously indicated, Carlton and Moore (1966, 1968) found significant, relatively permanent, changes in the self-concepts of their subjects, culturally disadvantaged children, as well as improved reading ability. Murray and Wellman (1972), in their study of the impact of academic grades on the student role identities of black and white adolescents, posit that their



most important general finding is, that there is a relationship between academic success and the tendency to see oneself as a student. This relationship was found at all levels of achievement; in academic failure, as well as academic success. The relationship exists, with varying degrees of strength, in all subgroups, black as well as white, low socio-economic background level, as well as high. While high achievement means more to blacks than it means to whites--at least insofar as their willingness to see themselves as students is concerned--blacks are more sensitive than whites to academic failure with respect to student role identifications.

The indications, from the above studies, seem to be that success or failure in school significantly influences the ways in which students view themselves. Students who experience repeated success in school are likely to develop positive feelings about their abilities, while those who encounter failure tend to develop negative views of themselves. In the light of the influence of the self-concept on academic achievement, it would be safe to assume that enhancing the self-concept is a vital influence in improving academic performance.

### Self-Concept and Academic Performance

Research in the educational sphere has mainly centered around several crucial factors as accounting for the differences in academic performance, and/or attributing to the cause of academic success or academic failure. Because of this, the writer decided on a different format for this category. It will be divided into several sub-categories, for the purpose of highlighting the relevant research done in those areas, in regard to the above category relationship; and, that is pertinent to this study. The sub-categories are: (1) racial/ethnicity differences,

(2) socio-economic or class differences, (3) genetic differences, (4) achievement level differences, and (5) sex differences.

All of the above sub-categories are not, and were not, intended to be viewed as major schools of thought in the educational arena. Only the first three sub-categories would likely be classified as such. The other two sub-categories have made significant contributions in clarifying some of the mystics which surround education; thus, the writer felt they should be acknowledged or presented here. Cognizant social scientists are also aware of at least two crucial areas which have not been included in the above, and deliberately so. The cultural aspects of the school (i.e., school social environment, as delimited in this research) and the role of significant others will be discussed shortly under a different section and category, respectively.

#### Racial/Ethnicity Differences

Most discussions of equality of educational opportunity are, seemingly, more concerned with the significance of racial identity than of class origin; and, it can be argued that race is a much more important factor than class in limiting an individual's opportunities (Kerckhoff, 1972:138). To what degree is racial identity associated with position in the stratification system? According to Kerckhoff, there is a very close association. Blacks are concentrated much more in the lower levels than are whites (p. 139).

Such massive differences in the class distribution of the two populations cannot be ignored when comparisons are made for other purposes . . . . one needs to look at black-white differences within social class levels rather than make simple black-white population comparisons. Unfortunately, this kind of analysis, controlling for social class, has not been carried out very often. There is sufficient evidence available, however, to suggest that much of the overall black-white difference is in fact a social class difference; but, it is equally clear that there are racial differences as well (p. 139).

As depicted above, there is an association between race and class. Henderson (1972), taking into account the correlation between race and socio-economic status, posits that race may be a factor in academic achievement along with socio-economic status, in that, "race, alone, may mitigate or enhance school performance in aspects yet undetermined" (p. 100).

This subdivision will examine the research on racial/ethnicity differences in relation to self-concept and academic performance. The following subdivision will then examine the research on self-concept and academic performance with regard to socio-economic/class differences. The reader should also keep in mind, however, the Henderson postulate, previously stated.

It is apparent why school performance should be relevant to self-esteem. Schools in our society are fundamentally evaluative, by nature/characteristic. The system is constantly concerned with comparing, judging, and measuring the merit and worth of the child. Also, it is of utmost significance that the evaluation is manifested overtly, explicitly, and unequivocally in the form of tests and report cards. Without any question, performance in school is one of the very few

objective, unambiguous sources of evidence available to the child for judging his own worth.

Moreover, the child's school marks, generally, become known to his parents, and many of his schoolmates; and, their judgments of him, along with his teachers, are likely to be affected by this information. The image of him that forms in their minds may then affect the way they act toward him. Because of this, and because school occupies such an important place in the child's life, one would expect the grades on his report card to have an important bearing upon his self-concept. How, then, do the races differ in school performance; and, what bearing does this have on their self-concept?

It is an established and well documented fact that black and/or poor children, as a group, tend not to do as well in school as white children, whether assessment is by standardized tests or other measures (Clark, 1965; Rainwater and Yancey, 1967; U.S. Commission on Civil Rights, 1967; Baughman and Dahlstrom, 1968; Rosenberg and Simmons, 1971). The Coleman Report (1966:20), illustrating that blacks' scores on achievement tests are about one standard deviation below the average for whites, offers the most salient testimony in a fairly abundant literature. The results on standardized tests have also shown that black children lag behind white children at the outset; and that, the disparity widens with age (Coleman, et al., 1966). However, the spirited debate on the matter has never really centered on whether school performance tends to be substantially lower among blacks; but, why.

Rosenberg and Simmons (1971), in their study of self-esteem of the black and white urban school child, reported that their findings, based on school grades, were in general agreement with the studies that used standardized tests (p. 89). They found, however, that the difference in achievement marks were not the same at each grade level; and that, low achievement for blacks increased at different grade levels. The racial differences were substantial (i.e. forty-eight percent of the white children; but, thirty-eight percent of the black children were A or B level students in all the schools tested).

One reason for expecting a child's marks to influence his self-concept is that, the report card indicates just how good or bad the student is; and, this process of assessment continues throughout his school years. Thus, as stated earlier, there seems to be little question that the child's global feeling of self-concept is strongly related to his success or failure in school. It is also reasonable to argue that if black children receive poorer grades in schools than whites, and if poor marks reduce the self-concept, then blacks should score lower in self-concept.

In the theoretical spirit of Mead (1934) and Cooley (1902), there are sound reasons for expecting that the low societal ranking of blacks, in terms of their racial status, occupational position, physical attributes, family background, and school performance, will markedly reduce their ability to perceive themselves as worthy persons. "If the black is treated as an inferior on grounds of his race, or his

lack of success in the occupational or academic realms, then his sense of personal value should assuredly be low" (Rosenberg and Simmons, 1971:2).

On the above issue, both black and white social scientists appear to be in agreement. Kenneth Clark (1965: 21, 64), E. Franklin Frazier (1957:24) and Grier and Cobbs (1968:9), the black psychologist, sociologist, and psychiatrists, respectively, speak to the blacks' belief in their own inferiority, and prejudice against himself. White students, of the black self-concept, from the 1940's through the 1960's, have also reached the conclusion that the blacks' self-concept is lower than whites (e.g. Kardiner and Ovesey, 1951; Proshansky and Newton, 1968: 178-179, 191; Pettigrew, 1964:9). Other writers, both popular and scholarly, often simply assume low self-concept among blacks as a self-evident, fundamental, and irreducible datum; and, proceed from there (Deutsch, 1960; Tannenbaum, 1962; Erickson, 1966; Ausubel and Ausubel, 1958, 1963; Pettigrew, 1964; Vontress, 1966; Kvaraceus, et al., 1965; Poussaint, 1966).

Much of the evidence behind the assumption of low black self-concept has come from studies showing that black children prefer light-skinned dolls, pictures, or puppets, to those with brown skin (Clark and Clark, 1946; Goodman, 1952; Landreth and Johnson, 1953; Morland, 1958; Stevenson and Stewart, 1958) or that they show problems of self-concept in psychotherapeutic sessions (Kardiner and Ovesey, 1951; Brody, 1963). Only recently are there social scientists dissenting from this nearly unanimous conclusion (McCarthy and Yancey, 1971; Baughman, 1971).

While many of these studies are of a high order of excellence, they characteristically suffer from certain limitations with regard to methodology: (1) self-concept has almost invariably been inferred by the investigator from indirect evidence rather than direct examination; (2) the samples have rarely been representative so that, it is difficult to know to what populations they properly apply. Additionally, this depicts the need for careful methodological techniques in comparison of black and white students in future research endeavors.

Until recently, the widespread assumption, that blacks are more likely to have a lower self-concept than are whites, have gone unchallenged. Recent research data, catapulted by the research done by Soares and Soares (1969), have yielded results which conflict with the stereotypic view; and, tend to shed doubt upon the proposition that ethnic minority groups report negative self-concepts and hence, low academic achievement (Kerensky, 1967; Carter, 1968; DeBlassie and Healy, 1970; Soares, 1970; Soares and Soares, 1971; Hara, 1972).

Zirkel and Moses (1971), in a study consisting of fifth and sixth grade pupils in a Connecticut city, reported black and white means to be equal, and higher than means for Puerto Rican pupils. Cooper (1972), in his study of the perception of self and others as related to ethnic group membership, found that all four groups, Anglo, Chicano, Indian, and Black, reported favorable perceptions of themselves among blacks than whites, with recent research. Because of this unexpected result, they wanted comparison feedback in three significant

areas where a number of questions had arisen, based on the finding: (1) Is the finding unique to just our study? (2) What do we mean by self-esteem? (3) How did we actually measure self-esteem? All of the data from the twelve studies compared were collected between 1960 and 1968.

In eight comparisons, blacks rate higher in self-esteem (Gordon, 1963; McDonald and Gynther, 1965; McDill, et al, 1966; Wendland, 1967; Hunt and Hardt, 1969; Kohn, 1969; Power and Fuller, 1970; Bachman, 1970); in four, whites rate higher (Rosenberg, 1965; Herman, et al, 1967; Gordon, 1969; Kohn and Schooler, 1969); and in one, no difference appears (Coleman, et al, 1966). The types of measures moderately vary. Two are "academic self-concept" scores (Coleman, et al; McDill, et al), one is a self-ideal-self-discrepancy score (McDonald and Gynther), two are composite scores based on diverse items (Gordon, 1969; Hunt and Hardt), two are factors emerging from a factor analysis (Kohn; Kohn and Schooler), two are based on the Tennessee Self-Concept Scale (Wendland; Power and Fuller), and four are Guttman scales (Gordon, 1963; Rosenberg; Herman, et al; Bachman).

Other facts worth mentioning is that the types of sample varied: One covers the third through twelfth grades, three focused on the junior high level, six on the high school level, one on the junior college level, and one on the adult age range. Most dealt with the normal economic range, but two focused on poverty youth; six were nationwide samples, three in the South, two in the Northeast, and one on the Pacific coast. The main literature was that there was



only one sample of adults. However, the study was one of exceptionally high quality. Rosenberg and Simmons sum up their review by assessing the findings as follows: "while the results probably do not justify the conclusion that blacks have higher self-esteem than whites, the weight of evidence certainly does not support the general conclusion that their self-esteem is lower. A reasonably conservative assessment would be, 'from the twelve studies, and their own,' that there are no appreciable racial differences in self-esteem" (pp. 5-8).

It is a truism that the individual's picture of himself develops in interaction with his environment. But, this environment, in turn, is structured by broader social and cultural forces, many of which extend beyond the awareness of the individual. This is conspicuously the case when we deal with the area of race. Among the most important of the consequential effects of racial discrimination and prejudice is that, in all likelihood, the child will live in a racially segregated environment.

Since the self-concept is important to both the achievement and aspirations of the individual, investigators have recently turned their attention to the self-concept of the black student in racially different school settings. The results of this research have been inconsistent. Some studies have found no difference between the self-concepts of black children in segregated versus integrated schools, while other findings support segregated (Gottlieb, 1964) or integrated (Caplin, 1966) school settings.

What effect does racial segregation or integration have on the self-concept of the black child? From the viewpoint of self-concept,

the child's immediate, day-to-day, interpersonal experiences is structured, in that, his direct interaction with whites, under any circumstances, is unequivocally determined by his racial environment. And, from the child's perception, these are the experiences which would particularly impinge upon his self-concept.

Racial segregation in the schools represents an underestimate of the degree to which a child's significant interaction occurs with persons of the same race. To the blacks, it is a predominately black world, to the whites, an almost exclusively white world

(Rosenberg and Simmons, 1971: 23-24). Marx (1967) and Mack (1969) indicate, from their studies, that most blacks would like some degree of neighborhood integration, and that this racial separation is not purely voluntary. What is the effect of this racial separation on the self-concept of the black child? Radke-Yarrow, et al (1949), in their study of social perceptions and attitudes of young children, found a close relationship between self-concept and individual behavior. Their study demonstrated that racial/group consciousness and social prejudices are present in the pre-school and early school years; thus, indicating the harm connected with assuming that racial/group consciousness does not arise until adolescence or beyond.

Despite all the theoretical and polemical discussion in this area, there is no clear consensus on whether racial integration raises or lowers self-concept. Does racial segregation damage the self-concept of black children? The writer was unable to locate any literature dealing with the affect of racial segregation on elementary black children; but, found a few studies dealing with this relationship on a secondary level.

Rosenberg and Simmons (1971) show that if anything, racial segregation appears to protect their self-esteem and not damage it. Their random sample consisted of 2625 pupils from grades three through twelve in twenty-six public schools of Baltimore City. There was a small difference in the self-esteem between the black students in predominately black junior high schools and that of black students in predominately white junior high schools. However, in the senior high schools, there was a statistical significant difference. The black students in the segregated schools (88 percent) clearly indicated a higher self-esteem than the black students in the integrated schools (74 percent).

Power and Fuller (1970) studied the self-concept of black and white students in grades seven through nine in segregated and de-segregated schools in a city in the Central South. They found that black students in segregated schools had a higher self-concept than the black students in integrated schools. Bachman's (1970:130, 265) nationwide study of tenth grade boys yields similar results. However, "this does not appear to be attributable to the initially higher social status of those in integrated schools, for the already higher self-esteem of the segregated blacks increases when family background is controlled, and increases still further when both family background and intelligence are controlled."

Thus, the data of the above three studies are parallel and strongly indicate that racial segregation, seemingly, protects the self-esteem of Black children; and, not damage it. These findings can be perplexing, however, when other research endeavors concur that integration

appears to help the school performance of Black children, though how much is not known (Coleman, et al, 1966:28-30; U.S. Commission on Civil Rights, 1967). Seemingly, since high academic achievement has a tendency to reflect a high self-concept, and since black children in secondary integrated schools attain somewhat higher achievement than black children in segregated schools, one might expect that their self-concept would also be reflected as such. Obviously, this is not the case. In essence, the literature reviewed has shown that, on the secondary school level, although the black students in segregated schools have a higher self-concept than the black students in integrated schools, they attain a lower academic achievement level than those same students.

A logical interpretation, from the writer's perspective, is that reference group(s) plays a significant role in the above process. Biddle and Thomas (1966:157-195) construe reference group by stating that:

Dispute over the proper meaning of reference group seems to center about the acceptable generality of the concept . . . . a reference group may mean a group with which one compares himself in making a self-judgment . . . . the source of an individual's values or perspectives . . . . refers to a group whose acceptance one seeks . . . the terms "reference group" and "relevant other" refer to essentially the same phenomena. The reference group is a "generalized other" which is viewed as possessing member roles and attributes independently of the specific individuals who compose it.

The student compares himself and his abilities to the other students in his class and/or in his school.

Rosenberg and Simmons (1971: 101-103) succinctly describe this phenomenon with regard to the Black secondary student in an integrated school setting as compared with a segregated school setting.

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. . . their higher grades do not raise their self-esteem because the unfavorable comparison with their white classmates does not allow them to take particular pride in their academic achievements . . . . although black children in integrated settings (50 percent) are more likely than those in segregated schools (23 percent) to have A or B averages, they do not experience a corresponding elevation in self-esteem . . . . They consider themselves just as smart, but no smarter, than black children in segregated schools who obtain poorer grades than they . . . . The net result was that despite their higher grades . . . their lower self-esteem was probably attributable to the various effects of contextual dissonance (which was) probably not to lower their self-esteem but to inhibit their relatively high marks from raising it.

Rosenberg and Simmons contend that although the white students attain even higher achievement grades than the black students in integrated secondary schools, the fact still remains that "higher grades are associated with higher self-esteem in each group--blacks in black schools, blacks in white schools, and whites in white schools" (p. 102).

Martin (1972), in her study of the inner-city, black-male high school student, compared the self-concept, academic achievement, and occupational aspirations of two samples of eleventh and twelfth grade black male students who attended schools of racially different composition; and, lived in the inner city of a large metropolitan area. In an attempt to assess the effects of school integration, her findings indicated that, those who attended the segregated high school had a higher self-concept than those in the interracial schools. Interpretation of her findings reflect the following: (1) there is a general

trend toward higher occupational aspirations of black youth in both integrated and segregated school settings; and, greater support for education by black parents of the lower socio-economic class. (2) the integrated suburban school appears to have some detrimental effect on the black students' self-concept from the inner city. And, (3) no difference exists between the two samples with regard to academic achievement and occupational aspirations.

All of the above authors point to certain advantages of the integrated environment; but, improvement in the self-concept is not one of them. Also, it is not known whether similar results would appear for younger children. In fact, two studies (Strauss, 1967: Caplin, 1966) have reached the reverse conclusion. Why is it then that blacks in segregated secondary schools appear to have a somewhat higher self-concept than those in integrated secondary schools? In view of the symbolic significance frequently attached to segregation, it is possible that this finding might not have been anticipated.

Coleman's (1966:323-324) study includes an "academic self-concept" score, and, is thus, not entirely comparable to the above studies. However, he notes that: "for each minority group, as the proportion white in the school increases, the child's . . . self-concept decreases." Henderson (1972:98) postulates that the black students in segregated school settings may judge their self-concept based upon their school setting. Hence, their high score on the S.C.A.A. measure may be accounted by the above, and a function of reference group membership. He perceives S.C.A.A. "as a possible true measure of

**a**cademic potential among black students in segregated settings . . . even **t**hough blacks' self-concept drops when they are first integrated with **w**hites" (p. 98). He contends that S.C.A.A. can still be used as a **p**redictor for the academic performance of Black students once the **"**reference group shock" wears off. Baughman (1971:54) posits that **"**the black child may have to pay a significant emotional price for **i**mmEDIATE desegregation at the upper grade levels."

It is, in fact, according to the literature reviewed, only when **b**lack children are integrated that they learn directly what it means, **p**ersonally, to be a member of the minority. In essence, their reference **g**roup changes when their environment changes. Broader social forces **h**ave operated to place the great bulk of black children in a racially **s**eparate environment; and, this environment establishes certain barriers **t**o assaults upon their feelings of personal esteem, such as direct **e**xpressions of prejudice. This is one reason why the self-concept **l**evel of black children, as a group, is not as low as one might **o**therwise expect. Insofar as the phenomena of integration and segre- **g**ation can be viewed, the writer can say nothing about their implications **f**or further policy. The only object here, was simply to indicate how **c**ertain social forces structure the child's environment, and how this **e**nvironment bears upon his self-concept.

In summing up, reiteration of one of Coleman's, et al (1966) **f**indings is in order to illustrate a significant point. They posit **t**hat although black children are behind at the beginning, they tend **t**o **b**ecome progressively further behind as they get older, especially **b**lack boys. The point is, that to evaluate such findings in light



of the massive social class differences between blacks and whites, is difficult. One can well argue that the differences are actually class rather than race differences, or at least one may argue that the differences by race would not be nearly as great if class were taken into account. This view is supported by at least one limited study, which shows increasing class differences as students move from first to fifth grades; but, very small differences between the races within social class levels (Whiteman and Deutsch, 1968).

It is also true that the overall race differences seem to be most pronounced in the South and Southwest, and in rural areas, and are much less apparent in northern, western, and urban parts of the country (Coleman, et al, 1966). Thus, although it seems probable that race, as such, makes a difference in academic achievement among young children, the evidence is not wholly adequate.

#### Socio-economic/Class Differences

As previously indicated, Black schools are usually classified as low S.E.S. with concomitant achievement level. Because of the above, educators are easily prone to assume that the minority groups suffer from negative images of the self based on their status within society. Judging by the research presented in the previous section, and other available research, it seems hazardous to assume that black and/or poor children, have lower self-concepts than children in better environments.

The finding that socially disabled students do not necessarily report low self-concepts is borne out from a study by Soares and Soares (1969). In a comparative study of the self-perceptions of

disadvantaged and advantaged elementary school children (grades four through eight), the Soares team found, on the whole, more positive self-concept scores among the disadvantaged pupils than among their advantaged peers. Other studies, which questioned the commonly held assumption that disadvantaged children have negative concepts, include those of Kerensky (1967) and Carter (1968). DeBlassie and Healy's data (1970) from Anglo, Black, and Spanish-American ninth grade pupils in the southwest, disclosed similar self-concepts across ethnic groups, and across socio-economic levels.

Linton (1972) found significant differences between Anglo and Mexican-American sixth grade students on academic and global self-concept measures between socio-economic levels. (1) Achievement is not significantly related to either academic or global self-concept among high socio-economic level Mexican-American students; (2) achievement is more closely related to academic self-concept than to global self-concept among the middle socio-economic level of Mexican-American students; (3) academic self-concept is not significantly related to achievement and global self-concepts among the low socio-economic levels of these students; (4) achievement is more closely related to academic self-concept than to global self-concept among high and middle-socio-economic Anglo students; and, (5) a weak relationship exists between achievement and self-concept for low socio-economic Anglo students. There is little difference between the relationship of achievement with academic and global self-concept among these students.

Soares and Soares (1970), in their study of self-concept of disadvantaged and advantaged students, indicated the following results:

(1) disadvantaged children of all ages had a higher self-concept than advantaged children, (2) disadvantaged high-school students were not as high in self-concept as disadvantaged children at the elementary school level. The specific intention of the study was to determine whether samples of disadvantaged students showed positive self-images, as illustrated in some of their previous research, when they moved out of their neighborhood schools to the more integrated environment of the high school.

As in the case with all children, the black child is likely to begin school with fellow students who are of his same social class. He is also likely to go to a predominantly or completely black school. At school, among the lower-class children, blacks are much more likely than whites to be in socio-economically homogeneous environments (Rosenberg and Simmons, 1971:70). Black children are thus, less aware of encountering in their daily lives other children of unequal socio-economic status. Therefore, socio-economic status appears to have a bearing upon the self-esteem of white children; but, no effect upon that of blacks. This finding holds true when age is controlled (p. 71). There are other studies who have reported such a finding.

Epps (1969:63), in a study of black high-school students in the North and in the South, found the following correlations between S.E.S. and self-concept: Northern males, .08; Southern males, -.07; Northern females, .03; and Southern females, .03. On the other hand, Langner and Michael (1963) Kohn and Schooler (1969), and Rosenberg (1965) do show clear, although not always powerful, relationships between social class and self-concept among whites. Brookover, et al

(1967:117) indicated that the "direction and rate of changes in S.C.A.A. were generally not associated with socio-economic status."

Hence, although it is an undeniable fact that the socio-economic status of blacks in our society today is extremely low, compared to the white average, the effects of such poverty pervade every aspect of the child's life; controlling his day-to-day experience as well as his future life chances. However, from the viewpoint of self-concept, the matter must appear in a different light. Meaning, for low socio-economic status to reduce self-concept, the individual must be aware that his status is low, relative to others. In the absence of this awareness, there is no sense of status inferiority and no implications for personal worthlessness.

This is, of course, no accident; but, the product of the specific environmental conditions in which poor black and white children live. For the poor black, it is a homogeneous environment of poverty which leaves little room for wonderment about economic distinctions. For the poor whites, it is an environment in which most others are more well-to-do than they; an environment of economic heterogeneity in which their own inferior status is likely to be highlighted.

The outcome of all this is that black children, poor as they are, have little awareness of how low their socio-economic status in the society actually is. Thus, it is not surprising to find that among black children, in contrast to whites, objective status bears no relationship to feelings of self worth.

The number of investigations of the relationship between self-concept and socio-economic status has been increasing; but, the relationship remains undetermined, as the findings appear conflicting. And, as a result, there has been difficulty in interpreting these findings.

Several social scientists have postulated that children of low socio-economic status, in fact, actually reflect the negative image society holds of them (Ausubel and Ausubel, 1963; Erickson, 1966; Witty, 1967). There are some investigators who, seemingly, support this thesis (Deutsch, 1960; Long and Henderson, 1968; Wylie, 1963), while there are others who indicate no significant differences in the self-concept of children of different socio-economic levels (Coleman, et al, 1966; McDaniel, 1967; Scott, 1969). Still, there are others, who indicate that the self-concept of low S.E.S. children may be even more positive than that of middle class children (Trowbridge, 1972; Clark and Trowbridge, 1971; Green and Rohwer, 1971; Zirkel and Moses, 1971; Soares and Soares, 1971, 1970, 1969; Trowbridge, 1970a, 1970b, 1969).

Before going further, clarification of the above research mentioned is indicated, so as to avoid, hopefully, any additional confusion on the subject. The reader might have noted that some of the research relating S.E.S. to self-concept is the same as some of the research relating race to self-concept; and that, the two relationships, seemingly, were used in the exact same context. If the above were true, then the question would be; why separate the construct

S.E.S. and race if they mean the same thing? To illustrate how this thinking is possible, an example is as follows, respectively:

1. Children in the lower S.E.S. level have a lower or negative self-concept than children in the middle or higher S.E.S. level (Ausubel and Ausubel, 1958, 1963; Erickson, 1966).
2. Blacks have a negative or lower self-concept than whites (e.g. Ausubel and Ausubel, 1958, 1963; Erickson, 1966).

Although the example, in reality, means the same, it should not necessarily be this way. Meaning, due to the socio-economic inconsistencies within the United States, the great majority of blacks are in the lower class, and the greater majority of the middle class are white. The above findings have serious implications in that, black schools are usually classified as low S.E.S. with concomitant achievement levels. Because of the above, educators are easily prone to assume that the minority groups suffer from negative images of the self, based on their status within society.

Zirkel and Moses (1971), as illustrated in Chapter II, noted the confusion and the concern that applies to all of the research involving the self-concept. The emphasis appears more emphatic, in this instance, because of the high correlation between race and S.E.S. in the United States; and, the societal realities that encompass minority groups; specifically, in this dissertation, with regard to academic achievement.

Trowbridge (1972:535) explored the relationship of self-concept and S.E.S. in elementary school children to determine whether

differences in self-concept existed between children of different S.E.S.; to examine the specific dimensions in which differences existed; and, to determine whether the S.E.S. effects, found in her earlier studies, were confounded with other variables such as race, sex, and age. Her sample was comprised of 3789 children, from eight to fourteen years of age, in the central part of the United States.

Using the Coopersmith's Self-Esteem Inventory as the self-concept measure, her findings indicated that the "children of low S.E.S. scored higher than (the) children of middle S.E.S. at all ages, in both sexes, among blacks as well as whites, and in rural areas as well as urban." The Inventory measured the general self, social self-peers, school-academic, and home-parents. Home-parents was the only subscale score that the children of low S.E.S. did not score higher upon.

In relating S.E.S. to academic achievement, there is ample evidence indicating the correlation between the socio-economic status of the students and the level of academic achievement they attain in different type of school settings (Sexton, 1961; Herriott and St. John, 1966; Sewell and Shah, 1967; Coleman, et al, 1966; McDill, Meyers, and Riggsby, 1967; Mayeske, 1967; Wilson, 1969; Jones, 1971). These studies will be reviewed under the section of school climate and academic achievement. The research reviewed, thus far, focused on race and socio-economic status as being the decisive factors attributable to the achievement differences between white and black students.

### I.Q. Differences

Research in the area of I.Q. tests is highly significant in that I.Q. differences, between blacks and whites, on the standardized "measured

intelligence" tests have staunchly been used as an explication of the lower achievement performances of particular minority and/or ethnic groups. Research literature is replete with documentation that blacks and/or impoverished students have, and, as a group, continue to do very poorly on I.Q. tests. What effect(s) does this have on the self-concept of the student; and, the effect(s) upon intellectual ability?

Purkey (1970:14) stated that "Academic success or failure appears to be as deeply rooted in concepts of self as it is in measured mental ability, if not deeper." Brookover, et al (1967) posited, from their longitudinal research on self-concept of ability and school achievement, that the student's attitudes limit the level of his achievement in school; and, that it is a questionable assumption of human ability being the most important factor in achievement. Wattenberg and Clifford (1964) found that although kindergarten self-concept was significantly predictive of reading progress, it was not significantly related to mental ability.

Campbell (1966) concluded, in his study of self-esteem and achievement, that there was not a high enough correlation to predict achievement from self-esteem and intelligence. Lamy (1965) posits that the perceptions of children in kindergarten, obtained by trained observers, gave as good a prediction of later reading achievement as intelligence test scores; and, that when I.Q. and self-evaluations were combined, the predictive was even greater. Gabbler and Gibby (1967) disclose that black and white children differ significantly in self-concept, as measured by self-ratings of intelligence; and, thus, verify the findings of Radke-Yarrow, et al (1949).



The most obvious place to look for an explanation for varying levels of academic performance is, seemingly, in the differences in intellectual ability. There is a sizable relationship between measures of intelligence and measures of academic performance; but, it is far from perfect (Lavin, 1965, Chapter 4). Using intelligence as a source of explanation of academic performance is, in itself, filled with difficulties. If one is to explain the wide range of academic performance in schools, then one must go beyond measures of intelligence. It can be argued that "performance on tests of intelligence . . . is influenced by one's experience as well as one's native ability" (Kerckhoff, 1972:97). Perhaps Coleman, et al (1966) put it about as bluntly as anyone when they said:

The ability tests (used in their study) have been in the past, and are often still, termed 'intelligence tests' or 'IQ tests,' and seen as measures of more fundamental and stable mental abilities, but recent research does not support that view. Ability tests are simply broader and more general measures of education, while achievement tests are narrower measures directed to a restricted subject area. The findings of this survey provide additional evidence that the 'ability' tests are at least as much affected by school differences as are the 'achievement' tests (pp. 292-93).

One of the most consistent correlates of academic performance is social status; a finding that persists even when intelligence level is controlled (Lavin, 1965).

Among students at a given level of I.Q., low-status students tend to increase during the elementary grades owing to the cumulative nature of the school's teachings (Kerckhoff, 1972:98).

The literature that Lavin (1965) reviewed illustrated that measures of I.Q. vary by social class; and, that school performance varies by I.Q. and by social class. However, is the relationship between class and performance only a reflection of the relationship between I.Q. and

performance? Also, given the fact that measures of I.Q. depend on the use of language, is the relationship between I.Q. and social class, at least in part, due to language differences between classes?

Current evidence is sufficient to suggest that social class has an independent relationship with performance (holding I.Q. constant); and, that language is an important element in the relationship between class and performance. This is relevant because of the number of studies that have been conducted on urban black speech patterns, which have demonstrated distinct differences between black and white speech. Although all children in the lower S.E.S. level has learned to speak a language, which is somewhat different from that of the dominant middle-class segment of society, the black child in the lower S.E.S. level is even more likely, than his white counterpart, to speak a form of English that is different from that of his teacher (Baratz and Shuy, 1969). Such race-linked language difficulties present only added difficulties to the child (e.g. (-) self-concept→(-) S.C.A.A.→(-) academic performance), and to his teacher (e.g. self-fulfilling prophecy syndrome).

Whiteman and Deutsch (1968), in their study of first and fifth graders, found a complex pattern of relationships among age, class I.Q., and reading ability. They found that, although I.Q. was related to social class both early and late in elementary school, the I.Q. measures themselves, especially the verbal forms, seem to reflect differences in the verbal facility of children; and, class-related differences increased as the child passed through the primary grades. Meaning, that not only does the child in the lower S.E.S. level progressively fall farther behind in basic reading skills, such language skills appear to be reflected in the I.Q. measures themselves. The study included both black and white

children, and differences by race were found; but, they were independent of the differences by class.

In relating the above discussion, of I.Q. differences in academic performance and its relation to S.E.S., to the self-concept of the student, recent research by Trowbridge (1972) provides some insight. Trowbridge (1972:535) indicates the possibility of a relationship between self-concept and the I.Q. of the student; and, that the results by S.E.S. could conceivably be explicated by an I.Q.--self-concept relationship. The results of this relationship is the focus of another study (now in press). However, she posits, in the present study, that the findings explicitly illustrate that any confounding of the observed S.E.S. results, by I.Q. differences, is minor in that, students of low S.E.S. have the higher self-concept prevalent at all I.Q. levels.

Jensen (1969) catalyzed anew, research which connotates the intelligence superiority of whites, as measured by I.Q. tests. His controversial research posits that, racial and/or social class measures of change in achievement cannot be attributed to differences in the environment; but, must be accounted, primarily, to genetic differences. This "nature-nurture" controversy of I.Q. differences between blacks and whites will be discussed further, in brief, in the section on school climate and academic achievement.

#### Achievement Level Differences

The majority of the research literature pertaining to this sub-category have been previously reviewed under the sub-categories: student perceptions and academic success, student perceptions and academic failure; effects of self-concept on achievement, and effects of achievement

on self-concept. However, there is research literature which indicates age/grade level differences, with regard to self-concept and academic performance; that knowledge will be illustrated under this heading.

Brookover and associates (1965) concluded that S.C.A.A. is associated with academic achievement at each grade level. Harding (1966), in his study of white, male, high school students, concluded that a student's attitude toward his ability to achieve in academic endeavors is a critical variable in predicting whether the student will continue in school or whether he will drop out.

Douglas (1964), in a study examining the effects of the self-fulfilling prophecy in ability grouping, found significant differences in students between ages eight and eleven when they were ability grouped. Able students who were placed in the high-ability-track classes tended to improve between those ages; whereas, the students of equal ability, who were placed in the lower-track classes at age eight, deteriorated. The reverse was also true. Students of lower ability placed in the high-ability-track classes at age eight profited; whereas, the students of equal potential, who were placed in the lower-track classes, lost. Simply, in the high track, the slower the learner, the greater the improvement; in the lower track, the brighter the student, the greater the loss. An underlying aspect of this study demonstrates that, ability grouping often functions as a self-fulfilling prophecy; and, that it is undoubtedly related to teacher expectations. This will be discussed further under the "significant others" category, as it relates to the self-concept.

Morse (1964) found a gradual decrease in the perceived self-concept with age in his study of self-concept in the school setting.

His sample consisted of over 600 students of a metropolitan school system, in alternate grades, from grades three to eleven. There was a sharp decrease in grades three and five, with some recovery by eleventh grade. He posited that many of the items on the self-report scale (Osgood Semantic Differential) showed a decrease in self-esteem with age; but, that the social self after the third grade appeared to improve.

This is in line with the observation that we are more effective in socializing youngsters than in making them secure within themselves (p. 197)

Similar findings, to Morse (1964), were reported by Brookover, et al (1965) and Yamamoto, Thomas, and Karnes (1969). These studies, seemingly, denote that gradually, over time, the image of the school becomes less positive; and, that a sense of personal incompetence is communicated to many of its students. In essence, the school can instill negative feelings in the students.

There is evidence of the increasing differences in the level of academic performance of black and white children, as they move from elementary through secondary school. Using the Coleman, et al (1966) study as an example, they found that, by the time black children had reached the sixth grade, they were about one and one-half years behind white children on a series of achievement tests; and, were more often to fall behind in grade level. This appeared especially true for black boys. By the ninth grade, the difference became two and one-fourth years behind; and, by the twelfth grade, the difference was three and one-fourth years. Another noted difference associated with academic performance was that, holding S.E.S. constant, the students' perceived

S.C.A.A. was much more clearly associated with performance for whites than for blacks. In contrast, the students' perceived "sense of control" over his environment was much more clearly associated with performance for blacks than for whites. Thus, this difference, which was found in both the North and the South, denotes that, the black student's perceptions of "sense of control" over his environment were more important than his perceptions of his S.C.A.A.

In light of what we know about the self and scholastic success, the findings presented here have serious implications for the school as well as the student, if a child becomes convinced that school is a place where he cannot hope to succeed. This line of research will be pursued further under the sections involving school climate.

### Sex Differences

One will see, from the literature which follows, that the influence of sex on the self-concept is an area which deserves further exploration. Research evidence clearly shows a persistent and significant relationship between the self-concept and academic achievement. However, this relationship appears quite clear for boys; but, less so for girls. There seems to be a more consistent relationship among girls between measures of ability and academic performance (Lavin, 1965).

Both Campbell (1965) and Bledsoe (1967) used self-report inventories in their respective studies; and, each found a stronger relationship, between the self-concept and academic achievement, in boys than in girls. Bledsoe (1967) found that, fourth and sixth grade boy's self-esteem and academic achievement, were positively correlated to a

significant degree. However, the correlations for girls were much lower and generally not statistically significant. Purkey (1970:15) stated that, the relationship between the self-concept and achievement were influenced by sex differences, primarily, in the area of underachievement. Also, that negative self-concepts were exhibited among more male under-achievers than female underachievers. Underachievers usually have a high I.Q. and/or the ability to succeed in school; but, they do not perform according to those expectations.

Through repeated testing with a self-report inventory, the Self-Concept as Learner Scale, Baum, et al (1969) found that, girls, as a group, have a higher self-concept than boys; and that, both high and low achieving girls have a higher self-concept than boys. Hughes (1953) stated that, girls tended to out-perform boys even in the early grades.

Linton (1972), in his study of Anglo and Mexican-American sixth grade students, examined the relationship of global self-concept, S.C.A.A., and academic achievement. No sex differences were found on the measures of academic and global self-concept. However, sex differences in the Anglo and Mexican-American sample, yielded different patterns on the measure of achievement. (1) achievement was more closely related to the academic self-concept than to the global self-concept among Anglo boys and girls; and, among Mexican-American boys. (2) achievement was more closely related to the global self-concept than to the academic self-concept among Mexican-American girls. Purkey (1970:22) assumes that it is particularly true of boys, and to a lesser extent, also true of girls that, if they are unsuccessful as students, be it under- or non-achievement or poor readers, they tend to see themselves as less able, less adequate, and less self-reliant, than their more successful peers.

What are some of the reasons for these sex-linked differences in self-concept and academic performance? Kerckhoff (1972: 100-102) cites several factors which may help to explain some of the "variations by sex."

1. The higher performance of females may be due to the fact that, because the elementary teacher is usually female, the classroom, in part, tends to be dominated by female values (Parsons, 1949).
2. Girls excell in elementary school because they fit more easily into the school setting, and their normal sex-role characteristics better equip them for performance in that setting. Meaning, there is less reason to expect their personal characteristics would, influence that performance to a significant extent.
3. As they get older, the school as a socialization agency takes on different meanings for both boys and girls. Boys are more likely to become concerned about achievement because of their future role in the employment force; whereas, girls become concerned about their personal characteristics, and degree of acceptance by others (Sexton, 1969). Meaning, a positive self-image of adolescent girls seems much more dependent on their image of their personal qualities; whereas, the boy's self-image depends more upon intellectual qualities (Shaw, Edson, and Bell, 1960).
4. Boys, generally feel more graduated pressure to do well in secondary school than do girls. Girls become more concerned about social relations; which is related to the fact that, the level of academic performance drops at puberty for many girls, especially the more talented ones (Shaw and McCuen, 1960; Maccoby, 1966).
5. The above stated differences suggest that boys, more than girls, experience a strain between the need to perform well in school and the set of conditions under which that performance is possible.
  - a. The importance of education for future goals becomes increasingly significant with age; but, also the awareness of the significance of past achievement with regard to present and future achievement.
  - b. For those boys, especially, who have not done well previously, and do not anticipate that they will do much better in high school; other avenues of achievement may be sought. For some, these avenues may be found within the school experience (e.g. athletics, social leadership, etc.). For others, the options may be more limited; and, they may actually drop out of school.



6. Sex-related patterns will also vary by social class.
  - a. Children within the lower S.E.S. level are likely to have done less well in elementary school; and thus, the probability is not very high that their performance will be much better in high school.
  - b. The sense of the futility of high school work is likely to be strong, especially for the boys in this level. For many, the school is not a source of meaningful experience; but, becomes a constant reminder of inadequacy.

Whatever the reason(s) for the sex-linked difference(s) in performance, it is certainly of great social significance if boys are, even more likely than girls, to be subject to anti-academic/school influences.

#### Significant Others

"When one applies the self-concept theory of the symbolic interactionists to academic achievement, it is postulated that a child's self-attitudes concerning achievement in general and in specific subjects are acquired during interaction with 'significant others' who hold expectations of the child as a learner" (Johnson, 1970:88). This postulate is supported by a variety of studies (Rosen, Levinger, and Lippett, 1960; Clarke, 1960; Staines, 1956; Davidson and Lang, 1960; Videbeck, 1960; Helper, 1960). Brookover and Gottlieb (1964), for instance, posit that self-attitudes concerning achievement are related to academic achievement; and, that a student's perceptions of others indirectly influences his academic achievement, through their influencing the self-concept. Meaning, "the ways 'significant others' evaluate the student, directly affects the student's conception of his academic ability (which) in turn, establishes limits on his success in school" (Purkey, 1970:47).

The research evidence have explicitly and consistently identified parents, teachers, and peers, as being the most important "significant others" (persons) who play essential roles in influencing the self-concept

of the student. The research reviewed here will depict, individually, the relationship between "significant others," and self-concept and academic performance.

### Parents

For obvious reasons, and judging by the available research (Brookover, et al, 1965, 1967; Erickson, 1965; Thomas, 1966; Coopersmith, 1967; Kerckhoff, 1972) there is very little uncertainty that parents play an extremely crucial role in the development of the self-concept of their children. Brookover, et al (1965), in their attempts to improve the scholastic achievement of their low achieving ninth grade student sample, concluded that, the student's self-concept is greatly influenced by his parents' level of esteem for him, and his abilities. Another significant finding is the fact that, the parents' influence continues through the adolescent years.

This is contrary to the literature which involves adolescents; and, assumes that the peers become the "primary reference group" (Coleman, 1961) during this time. Although Coleman and others inferred that parents decreased as a relevant point of reference, when the adolescents moved into the high school system, this inferential was rarely made explicitly.

Brookover and his associates, however, reported this same finding in two other research projects (1962, 1967). All three research projects represented continuous phases of a longitudinal study, involving the students in one school class from the seventh through the twelfth grades, depicting the relationship of S.C.A.A. to school achievement. The first two research reports (1962, 1965) revealed that the perceptions

of almost all of the students sampled, in grades seven through ten, explicitly indicated that parents were the most important persons in their lives; and, were most concerned about how well they did in school. The last research report (1967), which summarized the entire study, revealed that at each grade level, eight through twelve, parents were consistently named, as being the most important persons in the students life, by 93% to 97% of the boys and 96% to 99% of the girls; and, as being the most concerned about how well they did in school. The range of those responses were 95% to 97% of the boys and 97% to 99% of the girls.

Erickson (1965) reported similar findings in his study depicting the normative influence of parents and friends on the achievement level of tenth grade students. However, perceived parental achievement expectations, in relation to achievement, was accepted for male; but, not for female students. Achievement tended to correlate equally with the perceived achievement expectations of both parents and friends, in the case of the female students. No findings, however, suggested dominance by one over the other. Thus, the view that parents have less ability than peers to influence the student's academic performance, is not supported.

Although Brookover and associates, and Erickson's research challenge the Coleman position, it should be noted that the former two studies involved only white students of one urban school system. The Coleman Report, however, involved thousands of students from all over the country and from many of the minority groups. Thus, it could be possible that under different situations and in different types of school settings, both would be applicable to the population addressed to. Thus, parents have a more vital and continuing role in the self-concept of their children than is generally recognized or completely elucidated.

## Teachers

Teacher behavior, whether positive or negative, has proven to be very significant, in relation to the student's self-concept and academic performance. According to Moustakas (1966), teachers want to be significant forces in the lives of their students. However, in order to influence students, it is mandatory to become important or a "significant other" in their lives. The determinant factors that makes a teacher become a significant other are, his beliefs and his actions. Cornbleth, et al (1972:13-14) posit that, seemingly, the observed differences in teacher behavior are likely to discriminate against pupils for whom teachers have low expectations. Also, the age or grade level of the pupils seem to have a substantial impact on the nature of teacher behavior, which is likely to communicate differential expectations for pupil achievement. In essence, teacher attitudes and opinions regarding his students, have a significant influence on their success (or failure) in school (Brookover, et al, 1967:110). Therefore, the teacher becomes a "significant others" person of the student, in terms of the interaction with, and the influence he has over, the student as the academic agent for the school.

In other words, when the teacher believes that his students can achieve, the students appear to be more successful; when the teacher believes that the students cannot achieve, then it influences their performances negatively" (Purkey, 1970: 47).

The expectations of the teacher can have a great deal of influence upon a student's self-concept and consequently, upon his academic performances. Rosenthal and Jacobson (1968), in a provocative; but, often criticized study, illustrated the power of teacher expectations. Their

study and other similar evidence will be discussed further under the school climate sections. However, it should be noted here that, according to Johnson (1970:95-96,99):

. . . the teacher's expectations toward the child as a learner will not always affect the self-attitudes of the child. . . . one must take into account the exact conditions under which relationships will hold. Under some conditions, a teacher's expectations of a student's ability will have a significant influence upon the student's self-attitudes regarding his ability. But this situation will probably hold only when either the child has a need for social approval from adults or when the teacher has a warm, trusting relationship with the child. In addition, there is some evidence that it is only when the teacher really believes that the child is capable of achievement that his expectations affect the child's self-attitudes.

It has been previously pointed out that the way "significant others" evaluate the child directly, affects the student's conception of his academic ability; which, in turn establishes limits on his success in school. The fact that teachers, in their role or capacity of "significant others," should have routine expectations for their students, is especially crucial during the elementary level; although it is important in all of the grades.

The literature on ability grouping commonly recognizes, that placing a student in a certain ability-level class, often operates as a self-fulfilling prophecy. One such study (Douglas, 1964) was reviewed here; under the sub-category, achievement differences. There is evidence that ability grouping affects the self-concept of students. Because of the role that the teacher plays in this process; and, the resultant behavior of the teacher, this has implications for the student, with reference to the teacher's role as a "significant others."

Eash (1961) concluded, from his research on grouping, that the student's self-concept could be positively influenced by the development of social situations vis-a-vis grouping procedures in a school. Borg (1966)

posits that the average and slow students, in schools that practice ability grouping, have considerable low self-concepts. Randomly grouped students, especially girls, had higher self-concepts than the students who were ability-grouped.

Many of the children in the lower-ability grouped classes are within the lower S.E.S. level. It has been proven that the teacher's influence upon the children within this level is potentially greater than the influence of the teacher upon children within the middle class (Kerckhoff, 1972).

Research evidence on teacher attitudes and beliefs is now illustrated. Davidson and Lang (1960) found a positive correlation between the student's perceptions of the teacher's feeling toward him and his perceptions about himself. Also, the more positive the children's perceptions, of their teachers feelings, the better their academic success; and, the more desirable classroom behavior, as rated by the teacher. Clark (1960) found a positive relationship between a student's academic performance and his perception of the academic expectations of him by significant others. Brookover, et al (1965) found that by enhancing the academic expectations and evaluations which parents hold of their children's ability, this process yields significant results in enhancing self-concept; and, improving academic achievement. Spaulding (1963) found that there was a high relationship between the student's self-concept and the teacher's behavior, when it involved personal and private talks with students. Gill (1969) posits that teacher attitudes toward students are equally important in shaping the self-concepts of their students.

. . . teachers should consider self-concept as a vital and important aspect of learning and development which the school, through its educational process, should seek to promote and foster in every child (p. 10).

How these attitudes function, in the school setting, will be discussed in the sections on school climate.

### Peers

Much of the research on peer groups and their relationship to the individual have been mostly on the adolescent. Kerckhoff (1972) states that "the limited emphasis on peer group functions in the pre-adolescent period seems to be based on the reasonable assumption that in the early grades children are not sufficiently autonomous to establish peer group norms independent of the teacher's influence" (p. 70). He also contends that the teacher's influence is much stronger in the early years because children tend to have few friends; but, this influence decreases as the influence of peer norms and values increase.

The fact that peer group relations are highly influential in how students feel about themselves and their abilities, as evidenced by their resultant behavior, is supported by many researchers.

Coleman's (1961) study of the adolescent subculture explicitly indicates the influence of peer groups on the secondary school level. Emphasis placed social achievement (e.g. dating; athletics) far above academic achievement. Students who excelled academically were looked down upon by their peers, especially the boys. Being in the "right crowd" is very important to the adolescent. Generally, the various sub-groups tend to reflect the structure of the school itself; each group tendint to involve students at similar social class and academic performance levels (Coleman, 1961; Turner, 1964). Freedman (1967),

in his extensive review of the literature, posits that students are influenced more by their fellow peers than by any other school influence. He also contends that the student culture in colleges is also responsible for transmitting the academic goals and other college processes to the incoming student.

Researchers also posit that the educational aspirations of the individual students are largely influenced by the S.E.S. composition of the majority of the students in the school (Wilson, 1959; Ramsay, 1961; Coleman, 1961; Turner, 1964). The potency of the peer group is, seemingly, greater among the children in the lower class. These children experience less direct supervision, less interaction, and less support from their parents with regard to school affairs (Kerckhoff, 1972); and hence, are influenced more by persons outside the family, especially their peers (Campbell, 1964). Kerckhoff (1972:69-70) perceives that it is, seemingly, clear that an anti-academic pattern is most likely to develop among the children in the lower-class, especially the boys, because of the following:

1. The school itself tends to encourage a sense of collective identity among young children by grouping them together in a single classroom with a single teacher; thereby, reinforcing the teacher-peer group relationship if the students respond positively to the teacher's attempts to influence them. However, if the teacher is perceived negatively by the children, there is a real possibility that the children will develop anti-academic values.
2. Unless the teacher, from the beginning, encourage the development of pro-academic motives and values, she will rapidly lose her effectiveness as a peer group structure evolves that is organized around other motives and values.



3. If, as has been posited, children from homes of a lower S.E.S. level are generally less well prepared for school than children from homes of middle S.E.S., if they receive less encouragement at home, if their teacher disapproves of their behavior, if their experience in school is less consistent with their previous experience, then their reactions to school and to the teacher would be expected to be less favorable.
4. Given the reality/existence of the above, the peer group tends to assume an increasingly significant role in the life of the boy from a low S.E.S. background. Peer group relations provide a degree of social security and self-respect in a setting that may offer few other rewards. In essence, a student's peers present a basis and provides social reinforcement for successful modeling in a situation where other bases may be weak or absent (Bandura and Walters, 1963).
5. The child who does adopt the values of the school and who strives for success at school may well find himself alienated from his peers (Jackson and Marsden, 1962).
6. The differences alluded to above are not massive when the child starts to school. Although the occurrence of the above are highly probable, it is the cumulative effects of these influences over time that is significant.

The influence of the peer group on a child's academic performance, be it positive or negative, is seemingly, clear; although all of the mechanisms by which this outcome occurs is not fully understood. "The more cohesive the peer group, the greater the influence on its members . . . if (these) students . . . agree about the undesirability of academic achievement, they will not perform at a high level; if they agree about the importance of academic achievement, however, there will be strong pressures toward achieving at the highest possible level" (Johnson, 1970:243). Johnson posits that motivation is determined largely by family background and that for most of the disadvantaged

students there is a lack of adequate motivation here which is reinforced by peers with similarly deficient motivation.

Parsons (1942) emphasizes that the peer group relations in adolescent subculture serve an important function in making the transition from childhood to adulthood a little easier. As previously stated, much of the literature on peer group relations are on the secondary level involving the adolescent. Kerckhoff (1972) also provided a rationale for such concentration. There is some literature, however, which indicate the significance of peer group relations at the elementary school level or before.

Hartup and Charlesworth (1967), in their studies involving nursery school children, illustrated the ways in which the small children reinforced each other; thereby, encouraging one kind of behavior over another. Pope (1953) illustrated that distinct patterns of power and prestige were demonstrated in the early grades along with bases of evaluation of the self and others. Costanzo and Shaw (1970) note that the potency of peer influences rises during the elementary school period, reaching a peak in late childhood and early adolescence where a clear and cohesive separation among cliques are found.

Brown (1957) illustrated that the preference for sex-specific activities and objects was found in both sexes well before the usual time of entry into school. This preference however, was more clearer with boys than with girls. Fagot and Patterson (1969) found that the peer influences that tend to reinforce masculine forms of behavior are also apparent even from an early age.

In summing up this sub-category on "significant others," the following can be stated, as provided by Kerckhoff (1972: 70-93):

1. The major agencies which contribute the most to the development of the child's feelings about himself and his abilities are the family, the school, and the peer group.
2. The parents normally provides the child with a sense of identity, a set of values, and the motivational base for his later actions.
3. The school, through the agent of the teacher, provides the child with the knowledge and skills necessary to accomplish the goals he seeks.
4. The child's response to his teacher (in actuality, the school) is clearly influenced by his experience in the family (mostly parental). Because of the interaction between parents and teachers, the opposite is also true. Meaning, the school experience for the child can be either a positive or negative one depending upon which of the two most influences him, either pro or con, in this area.
5. Peer relations are strongly influenced by both the teacher (school) and the parents (family) in either a positive or negative way.
  - a. Peer group patterns are found with both boys and girls; but, are more evident with boys, especially those boys from a low S.E.S. background.
  - b. Peer relations can be a crucial factor in whether a child views the school experience as positive or negative with concomitant achievement attained.
6. The three-way relationship among parents, teachers, and the peer group constitutes a social matrix within which the child has potentially diverse socialization experiences, especially regarding his academic performance.

" . . . it is apparent that socialization outcomes are influenced by the kinds of opportunities provided by the society. To the extent that these are different for people at different social levels, the socialization process and its outcomes will vary by social level" (p. 79).

### Changing the Self-Concept

"Symbolic-interaction theory implies that, since self-attitudes are acquired during interaction with significant others who hold expectations of the student as a learner, self-attitudes may be changed by changing the expectations of the student, as a learner, of his significant others" (Johnson, 1970:94). There is research evidence which postulates that one may raise academic achievement by changing a student's self-concept.

This does not mean, however, that changes in the self-concept causes or determines academic achievement. Before citing the literature reviewed, it is important to note that the correlational relationship found between self-concept and academic achievement does not indicate causation. It is very important to specify under what conditions the self-concept would be high, and under what conditions the self-concept would be low. One possible explanation of the above relationship is found in the concept of the self-fulfilling prophecy.

Merton (1948:195) defines the self-fulfilling prophecy as a "false definition of the situation evoking new behavior which makes the originally false conception come true." Rosenthal and Jacobson (1968), in a comprehensive review of the self-fulfilling prophecy, apply it to the learning process. They argue that children place artificially low limitations on their learning ability because their teachers erroneously believe that they are unable to learn. More will be explicated on this, often, criticized study in the section on school climate and academic achievement.

However, it is important to note that students who believe that others perceive them to be unable to learn may accept that definition, regardless of whether or not they may be able to learn. "A student's self-concept can readily lead to a self-fulfilling prophecy" (Johnson, 1970:93). In the classroom, it is a problem for the teacher to solve, in that he must be able to break the cycle of negative self-fulfilling prophecies by creating positive self-fulfilling prophecies in order to increase the level of academic achievement of the students. Merton (1957) posits that in order to break the vicious cycle of the negative self-fulfilling prophecy, the initial definition of the situation which set the circle in motion must be eradicated. Once the student changes his self-conception of his learning ability, the self-fulfilling aspects concerning his self-concept of his ability to achieve, end.

Brookover and his associates (1962, 1965, 1967) concluded from their studies that changes in the perceived self-concept of academic ability (S.C.A.A.) are associated with parallel changes in academic achievement. Purkey (1970) concluded from his review of the literature on the self-concept and school achievement, that "just as poor performance lowers self-regard, successful performance raises it;" and, that "enhancing the self-concept is a vital influence in improving academic performance" (pp. 26-27).

There are a variety of ways in which the self-concept of a student's ability to achieve may be changed in a school setting. Some of this literature have previously been reviewed under the categories of: effects of self-concept on achievement, and effects of

achievement on self-concept. Thus, that literature will not be explicated here for the sake of brevity. Most of the ways, however, involve modifying the expectations, and evaluations that "significant others" have of the student's abilities. They have been identified, from the previous category, as being parents, teachers, and peers. Much of that literature was dealt with also; therefore, only brief references will be cited in the event of repetition occurring.

Brookover, et al, (1962, 1965, 1967) found that parents were seen by the majority of the students they studied as being the "most important in their lives" and "concerned with how well they are doing in school." Rosenberg (1963) furthermore, demonstrated that when parents manifested indifference toward their children, the children later exhibited low degrees of self-esteem. In Brookover's, et al (1962) study, parents, of low-achieving ninth grade students, were counseled in the need their children had for expressions of their parent's faith, in their children's ability to achieve. In cases where the parents changed their evaluation, the change was apparent to the children; and, was shown by a gain in grade point average in 42 per cent of the children. This study demonstrates that parents can affect a student's self-concept, and thereby, raise his academic performance. Therefore, one way in which a school can raise the self-concept of underachievers, is to enlist the aid of the parents and have them express positive expectations about their children's ability to perform well academically.

The expectations and evaluations of the teacher can have a great deal of influence upon a student's self-concept; and,

consequently upon his academic achievement. Rosenthal and Jacobson (1968) demonstrated the power of teacher expectations (to be reviewed in school climate sections). However, as previously stated elsewhere in this dissertation, the teacher's expectations toward the child, as a learner, will not always affect the self-attitudes of the child, depending upon the circumstances. Rosenthal (1966) posited that only when the teacher really believed that the child was worthwhile, and capable of achievement would his expectations affect the child's self-attitudes.

Staines (1958) concluded, from his careful observation study of teacher-child and child-child interaction in four elementary classrooms, that changes in the self-concept of the child do occur as an outcome of the learning process; and, that the self must be regarded as an important factor in learning. He posits that teaching methods can be adapted; whereby, definite changes of the kind sought for would occur in the self without any damage to the academic program in the process. We have observed how negative changes have resulted in the reality of the self-fulfilling prophecy. Coleman, et al (1966) posited, from their equal educational opportunity study, that teacher quality--based upon a self-rating coupled with the educational background of the teacher and his family--was, seemingly, more important for minority-pupil achievement than for the achievement of the majority of white students.

There are a variety number of research studies demonstrating the great deal of influence that one's peers have upon one's attitudes and behaviors. Engle, et al (1968) concluded from their study that peer-group acceptance and support brought measurable increases in

grade point averages, whereas a warm and supportive teacher did not. One might be inclined to assume, however, that peer-teacher influence over a student's self-concept, and, subsequently, his academic achievement, might vary with age. Meaning, that younger children may be more inclined to be influenced by their teacher; whereas, the adolescent, as here, may be more inclined to be influenced by their peer group. As stated in the peer section of the "significant others" category, the more cohesive the peer group, the greater the influence on its members.

Other methods utilized which have been used to affect a student's self-concept, and consequently, his academic achievement, have been to place the student in a series of situations where he received support and recognition for "success" experiences in critical areas. Gillham (1967) found, in her study of poor eighth grade readers with concomitant self-concept, that having them assist in reading to kindergarten children, and honestly praising them for their activities, raised their grade level in reading greatly. It seemed that after their abilities were recognized and requested from other grades, they began to ask for help in correcting their own reading deficiencies; and, hence the raise.

Another method illustrates how by providing an appropriate model, one may change a child's self-concept. Fox and Schwarz (1967) evaluated a program that paired students from two "slow" second-grade classes in a Harlem elementary school with students in two high achievement fifth-grade classes. The hypothesis was, that by providing a successful model for the children, their attitudes and performance



in school would become more positive. The results indicated that the second graders improved in school attendance and reading achievement.

Offering intensive counseling to those students whose self-concept of their ability to achieve are low, is another method which can possibly be used. An example of this method is illustrated in a study done by Dolan (1964) of poor junior high school readers who had high ability, but, low achievement and a low self-concept. After a six month period, he found that his experimental group, who had been given intensive counseling, made significant gains over the control group, in both their reading ability and their self-concept.

Therefore, it may be possible to modify a student's self-concept concerning academic achievement by modifying the expectations and evaluations parents, peers, and teachers have toward the student, as a learner; and, through methods such as successful experiences in critical areas, appropriate role models, and group counseling. Emphasizing again, however, that the above will not always be successful and/or effective in all cases; and, that it depends upon the circumstances in which it is effective or not.

#### Self-Concept of Academic Ability (S.C.A.A.) and Academic Achievement

Self-concept of academic ability (S.C.A.A.) as delineated in this research, is an eight item guttman scale developed by Brookover at Michigan State University; and, was utilized in his longitudinal study of the Self-Concept of Ability and School Achievement (see Brookover, et al, 1962, 1965, 1967). This scale was derived, based

upon the nature of the self-concept research. His rationale for the development of the S.C.A.A. scale is depicted below.

Perhaps the best description of a large part of the self-concept literature is that it is verbally redundant or synonymous but nonreplicative. Literally hundreds of studies have been done on (the) self-concept and reported in the educational, sociological, and psychological literature. Yet few of these studies can be replicated because of either poor methodology or unclear conceptualization, or usually both . . . if one controlled for the academic dimension of self-concept, the association between general measures of self-concept and G.P.A. will drop to zero (p. 24).

Brookover adapted Mead's Theory of symbolic-interaction who theorized that the self was faceted; and, that the social situation determined which facets were brought forth (Mead, 1934:142). Brookover postulated that a global self-concept might be too broad to have significant power to predict any one facet of behavior. Therefore, he defined self-concept of academic ability as "behavior in which one indicates to himself (publically or privately) his ability to achieve in academic tasks with others engaged in the same task" (Brookover, et al, 1967:8). Thus, it is this self-concept, the self-concept of academic ability, which is employed in this study. Before reviewing the literature on the S.C.A.A. and academic achievement, this writer will review some of the literature which examines the relationship of the self-concept and academic achievement by employing some of the more commonly utilized self-concept instruments, as explicated in Auer's (1971) review of the literature. They are the Coopersmith Self-Esteem Inventory, Rosenberg Self-Esteem Scale, and the Tennessee Self-Concept Scale.

### Global Self-Concept Instrumentation

#### Coopersmith Self-Esteem Inventory

Coopersmith (1967:188), in his study on self-esteem, found that a relationship existed between self-esteem and parental expressions of attention, concern, and value. In relating this scale to academic achievement, Lowther (1963) postulated, from his study, that children, irregardless of I. Q., with high academic achievement, would have high scores on the Coopersmith instrument twice as likely as the children with low academic achievement; and, also that the converse of this relationship would be true. However, no causal inferences can be depicted from his study because no percentages of the children with high self-esteem were given as to whether they also had high or low academic achievement.

Trowbridge (1969) measured the self-esteem of disadvantaged elementary school children with the self-esteem of advantaged elementary school children. Although she found that disadvantaged children had the higher self-esteem of the two groups, she did not relate this to academic achievement. Therefore, other than the fact that she delineated the significance of reference groups for the said population strata studied, her study is of limited utility. Soares (1970) findings and Trowbridge's are consistent, however, in that he found, in his study, that disadvantaged students scored higher on self-esteem than did the advantaged students. However, Soares, also, did not relate this to academic achievement nor described, what reference groups were used by the students.

### Rosenberg Self-Esteem Scale

Rosenberg (1963) found a similar relationship as Coopersmith (1967) concerning self-esteem and parental evaluation of their children; even though they used slightly different instruments. Brookover, et al (1967:102) examining both Rosenberg's self-esteem scale and the S.C.A.A. scale, found that Rosenberg's self-esteem scale was not as highly correlated with academic achievement as was the S.C.A.A. scale. The correlation between Rosenberg's (1965) self-esteem scale and academic achievement was .31 among almost five and a half hundred twelfth-grade students; whereas, Brookover's S.C.A.A. scale produced a correlation of .49 with academic achievement. Also, when the variance of self-esteem was partialled from the S.C.A.A. correlation, the correlation was decreased from .49 to .46; however, when the variance of S.C.A.A. was partialled from the self-esteem correlation, the correlation decreased from .31 to .06. Therefore, seemingly, self-esteem is indirectly associated with academic achievement, through the S.C.A.A.

### Tennessee Self-Concept Scale

Williams and Cole (1968) in their study between the Tennessee self-concept scale and the California Test of Mental Maturity found a correlation of .31 on reading achievement and the self-concept. Although the Tennessee instrument had a greater range of scores than Brookover's scale and the California Test had a greater range of scores than grade point average, the correlation found in the Williams and Cole study is still lower than any of those of Brookover. It is possible, that this scale is of less utility than Brookover's in predicting academic achievement.

The above literature is representative of a great majority of the research on the self-concept. These tests, which are of general self-concepts, contain a great number of dimensions which are correlated with academic performance. Seemingly, "the small observable associations between the general self-concepts and academic performance are (in actuality) only reflections of the association between an academic self-concept and general self-perceptions" (Votruba, 1970:15).

#### Specific Self-Concept Instrumentation

Brookover, et al (1962, 1965, 1967) employing the specific self-concept of self-concept of academic ability, in their longitudinal study of one Midwestern school class from the seventh through twelfth grades, found that the correlations between S.C.A.A. and grade point average ranged from .48 to .63 over the six year period of the study. Their sample consisted of 1,050 white male and female students; and, some of the more principal significant resultant findings were as follows: (1) the reported self-concept of academic ability is significantly related to academic achievement among both boys and girls, (2) this relationship persists even when intelligence is partialled out, (3) achievement in school is limited by the students' concept of his ability, (4) students with negative self-images of ability rarely perform well in school, (5) self-concept of academic ability is associated with academic achievement at each grade level, (6) S.C.A.A. is a better predictor of success in school than is the overall (global) self-concept, (7) a student's self-concept of academic ability is positively related to the image he perceives parents, teachers, and peers hold of him, and (8) the perceived evaluations of parents are

more likely to affect S.C.A.A. than are the perceived evaluations of peers or teachers. Other findings from this research have been delineated, wherever applicable, in this present study's review of the literature.

### S.C.A.A. and Academic Performance

There have been a number of other studies hence, which have employed the S.C.A.A. and related it to academic achievement. This review will commence examination of that literature.

Richard Morse (1963) found that the reported S.C.A.A. was a better predictor of classroom achievement than I.Q.: and, that this was true for both black and white students. Haarer (1964) found that the reported S.C.A.A. was a better predictor, of the achievement of both ninth grade public-school male students and institutionalized delinquent boys, than I.Q. He also postulated that since (1) "S.C.A.A. is formulated and modified in a interpersonal setting, and (2) the learner tends to evaluate himself as he perceives other evaluate him, then (3) it should be feasible to elevate the self-concept of the delinquent student, and consequently, raise his level of academic achievement by working through appropriate others" (p. 246).

Sandeen (1965) examined the college and non-college aspirations, and the changes in those aspirations, of secondary school students over a four year period. His sample consisted of male and female students in one school class from the seventh through tenth grades. He found that the students' aspirations for college were highly correlated with

S.C.A.A. from the seventh through the tenth grade. He also found that the student's S.C.A.A., seemingly, was more highly related to his aspirations than was his social class rating. The student's perceptions of his parent's evaluation of his ability to achieve was also significantly related to his aspirations for college; however, the degree of significance decreased each year until the tenth grade.

Erickson (1965), in his study of the relative influence of parents and friends on the achievement level of tenth grade white male and female students, found that parents were indicated as being most concerned about their academic achievement by 88 percent of the males and 91 percent of the females. Twenty-four percent (24%) of the females indicated that their friends were important in both their lives and concerned with how well they did in school. "There were almost no (students) who indicated a conflict between parental and friendship expectations when conditions demanded compliancy with both sets of expectations - 8 out of 942" (p. 197). He concluded that the relationship between academic achievement and the perceived academic expectations of parents and/or friends can influence a large proportion of students toward higher achievement; and, that when no importance is attached to high academic expectations, the expectations will not likely result in higher levels of achievement (p. 201).

Harding (1966), in his comparative study of tenth through twelfth grade white, male, students who remain in school and those who drop out, found that the dropouts had a significantly lower

S.C.A.A. than the males who remained in school, when I.Q. and grade point averages were factored out. He concluded that a student's S.C.A.A. was a critical variable in predicting whether the student would continue in school or whether he would drop out. Morse (1966) in utilizing the S.C.A.A. and perceived reference group expectations (parents, teachers, peers) wanted to determine what relationship existed between the above and the student's level of educational aspiration and classroom achievement, with students of different S.E.S., and with similar S.E.S. He concluded that for students of both different, and similar S.E.S., the S.C.A.A. and the perceived expectations and evaluations of the students' "significant" persons in his life, influences his (the student) educational aspirations and classroom achievement.

Thomas's (1966) research demonstrated how significant gains in the S.C.A.A. and academic achievement of low achieving students were accomplished. By using the parents, a significant other, and counseling them on school achievement, he indicated their possible role in expediting a positive academic performance of students. Towne (1966), in his study of the S.C.A.A. of the educable mentally retarded child and the effect of special class placement, found that comparison with particular reference groups (i.e. parents, teachers, peers) resulted in the S.C.A.A. of the student. Also, that changes in the reference group could result in a change in S.C.A.A.

Joiner (1966), in a reliability and validity study, involved a comparative analysis between the S.C.A.A. of hearing--impaired



the hearing impaired is equal to the mean S.C.A.A. of the non-impaired. The S.C.A.A. scale developed for the hearing impaired students was associated with school performance, perceived parental evaluations of academic ability, perceived teacher evaluations of S.C.A.A. among the hearing-impaired, and measured intelligence. His sample of seventh through tenth grade students indicated that S.C.A.A. was not associated with the grade level of this group (p. 186).

Paterson's (1966:170-172) study concerned the reliability and validity of the S.C.A.A. scale. Her sample consisted of white, male and female seventh grade students. She concluded that although the S.C.A.A. scale yielded positive results, in its correlation with grade achievement, there were certain knowledge gaps concerning the measuring instrument. They were presented as follows:

1. The influence of social desirability, instrument form, or response restrictiveness on the results, when using the scale, is not known.
2. Examination of the psychological relevance of scoring procedures is equally as serious as number one, above,
3. Inability to demonstrate that the results are not method-tied is the most serious problem,
4. Related to number three is that the results may be criterion tied. Grade point averages are the only criterion that have been systematically examined to date. She felt that other achievement indices should also be studied, and that perhaps an independent measure of the S.C.A.A., to allow such evaluation as depicted in number three.
5. Articulation of the present research findings with other measures of the self-concept--particularly self-conceptions about ability in other than academic areas is necessary. This articulation would empirically demonstrate how broad a construct is tapped by the S.C.A.A. scale in the same manner as the analysis of the specific subject scale (e.g. Math, english, etc.).

6. The stability reliability of the instrument can not be determined until there is empirical evidence regarding the probability of change in the academic self-concept (i.e. change induced by other than experimental intervention.)
7. Further study is needed to determine the interval consistency reliability by increasing modification in the scale itself. The elimination of one or more items might be necessary. It appeared that item seven, logically should be removed; but, empirical evidence supported its inclusion. Paterson posited that either item seven functioned effectively because of the level of the students (junior high did not discriminate between performance and potential performance) or that the distinction existed, primarily, in the minds of the test constructors; and, was not important to the general public.
8. The need to examine other age groups.
9. Detailed analysis is necessary across different I.Q. and social class levels by sub-group. Evidence was sufficient to suggest that all analyses using the S.C.A.A. scale should be done separately for males and females.

Sproull's (1967) preliminary analysis surrounded the development and analysis of a self-concept of teaching ability scale. In the spirit of Brookover's, et al (1962, 1965, 1967) research, the S.C.T.A. was based on the perceived evaluations of the teachers' ability held by their principal, their teaching colleagues, and their students. Four respective scales were designed to measure the above. There was a significant correlation between the S.C.T.A. scale and teacher ability. Also, there were high positive correlations reported between the S.C.T.A. and the perceived evaluations of principals, students, and colleagues. Generalization, due to selective sample selection, was not beyond the study.

The above studies were all derived through affiliation with some phase of the Brookover and associates longitudinal study. There

is also a body of research literature which has utilized only the construct S.C.A.A. in their research endeavors. This literature will now be reviewed.

Coleman, et al (1966:323-324) utilized the academic self-concept in their study and found that "for each minority group, as the proportion white in the school increases . . . the child's self-concept decreased." Their study revealed that the "academic self-concept" was related to achievement; and, that the social class and racial composition of the schools were related to school achievement and to the attitudes of the students.

In using the construct of S.C.A.A., conflicting results have been reported in at least studies comparing Chicano and white students. Anderson (1967) and Johnson (1968) found no significant difference between the two groups at the high school level. In contrast, Evans (1969), in his sample of ninth-grade students, reported that the white students had a significantly higher S.C.A.A. than did the Chicano students. Some of Linton's (1972) findings, involving sixth grade students, were that the S.C.A.A. was more significantly related to achievement among the Chicano boys than the girls; and, among both white boys and girls. Also significant differences were found between socio-economic levels of both Chicano and white students.

Further explication will be made of Linton's findings, in that he compared the relationship of global self-concept (Piers-Harris Children's Self-Concept Scale - "The Way I Feel About Myself"),

academic self-concept (S.C.A.A. scale), and academic achievement among Anglo and Chicano sixth grade students. Up until this time, there had been no research contrasting the relationship of academic achievement to global self-concept and academic self-concept. His principal findings are as follows:

1. Achievement is not significantly related to either academic or global self-concept among high socio-economic level Chicano students.
2. Achievement is more closely related to academic self-concept (S.C.A.A.) than to global self-concept among middle socio-economic level Chicano students.
3. A weak relationship exists between achievement and global self-concept among low socio-economic level Chicano students. Academic self-concept is not significantly related to achievement for these students.
4. Achievement is more closely related to academic self-concept than to global self-concept among high and middle socio-economic level Anglo students.
5. A weak relationship exists between achievement and self-concept for low socio-economic Anglo students. There is little difference between the relationship of achievement with academic and global self-concept among these students.
6. Achievement is more closely related to S.C.A.A. than to global self-concept among Mexican-American boys, and among Anglo boys and girls.
7. Achievement is more closely related to global self-concept than to S.C.A.A. among Mexican-American girls (pp. 9-10).

In relating the S.C.A.A. to studies involving other minorities, Epps (1969), in a survey of northern and southern black high school students, found S.C.A.A. to be the strongest correlate of academic performance (i.e. to school grades). Hara's (1972) cross cultural study compared the self-esteem (Rosenberg) and the S.C.A.A. of Japanese and American (both black and white) ninth grade students. Her purpose was to empirically compare the similarities and differences

between those student populations living in metropolitan, industrialized areas in each respective country, to account for some of the behavioral patterns of each group; and, to gain some insight into the cultural patterns of each respective society.

Her findings concerning the self-concepts are stated as follows:

1. With respect to S.C.A.A. of the respective ninth grade students.
  - a. The Americans have a higher S.C.A.A. than the Japanese; but, there is no difference between the blacks and whites.
  - b. With regard to social class differences, the Japanese and white Americans have a higher S.C.A.A. at each successive rise in social class status; whereas, the blacks S.C.A.A. is only higher from lower to middle class. It is the same for the middle and upper class levels.
  - c. With regard to sex differences, S.C.A.A. is the same for both Japanese boys and girls, and for black boys and girls; however, white boys have a higher S.C.A.A. than white girls.
2. With respect to self-esteem differences of the respective ninth grade students--
  - a. The Americans have a higher self-esteem than the Japanese, and, the blacks have a higher self-esteem than the whites.
  - b. With regard to social class differences, the Japanese middle class have a higher self-esteem than the lower class; whereas, their upper and middle class have the same self-esteem level. There are no differences between the self-esteem of the black or white Americans.
  - c. With regard to sex differences, both the Japanese and the American black and white males have a higher self-esteem than the females of each respective population.

Auer (1971) examined the differences in S.C.A.A. among eighth grade West German students, in three different types of schools.

After the fourth grade, the students are formerly segregated, according to academic achievement, into either the Gymnasium, (most successful

students--top twelve percent) the Mittelschule (the middle eight percent) and the Volksschule (the remaining eighty percent). His findings constituted an inconsistent pattern with Gymnasium students having the higher S.C.A.A. and perceived evaluations; and, the Volksschule students having the lower S.C.A.A. and perceived evaluations. However, the differences were not statistically significant, which Auer posits might have been due to "statistical artifact." He concurs the same with his other findings in that, the school branch a student attended was a poor predictor of the student's S.C.A.A. and did not appreciably improve the predictive power of other combinations; however, perceived evaluations were the most potent predictors of S.C.A.A.

In summation of this section on S.C.A.A., it appears that it is a better predictor of school performance, and perceived expectations and evaluations of significant persons in the life of the student, than are any general or global self-concept measures delineating the same relationship. Although the scale could possibly use more refinement in terms of its internal consistency reliability, and other methodological concerns, it is the most accurate measurement, to date, which assesses the student's perceptions of his ability to achieve, with his academic achievement.

Research studies depicting this relationship have included different racial/ethnic groups, in this country and abroad, different socio-economic status levels of the respective above groups, different grade levels, between males and females, different achievement levels, and in different school subjects. Experimental situations in which

changing the S.C.A.A. was the goal, was also depicted as well as the converse self-concept of teacher ability delineated. Research endeavors indicate the potential of such a measurement in assessing not only the perceptions of academic behavior; but, its possibility in assessing different kinds of behavior. Since an individual has as many self-concepts as he does roles and attributes, it is, seemingly, possible that assessment of each respective role behavior could be measured by the specific self-concept of that particular behavior, based upon a derivation of the S.C.A.A. scale. The next two sections will review the literature of the school climate and academic achievement, and the school climate and self-concept, respectively.

#### School Climate and Academic Achievement

As previously stated, the literature concerning school climate is a matter of supposition; and, is very limited in the area of significant interest in this study, the elementary school. Most of the literature on the school climate, however, has concentrated on the secondary level and college level in depicting its respective relationship to academic achievement; and, most of these studies have been more of an organizational nature than social-psychological, as delineated in this research. Therefore, in addition to the minuscule literature on the elementary school climate, this section of the school climate review will encompass some of the various rubrics of school social environment, that are social-psychological in nature; and, their relation to academic achievement in different types of school settings.

Cooper, (1972:11) in his study of self-perception/ethnic group membership, found that all four groups, Anglo, Chicano, Indian, and Black reported favorable perceptions of themselves; but, less favorable perceptions of the school. "What is it about the school that leads so consistently to depressed perceptions?" Morse, (1964) in his self-concept school setting study, found that the school's self-esteem appears gradually to grow less positive with time; and, that there was a gradual decrease in professed self-regard with age (i.e., sharp decrease in grades 3-5 with some recovery by 11th grade). Similar findings were reported by Brookover, et al (1965) and Yamamoto, Thomas, and Karnes (1969). These studies have shown how the school can instill negative feelings in the students.

#### Elementary School Climate

Research endeavors in the realm of elementary school climate are practically nil. The significance of such research needed, however, has implications for the student, as a learner, throughout his school career. Also, in meeting the needs of the students, the college climate have more flexibility in being compatible, because the student exercises his prerogative in selection of the college that's best suited for him. This is not the case with elementary and secondary school's students, however. Because the schools are assigned, in most cases, geographically, the student has no choice in selection; and therefore, the climates of the above school situations may or may not be similar to the needs of the students. Hence, the latter climates may effect the student's behavior more so than the climate of the college (Johnson, 1970:231).



There have only been a few research endeavors delineating the relationship between academic achievement and school climate. Not all of these studies are applicable to the present study. On the contrary, only one really is. Most of the others are basically organizational, and not social-psychological.

Sinclair's (1970) study comes closest to this present study's research of all the school climate literature. His analysis of elementary school educational environments comprised 12,000 students from more than one hundred elementary schools. He posits "that there is an urgent need for principals and teachers to create refreshing educational surroundings that meet the personal and academic needs of children . . . . Different environments affect children in different ways, and to ignore variation in school climates is to limit our understanding of the various ways students think and feel" (p. 53).

He defines educational environment as "the conditions, forces, and external stimuli that foster the development of individual characteristics" (p. 54). Establishing the variables that are to be measured in environmental studies are very significant in this research. Adapted from Pace's (1965) work on colleges and universities, Sinclair recognizes five school climate variables which are used to measure school climate. They are: Practicality, Community, Awareness, Propriety, and Scholarship. Sinclair found seven environmental patterns emerging from his study.

1. Practicality - Schools that are scholarly yet rebellious.
2. Practicality - Schools, scholarly, warm, and accepting with a higher score on politeness.
3. Schools categorized by emphasis on student conformity politics.

4. Schools which are academically rigorous, and have little concern for practicality.
5. Schools low on scholarships and practicality.
6. Rebellious schools which are also low on awareness.
7. Schools which are cold and rebellious, somewhat like jails.

Sinclair indicated that the above seven patterns were not all-inclusive nor complete. He did note, however, that these patterns were, in essence, representative of the patterns found in many of our elementary schools across the country.

Six new factors were identified in the follow up study by Sadker and Sinclair (1972). They were: Alienation, Humanism, Autonomy, Morale, Opportunism, and Resources. These two studies serve to illustrate that the school climate configurations of successful schools are complex which must take into account the many factors involved in the process. Such factors will presently be reviewed upon completion of this section.

Other research, on elementary school climate, which is just tangential to the present study, include the Halpin and Croft (1962) school climate study, the Davis study (1969), the study done by Kenney and Rentz (1970), and the study by Barclay, et al (1972).

Halpin and Croft (1962) employed the instrument, which they termed, Organizational Climate Description Questionnaire (OCDQ). This instrument, which usually measured the population of secondary schools, was refined to measure elementary school settings. Though not of interest to this study, it is still applicable to the realm of school climate and those investigators interested in examining this

relationship. Davis (1969) in examining the differences between the types of schools, found significant differences, utilizing the (OCDQ), in predominately black and predominately white high achieving schools.

Kenney and Rentz (1970), in their attempt to replicate the Halpin and Croft study, found that other factors emerged. They were (1) the principal as an authority figure, (2) non-classroom teacher satisfaction, (3) work conditions, and (4) teacher-teacher. They concluded that before any real conclusive statements could be made, more research was mandatory; especially, in the realm of "open-closed" climate. They believed that, separating the internal school climate from the environment (external) to the classroom boundaries, was impossible.

Barclay, et al (1972) measured the social interaction in the elementary classroom derived from self-report, peer judgments and teachers expectations. Using the Barclay Classroom Climate Inventory, this study was to relate psychometric variables to actual observed behavior in a number of classrooms, involving 700 elementary school children; and hence, assess the needs of a classroom situation. They found that the use of the B.C.C.I., as a measure of social interaction, related positively to achievement scores.

Henderson (1972) found, in his comparative multivariate analysis of black and white elementary school children, in differential school settings, that the school climate configurations were different for the respective student population. His sample, comprised of fourth through sixth grade children, controlled for the effects of race, S.E.S. and achievement levels, as much as possible. His conclusions were that, of

the social-psychological variables, comprising school climate, the most significant variables were teacher press for competition, sense of control, S.C.A.A., perceived expectations and evaluations for peer, and teacher, respectively. With regard to the difference between races, the students in predominately black schools scored higher on all of the above variables, save for sense of control, than the students in predominately white schools.

Schneider (1973) postulated, from his school social environment study of fourth through sixth grade elementary school children, that the school climate factors most significant, in accounting for the variance in achievement, beyond the effects of race, S.E.S., and urban-rural community type, were student reported sense of futility (44.92%), greater teacher future evaluations-expectations (9.8%), less teacher reported push of individual students (5.28%), and greater student perceived present evaluation's-expectation's (3.36%).

Basically, the literature presented above, constitutes the extent of the school climate research at the elementary level. In examining other school climate literature, this writer finds, that academic achievement is related to the above in many different types of school settings. This literature will now be expounded upon.

### School Climate in Different School Settings

#### School Climate and S.E.S.

In relating the social environment (school climate) of the school setting to academic achievement and S.E.S., interesting findings develop. Sexton (1961:27), in her study of education and income in the

Detroit Public Schools, found that, academic achievement scores in elementary schools tended to be higher with a rise in income. Her findings were based upon fourth, sixth, and eighth grade Iowa Test results, and utilized a sample of 300 schools, 10,000 teachers, and 285,000 students. The mean income of \$7,000 depicted the direction of achievement. All of the schools, save one, above a \$7,000 income were achieving above grade level. However, all of the schools below a \$7,000 income were achieving below grade level. Further achievement differences were illustrated when examining schools with a mean income of \$3,500, and schools with a mean income of \$11,055. Achievement was almost one year below grade level, and more than a year above grade level, respectively.

Herriott and St. John (1966) found a consistent correlation between socio-economic status and academic achievement in their review of the research depicting the kind of education that students of different socio-economic levels receive. The lower S.E.S. students have lower levels of achievement; and, a higher potential of becoming school dropouts. Sewell and Shah (1967) found a strong relationship existing between the S.E.S. of the student, and his plans to successively complete college. Their study was a seven year longitudinal one, and comprised of a group of high school seniors.

A milestone research endeavor, in terms of its potential impact, and controversy, on contemporary educational and sociological theory and practice, is Equality of Educational Opportunity (Coleman, et al, 1966). Also known as the Coleman Report, this study looked at the relationship of S.E.S. and academic achievement with great

penetration. The report was designed to determine the extent of racial and ethnic discrimination in the schools by conducting a survey which would assess the degree of inequality of educational opportunity across the nation. The report addressed itself to identifying the determinants of different educational outcomes, and, to determine the relative importance of the relevant influences.

In assessing the factors related to achievement, Coleman posits that family background consistently accounts for far more variation in school achievement than do variation in school characteristics. The school characteristics, most significant in terms of amount of variance, were students' peers, teacher characteristics, and per-pupil expenditures, books, and facilities, respectively.

Coleman also found, that schools were segregated, for the most part, with regard to racial composition; especially, at the elementary level. This also indicated, that schools were segregated, for the most part, by social class. Thus, socio-economic factors bear a strong relationship to academic achievement in that, the differences in family background, and general societal influences also have strong effects. Therefore, indicating that, the quality of education among disadvantaged black and white students would improve, through association with pupils of higher socio-economic background.

Coleman is postulating that the achievement of minority pupils depends more on the school they attend, than does the achievement of minority pupils. Meaning, that minority pupils who, first, enter integrated schools in the early grades, record consistently higher scores, than do the groups of those who have been in segregated

schools. This could help to explain why the variance in the differences of schools upon achievement was low; and, would highlight Coleman's major conclusion which has caused, somewhat, controversial reactions from educational researchers and school personnel. In relating the effects of schools upon achievement, Coleman's conclusion, based on his findings, was that:

. . . schools bring little influence to bare on a child's achievement that is independent of his background and general social context; . . . this very lack of an independent effect means that the inequalities imposed on children by their home, neighborhood, and peer environment are carried along to become the inequalities with which they confront adult life at the end of school . . . equality of educational opportunity through the schools must imply a strong effect of schools that is independent of the child's immediate social environment, and that strong independent effect is not present in American schools (p. 325).

McDill, Meyers, and Rigsby (1967) indicated the effect(s) that school climate may have on the achievement of students, in their study of twenty highschools. The non-random sample included 20,345 students and 1,029 teachers. Their findings indicated that all of the climate aspects, save one, were more closely related to achievement than to S.E.S.; and, thus, S.E.S. was not an effective signifier of climate, especially, for those schools which occupy the middle positions in the S.E.S. range. When the socio-economic composition and intelligence are held constant, the climate effect still claims explicative potency.

A re-analysis of some of the Coleman data, by Mayeske (1967), provides some useful new insights on what it is about schools that makes a difference in pupils. Mayeske used the school as the unit of analysis, rather than the individual student; and, his regression

analyses, unlike Coleman, merged all the subsamples. Basically, his findings concurred with the Coleman Report. He concluded in his analysis that, the school coupled with the students' S.E.S. were more significant together than either means taken singly; the effect of the school upon the student could not be detached from the students' socio-economic environment; racial separation of personnel was a major factor in school achievement; the schools were able to exert more considerable effect upon the higher S.E.S. white or oriental students who lived with both parents; and, the schools successfully achieving on one instructional means tended to successfully achieve on others.

Wilson (1969) examined the effect of race/social class composition upon school achievement in eleven junior and senior high schools in a Northern community in California. His random sample was comprised of 5,545 students who were stratified by race, sex, school, and grade level. Some of his more significant findings, related to S.E.S. and achievement, were that, the social class composition of the school affects the academic achievement level of both white and black students in both integrated and segregated schools; the achievement level difference of students of the same social class is very little for either white or black students; and thus, the S.E.S. of school-peers, seemingly, is more significant than the S.E.S. of the student's neighborhood-peers who attend a different school.

Wilson's findings also illustrated that academic achievement in the higher grades is significantly affected by the climate of the school. He noted that sense of control, with regard to academic achievement, was affected by social class segregation; whereas, Coleman, et al



(1966) posited that this was a function of race. Race and social class in the United States are highly correlated, as previously mentioned. Thus, due to the economic realities in our society, Wilson's findings are quite salient. Is a school climate, that is contributive to achievement, a direct action of S.E.S., or can a positive climate be structured in any situation?

Jones, (1971) in a study of a low S.E.S. high school, indicates that such schools can and do have a positive school climate. Data collection was as comprehensive as feasibly possible. Although the factors, which may have explained the success of this high school, are not reported in the study, the fact that his findings indicated that the emphathetic and supportive role of the teacher were partly responsible for the success of many of the school's students, was high significant.

#### School Climate and Intelligence

The nature-nurture controversy of genetic superiority/inferiority is nothing new. Most of the literature on this realm of study has been forwarded by Jensen (1969). He posits that the student's genetic potential is the most important predictor of intelligence; and, that any change in the environment can only bring the student's academic achievement up to the student's genetic potential. Jensen indicated the role of the environment, in terms of intelligence development taking place in the interaction with the environment. Researchers who refute Jensen's findings, relating to environment

and I.Q., posit that the environment can have a strong effect on measured intelligence (Gage, 1972; Scarr-Salapatek, 1971; Green, 1968; Deutsch and Brown, 1964). Even though potent findings exist on each side of the nature-nurture controversy; it is still just that, a controversial realm of study with vast implications for the minority and/or poor student population.

In summarizing this section, Jerome Kagan (1958:284-289) posits some pregnant points which is still relevant today, in light of the educational situation for certain sectors of the society; and, the controversy surrounding, what this writer calls, "Jensenitis."

1. Changes in I.Q. during childhood are correlated with certain personality inclinations, as inferred from projective test data.
2. Results indicate that high motivation to achieve may motivate the acquisition of intellectual skills and knowledge which, in turn, facilitate increases in tested I.Q.
3. Needs for achievement should, similarly, only motivate attempts to improvement of intellectual abilities in a social milieu where praise, recognition, and superior status are awarded for such accomplishment. The type of relation between parent and child, however, may be an important factor in this process.

Several reports suggest that changes in environmental conditions can depress or raise I.Q. levels; and, it is sometimes implied that these changes may be explained by recourse to personality variables . . . . The exact relationship between genetic variables and I.Q. change has yet to be determined. The phenomenon of I.Q. increase during the school years is admittedly complex and it is not implied that the child's motives are the major factor. However, it is suggested that personality needs may influence this process. Perhaps the most accurate generalization is that for middle-class children, with average or above I.Q. levels, "strong achievement needs may facilitate I.Q. gains by motivating the child to master intellectual skills" (pp. 284, 288-289).

If one concurs with Jersild (1958), that the self is the nucleus of personality, then the above has underlying implications for, especially, the population who are, either, not motivated or whose motivation is not given supportive reinforcement. The majority of this population consists of children within the lower S.E.S. level who are more accustomed to ability grouping and "pygmalion in the classroom" processes. To observe how these practices are operational in the classroom, the next section on school climate and self-concept will attempt to forward literature encompassing the social-psychological variables operationalized in this study. This is done as there is no direct literature pertinent to this following section.

#### School Climate and Self-Concept, and S.C.A.A. School Climate and Self-Concept

The school plays a significant role in influencing the self-concept of the student. "Next to the home, the school is the single most important force in shaping the child's self-concept" (Purkey, 1970:40). The previous section indicated the cruciality of determining what relationship exists between the self-concept and the school social environment (Cooper, 1972; Morse, 1964, Brookover, et al, 1965; Yamamoto, et al, 1969). All of those studies demonstrated how the school could instill negative feelings in the students.

Traditionally the child is expected to adjust to the school, rather than the school adjust to the child. To insure this process, the school is prepared to dispense rewards and punishments, successes and failures, on a massive scale. The child is expected to learn to live in a new environment and to compete for the rewards of obedience and scholarship. Schools stand ready with grades and grade-levels, report cards, and honor rolls, continuous evaluation and fierce competition, detention centers and even expulsion, plus a host of other techniques to mold the child to meet the school's expectations (Purkey, 1970:40).

Jackson (1968) illustrates a sensitive and disclosing account of life in the classroom. Deutsch (1963) argues that it is often in the school that students evolve negative attitudes about their abilities to learn. Research in another section of this review, has also indicated the effect that ability grouping has on the child's self-concept (e.g. Eash, 1961). The effect that the school climate has on the child's perceptions of his abilities indicate that, the implications this relationship has cannot be overlooked. Strategies must be initiated whereby the school setting is viewed as a meaningful and positive experience for all of its students.

Because of the sparse nature of the literature in this vein, practically nil, the format of this section will be to delineate, as much literature as possible, on the social-psychological variables, comprising school climate; and, relate those respective relationships to the self-concept. Because there is no literature illustrating the relationship between S.C.A.A. and school climate, any resultant findings will be postulated to the S.C.A.A.

#### School Climate and S.C.A.A.

There are nine social-psychological variables which comprise, and operationally measure, school climate. However, as delineated earlier, the conceptual model elucidating the relationship among the nine variables, indicates that some of the constructs are interrelated (1) perceived expectations and evaluations within the social system, would include the four variables delineating the relationship between parents, teachers, peers, and the principal, (2) the academic social system or the academic norms within the social system, would

include the three variables NORMS, teacher's and student's press for competition in its delineation of the above relationship. The social-psychological system or the personality/behavioral perceptions within the social system includes the two variables sense of control and the importance of student self-identity. Although S.C.A.A. is the dependent variable in this research, it would be classified under personality/behavioral perceptions within the social system (refer to the conceptual model of school climate in Chapter I, Page 20).

#### Perceived Expectations and Evaluations within the School Social System

As previously explicated, the perceived expectations and evaluations of the "significant" persons in a student's life strongly influence the behavior of the student. Parents, teachers, and peers have been identified as the "significant other" persons who are very influential in determining the behavior of the student. With regard to the principal's expectations and evaluations, this writer postulates, that the principal, as a "significant other" of the teacher, indirectly influences the behavior of the student, with regard to academic achievement, through their directly influencing the behavior of the teacher.

The above functions in accordance with the self-other relationship (symbolic-interaction) philosophy, in that, the expectations and evaluations that they (e.g. student-teacher, teacher-principal) perceive the "significant other" persons in their academic life have of them. Based upon those perceived expectations and evaluations, formulation of the beliefs, values, and attitudes about themselves (i.e. student, teacher) serve to direct their behavior. The modus operandi of the principal's role may be perceived differently, by the

student, in different type of school settings. For example, in may predominately black (and/or poor) and low achieving schools, the principal is perceived as being a "disciplinarian" rather than a supportive influence with regard to academic achievement. This line of logic will be expounded upon later in discussion of that school climate variable.

#### Academic Normative Social System within the School

The academic norms within the social system (the school) as previously stated, set the tone of the school social environment. "In other words, within the school there are formal and informal pressures . . . done to (the student) in some particular setting" (Johnson, 1970: 246,232).

The climate of an organization such as a school is, the result of a cluster of variables which, taken together, result in a certain atmosphere or environmental press within the school . . . . Organizational climates do have marked consequences on the behavior of the members (Johnson, 1970: 240, 238).

Johnson (1970) has succinctly explicated the academic social system; and therefore, elucidation will be derived from his review on the "school and classroom climate" (Chapter XIII). He posits that all organizations have a certain type of social environment (climate). Thus, in addition to "the personality characteristics, the abilities, motives, values and career plans of the entering students, and the norms and values of the informal organization" (reference group of peer sub-culture), there are "the norms, values, and role requirements, and other characteristics of the formal organization;" which, upon interaction of the two, serves to "influence the students' behavior"

(p. 248). Meaning, that "the personality characteristics of the incoming students interact with the formal and informal aspects of the organization (the school) to influence the students' behavior" (p. 248).

In his discussion on the factors which affect the academic norms within the school, it was stressed that homogeneity/heterogeneity of the student populace, which would affect the overall social environment on climate of the school, would be most influential in setting the tone of the academic norms within the schools. He contends:

. . . when one cannot control the mix of student-input characteristics, socialization into the formal school norms and values can be accomplished through the use of in group cooperation and outgroup competition to motivate students. Because of differences in social background and personality traits, individuals will accept some school values to a greater extent than others. It is the norms and values of the subcultures the individual belongs to within the organization, however, which will most markedly affect his behavior. In addition, the pressures a student is exposed to vary with the position he occupies in the school. (Therefore,) in order to increase the influence of the (overall) climate of a school on the students, one would (have to) ensure that the organizational demands and pressures are related, coordinated, and reinforcing each other (p. 247).

#### Personality/Behavioral Perceptions Within the Social System (School)

This constitutes the personality characteristics, "the abilities, motives, values, and career plans of the entering students," as Johnson (1970) defines it. As previously postulated, each school has its own climate, which in turn, "is made up of a whole spectrum of more-or-less recognizable subcultures affecting (a) students' behavior and performance;" and, it "is a combination of all the organizational factors and of all the personality characteristics of the members of (the school) the organization" (p. 231). Murray's (1938) personality theory includes the classification of both the environmental pressures

and the characteristic ways in which the student strives to structure the environment for himself. "Press" referred to the external pressures; whereas, "needs" referred to their internal counterparts. Both serve the dual function in classifying the self-directing personality trends or "needs," and the externally controlling situational pressures or "press."

In essence, "both (the) needs and (the) press are inferred from (the) characteristics and (the) events, the former from things that the individual (student) typically does and the latter from things that are typically done to him in some particular setting" (p. 232). Pace and Stern (1958) applied Murray's personality theory to the social environment (climate) of the schools; and, they have conceptualized that the overall school climate consists "of the personality characteristics and values (needs) of its members and the organizational pressures on the students, administration, and faculty (press)" (Johnson, 1970:232).

Therefore, the personality characteristics, as operationalized in the research, constitutes the social-psychological variables of (1) importance of student self-identity or role, and (2) sense of control; whereas, the social-psychological variables delineating the academic normative system, constitute the organizational characteristics of the school. S.C.A.A., as perceived by this writer, would also constitute one of the personality characteristics. However, it is being utilized as the dependent variable in this research; and thus, not included in this grouping.

In this present research, what effect(s) do these perceived expectations and evaluations have on the S.C.A.A. with regard to their



role in the school social environment? Because of the possible significance of each social-psychological variable, comprising school climate, the research reviewed will be delineated accordingly, regardless of grouping. The grouping was done to merely illustrate the relationship(s) among the school climate variables (refer to Chapter I, page 20).

### Research on School Climate Variables

#### Reported Student Press for Competition or Individual Performance and Reported Teacher Press for Competition or Individual Performance

The following reviews in this area are extrapolated from Johnson's (1970) excellent review in this area. Deutsch (1962) contends that the learning environment of a cooperative nature coupled with the students' goals leads to a higher attainment of achievement by these students when the above serves to reinforce each other. Deutsch (1949), in his experimental study of the effects of cooperation and competition upon college students, and Haines and McKeachie (1967), in their replicative study of Deutsch's research, were unable to demonstrate any significant effect(s) that cooperation would have on the learning environment of the students. However, they were able to contend that cooperation, over competition, produced an atmosphere which was much more friendlier, satisfying, respectful of others, and secure; and, less anxious, and less self-oriented.

Johnson (1970) postulates that there may have been confounding effects in the above two studies which produced the somewhat ambiguous findings. He supports this with the studies that indicated conflicting

results concerning cooperation and academic achievement (Gurnee, 1968; Julian and Perry, 1967). Gurnee's findings indicated that the learning situation was significantly affected and was greater under cooperative conditions. Julian and Perry indicated that students in individual and intergroup competition, than in individual and intergroup cooperation, were more highly motivated and productive to a certain degree in the former situation than in the latter one. However, because the length of the study was only two hours, seemingly, their results should not be generalized to the cooperative group members who knew one another, in order to be accurate and fair.

Coleman (1961) postulates that school achievement could be applied to the model used in the intermural competition involved in sports. Meaning, that intergroup competition rather than interpersonal competition, could produce positive results/effects in academic achievement for the students.

The above studies illustrate the importance of further exploration into the realm of cooperative/competitive intergroup/interpersonal effects on the level of academic achievement attained. Indications are that the modus operandi of such strategy could be used to improve the achievement level of schools.

#### Reported Academic Norms (NORMS)

As previously explicated, NORMS delineate the consensus of behavior expected, by the students, within this social system, and the controlling behavioral means.

Norms have the general function of tying people into the social system so that they remain within the system and carry out their role assignments. Thus, within the classroom, the roles of teacher and student are integrated by the school norms that make explicit the forms of behavior appropriate for them . . . . Norms develop around and derive their support from the dominant ongoing functions of the social system; they give cognitive support and structure to the behavior in which system members are engaged (Johnson, 1970: 212).

With regard to research endeavors, the significant and powerful effect that group norms have on behavior have been demonstrated (Sherif, 1936; Festinger, 1950; Asch, 1952). McDill, Meyers, and Rigsby (1967) demonstrated that the norms factor ("academic emulation") from their study of school climate, constituting six factors, accounted for twice the explanatory power of S.E.S. when related to academic achievement (refer to McDill, Meyers, and Rigsby, 1972, also). Their factors constituting school climate also had explanatory power even when S.E.S. and intelligence were controlled.

Coleman (1961) demonstrated how the negative norms among the peer group could facilitate to mitigate against the achievement of students if their peer group did not see the merit of academic success. Wilson (1969) also contends that the norms of the school could produce a social environment (climate) which would encourage delinquent behavior in the schools that are segregated due to S.E.S. Therefore, NORMS, are imperative in either mitigating or enhancing academic achievement in terms of their modus operandi within the school climate. This appears to be a crucial area, whereby, strategies could be formulated to depict the latter with regard to academic achievement.

The above three social-psychological variables, delineated the grouping of the academic social system within the school social

system. The following two social-psychological variables constitute the personality/behavioral perceptions within the school social system.

#### Importance of the Student Self-Identity or Role (I.S.S.I.)

This variable has not been subject to extensive investigation. Basically, it is the extent or measure of commitment that a student placed in his role, of the student, in relation to the maintenance of his global or overall self-concept. Originally developed by Brookover, et al (1965), with regard to the longitudinal study of Self-Concept of Ability and Academic Achievement II, this construct was modified by Gigliotti (1969, 1972) during the preliminary phases of the parent research study, from hence this study is derived. Thus, in this present study, the construct is delineated in its modified form. Seemingly, based upon the influence of the self-concept by the expectations and evaluations of the students' "significant others," this construct may be positively associated with the level of academic achievement attained.

#### Sense of Control (SEN-CON)

Sense of Control has been, and remains, the focus of many research endeavors since Coleman, et al (1966) utilized this construct in attempting to explicate the low level of academic achievement attained by black and/or poor students. Their definition of the construct is the same as delimited in this research (refer to Chapter I, p. 18). The Coleman Report not only demonstrated that blacks had a lower sense of control than whites; but, that sense of control was an extremely significant predictor of academic achievement, especially for the minority students.



The construct of "sense of control" is partly derived from the research endeavors of Battle and Rotter (1963); and whose findings were supported by Haggstrom (1964) and Clark (1965). They all contended, that the students in the lower S.E.S. level did not perceive that they were capable of determining and controlling their own destiny, that they were powerless and it was futile to even attempt to do so.

The orientation of sense of control is also derived from Rotter's (1966) "locus of control" construct. He formulated the expectancy variable that describes the perceptions of personal control that one has over the reinforcement that follow his behavior. The "internal" person perceives that he is in control of his fate and that efforts and rewards will be correlated (high sense of control). The "external" person perceives that powerful others or "the system" determines how well he can do; and, that rewards are not correlated with efforts (low sense of control).

Wilson (1969) indicated that the middle class students had a higher sense of control and subsequent higher achievement than did the students who were in the lower S.E.S. level. Heath (1970) posited that the white junior high school students had a higher sense of control over their environment than did the black junior high school students. These findings have implications associated with those of Coleman, et al (1966). The data from the Coleman Report also indicated that as the proportion of white students increased in the school, the sense of control decreased for the black students in those schools. Seemingly, strategies must be formulated to increase sense of control which would not be dependent upon composition of the student body.

Kleinfeld (1971) contends that the sense of control findings in the Coleman Report are irrelevant, in terms of their being utilized in the debate over community control of the schools. She indicates that the attitudes more positively related to the academic achievement of the black students were, seemingly, those of S.C.A.A. and, not "sense of control" beliefs. She indicates that Coleman, et al, found this relationship to be strongest among black ninth grade students which, truly, may "depress" the school effort and achievement of those students.

However, she contends that in her replicative study involving white, eleventh and twelfth grade students (Kleinfeld, 1970) those findings support her present ones in that it would be a "wasted effort" to explore this construct further; it "appears to be a blind alley" (Kleinfeld, 1971:297). Also, that research effort should be directed toward exploring Katz's (1969) findings that "black students hold unrealistically low estimates of their ability and also toward experiments designed to increase academic self-concept in black students and determine effects on achievement."

Contrast to the research which supports that S.C.A.A. and sense of control are one and the same, this study will, hopefully, demonstrate that they are indeed, two entirely different constructs, which measures two different aspects of the students' behavior. In adage context, S.C.A.A. determines his school (academic) success; whereas, sense of control determines, whether or not, this success is worth the effort, since he will not succeed in his "life" success.

The above two social-psychological variables delineated, constitute the grouping of personality/behavioral perceptions within

the school social system. The next four variables constitute the grouping of perceived expectations and evaluations within the school social system; and, consists of those perceived expectations and evaluations of the principal, teachers, peers, and parents.

Keep in mind that parents, teachers, and peers constitute the "significant others" as delineated in the reviewed literature. Also, that although parents are not physically present in the school setting, they are regarded as a significant other of the student, as delimited in this research, based upon their status of "significant other" of the student. In addition, it is perceived that the perceived expectations and evaluations of the principal, as delimited in this research, seemingly, indirectly influences the student's S.C.A.A. through his direct influence or "significant other" relationship with the teacher.

Because a great deal of attention has already been focused upon these particular variables, save the principal, this section will only illuminate, in depth, the applicable literature not already focused upon. References, when deemed significant, will be cited. However, for the purpose of expediency and brevity, this format will be utilized.

#### Perceived Peer Expectations and Evaluations (P.F.E.E.)

The crucial and significant role of the peer group in the socialization process, as well as their role in the educational process has been explicated by many, as previously indicated elsewhere in this study. Parsons (1959) indicated how peer groups functioned as a source on non-adult approval and acceptance. Other researchers have



pointed out the values and norms that peer groups adopt, based upon such characteristics as socio-economic status, educational background, and aspirational level of the student body majority in their school setting; and, how these peer group norms and values functioned within the school climate (Coleman, 1961, 1965; Coleman, et al, 1966; Wilson, 1969; Johnson, 1970).

Seashore (1954) indicated, from his study involving an industrial situation, that the influence of peer pressure depends upon how cohesive the peer group structure is, with reference to its effect(s) on the levels of production. Schmuck (1966) indicated, that irregardless of the structure of the peer groups (i.e. diffuse or hierarchical), it had significant bearing upon the student's perceptions with regard to group acceptance, and motivation, or lack of, to academic achievement. Therefore, it seems imperative that the peer group structure may be one of the most expedient "tool" to utilize with regard to formulating strategies which would enhance, rather than mitigate, academic achievement. Illustration has depicted how the peer group structure, operationally does, either one or the other; and, in either case, quite well. Therefore, it appears logical that any modus operandi, with regard to facilitating "functional" and effective school systems rather than "dysfunctional" and non-effective school systems, should seriously attempt indepth exploration in this vein.

#### Perceived Teacher Expectations and Evaluations

Much of the research surrounding this realm of study have been catapulted by the research done by Rosenthal and Jacobson (1968). Their study illustrated how the self-fulfilling prophecy operationally

functioned within the school social environment (school climate). Utilizing an experimental and control group approach, a random sample of elementary school students were chosen to participate. Prior to the selection, an intelligence test was given to all of the students, and the teachers were informed as to which of the students would be "spurters" during the school year. This was done randomly, and not on the basis of the higher I.Q. scores of the students. At the end of the school year, another intelligence test was given which served to indicate the role of teacher behavior with regard to the self-fulfilling prophecy philosophy. The average I.Q. performance gained was 12.2 points for the experimental group (spurter designates) and 8.5 points in I.Q. gain for the control group (non-spurter designates).

Rist (1970) added further credence to this line of research in his longitudinal participant observation study. He postulates that the teachers formulate a stratification system, based upon the expectations and evaluations that they have for their students; and, that these expectations and evaluations are derived from/related to the behavioral and attitudinal characteristics of the students, as they relate to their socio-economic background.

As previously indicated, the Rosenthal and Jacobson study has been under continuing controversy. Finn (1972:387-410) reviews the literature relevant to this realm which indicates that the above study is incorrect and inaccurate (Snow, 1969; Elashoff and Snow, 1971; Thorndike, 1968), that, through replication, it was not significantly supported (Jose and Cody, 1971; Fleming and Anttonen, 1971; Claiborn, 1969; Rubovits and Maehr, 1971), and through comparative analysis, differential teacher behavior was "real" with regard to the students who

were perceived as being either high achieving or low achieving (Brophy and Good, 1970; Silberman, 1969; Rothbart, Dalfen, and Barrett, 1971). In Rosenthal's (1971) Pygmalion Reaffirmed, he refutes the Elashoff and Snow (1970) critique of Pygmalion in the Classroom, with regard to the effects of favorable teacher expectations on pupil achievement.

Finn (1972) poses the question that the above literature has asked with regard to teacher expectations--"does the expectancy hypothesis deserve further consideration?" (p. 388). The following points delimit some of his salient concerns with regard to the above:

1. The lack of significant differences for the higher grades of the Pygmalion study, and of any differences in the majority of replication studies does not necessarily refute the functioning of expectations. They may be interpreted instead, as questioning the strength of the experimental treatment, i.e. whether in fact teachers' expectations were functionally altered (p. 389).
2. . . . the expectations which are formed by teachers, pupils, and others over time, and which are continually reinforced and/or modified through daily events in class and elsewhere, may play a more formidable role in shaping the individual's behavior (p. 390).
3. It may be impossible to assess a pupil's actual capability given the effects of environmental expectations upon him over years of schooling (p. 397).
4. Little evidence is available on the directions in which such expectations are likely to operate to systematically help or hinder particular pupils (p. 398).
5. The original studies of the issue are conducted from a perspective which tends to obscure both the nature and magnitude of effects in operation in the usual class setting. Replication studies following Pygmalion may also suffer (p. 399).

He contends that it is now essential to depict the components of the students' educational environment which are the most effective. He postulates, that the characteristics which formulate the expectations with regard to the students' academic performance, also include those



characteristics other than concerned with the students' "realized" performance; and, are "confined to specific setting, and perhaps to specific grade levels" (p. 407).

The comparison of locales in which expectations appear to be operating differently is particularly significant. For to set expectations which serve to lower achievement for individuals, or for the class, is to deprive those individuals of equality of psychological opportunity. Such a situation must be changed, whether through bussing and integration, through teacher training, or through the provision of educational alternatives quite different from the present ones (p. 407).

Whitt's (1966) study, of the attitudes of teachers in relation to the student's self-concept and attitudes toward school, demonstrated that the teachers perceived the self-concept of the student in other terms, particularly in terms of good and bad behavior as equated with a high and low self-concept, respectively. Also, he demonstrated that the teacher's estimate of the student's self-concept was related to the student's achievement. Meaning, that the significant factor in the way a teacher perceives the individual student's self-concept is the student's academic achievement (i.e. low achievement low self-concept). Therefore, it seems imperative that Finn's (1972) concerns be seriously explored.

### Perceived Principal Expectations and Evaluations

This writer was unable to find any research pertaining to the above social-psychological variable, comprised in school climate. Research endeavors did exist pertaining to principal--teacher behavior. However, that research will not be explicated here. Reference is made, however, to suggest that research in this area might be significant in terms of how students do perceive the role of the principal. What

relationship does it have on school performance? Is this relationship different in different types of school settings; especially, in those of different racial and socio-economic composition? Is the principal a "real" figure in the elementary schools, other than for "disciplinary" purposes? Further exploration might provide insight with regard to how and what determines the atmosphere of the school climate, being that the principal is the person in command of his school "building."

#### Perceived Parent Expectations and Evaluations

Numerous researchers have explored the role of the parents with regard to the achievement attained by their children (Coleman, 1961, Coleman, et al, 1966, Brookover, et al, 1962, 1965, 1967, Erickson, 1965; Thomas, 1969). All of this research has been reviewed elsewhere and for the sake of brevity will not be delineated again, here (refer to Chapter III, section I, particularly). However, it does appear that the role of parents and peers in their influence in the educational process is in need for further and more extensive research; especially, with regard to black and/or poor students to determine which of the two is more important to the academic achievement attained by these students, as well as, all students.

#### Summary

This review of the literature is delineated into four sections due to the vast abundance of literature on the self-concept. The first section explicated the literature on the self-concept and academic achievement. The second section described the literature pertaining to the specific self-concept--self-concept of academic ability (S.C.A.A.) and its relationship to academic achievement. The third section examined

school climate, as delimited in this research, and its relationship to academic achievement. The paucity of the research in this area is noted. The fourth section elucidated the relationship of S.C.A.A. to academic achievement. Because the literature was practically non-existent in this sphere, due to the originality of this research, its format was explicated in the realm of the research pertaining to the social-psychological variables operationalized in this study.

Thus, in summation, the implications derived from this review of the research, seemingly, challenges previously held assumptions, with regard to academic success or failure; and, stresses re-examination of the assumptions which formulate the criteria used for measuring academic success or failure (i.e. generally,; but, specifically as operationalized in this study) to determine its validity in further environment studies.

1. Academic achievement is not determined by intelligence alone. It is also determined by a wide variety of social-psychological factors, of which self-attitudes (i.e. self-concept) are one.
2. A student carries with him certain attitudes about himself, and his abilities, which play a primary role in how he performs in school.
3. Indications are that academic success or failure is significantly influenced by the ways in which student's view themselves (self-concept).
4. Academic achievement can be raised by changing a student's self-concept.
5. Enhancing the self-concept is a vital influence in improving academic performance. Meaning, those who possess positive images of self and "others," tend to develop higher levels of school success.

6. A student's perceptions of "significant others" (i.e. peers, teachers, parents) indirectly influences his academic achievement through their influencing the self-concept.
7. Most of the ways in which a student's self-concept concerning his ability to achieve may be changed in a school setting, and involves modifying the images and expectations that "significant others" --parents, teachers, peers--have of the student's abilities.
8. Realization of the above depends upon the exact conditions under which each relationship will hold.
9. Each school does, indeed, have a social (social-psychological) climate, which in turn, is made up of a whole spectrum of more-or-less recognizable subcultures (e.g. academic and social) affecting student behavior and performance.
10. Since the school climate consists of a cluster of variables, including such factors as school norms and values, peer group norms and values, and the like, research on the effects that the above have upon behavior, is applicable to the effect of school climate on behavior" (Johnson, 1970:238); and thus, academic achievement.
11. The basic nature of the norms, values, and goals held by educational institutions affect the nature of school climate; and, subsequently, the behavior and attitudes of students and staff.
12. School climate is a social-psychological phenomenon.
13. Different environments affects children in different ways.
14. School climate, irregardless of ethnic or social class backgrounds, can provide an atmosphere that facilitates academic achievement.
15. School climate is most crucial at the elementary school level because of the effects, and implications, it has on the learner throughout his school career.
16. Since self-concept is related to academic achievement, and there is a relationship between school climate and academic achievement, the self-concept is, thusly, related to school climate.
17. The specific self-concept--self-concept of academic ability (S.C.A.A.) is a more relevant variable in school performance than a global or general self-concept. S.C.A.A. represents a more accurate assessment of the student's perceptions of his ability to achieve; and, is therefore, a meaningful factor in measuring achievement for all students.



18. Black students report a high or higher self-concept, and S.C.A.A., than white students.
19. Black schools are usually classified as being low S.E.S. with concomitant achievement level.

The above nineteen points, derived from the research explicated here, presents a valid case for seriously challenging the primary rationale for justifying why the minority groups have a low rate of academic success. That rationale's systemic base lies in the fact that minority groups have low or negative self-concepts; and hence, low achievement because of their socio-economic circumstances.

Therefore, in conclusion, it is perceived that the above social-psychological variables, comprising school climate, in this research, although not inclusive of the school climate factors operating in the educational process of the student, do indeed, represent a beginning of such a systematic inventory of relevant variables functioning in this process. Determining the significant influence that each variable has in accounting for the variance in S.C.A.A. is the objective of this research.

## CHAPTER IV

### THE RESEARCH METHODOLOGY

This research is designed to determine the relationship between the student's perceptions of his ability to achieve academically, and certain social-psychological variables, used as indices to measure school climate; and, to determine how this relationship functions in differential school settings. Specifically, the relationship between S.C.A.A. and the individual student's perceptions of these school climate variables of fourth, fifth, and sixth grade elementary school children, in schools of similar racial and social-economic composition, and varying achievement levels.

This chapter will describe the research site, design of the study, population and sample, instrumentation, and data collection procedures. In addition, the major variables and other constructs will be operationally defined, where applicable, along with the reliability of these variables given. Also, the specific hypotheses to be tested will be included; and, the procedures used to analyze the data.

#### Research Site

The objective of this research project was to find a locale, within the United States, whereby schools could be matched, as close as the population would allow, on both the racial and socio-economic

composition of the student body; but, differing on the level of academic achievement attained. With great assistance and cooperation from the State of Michigan, Department of Education, the site of this research project was finally determined. They had begun a state-wide assessment program of their elementary schools in 1969-1970. Their battery of tests, dispensed in the fourth grade, enabled us to control for race, S.E.S., and achievement level with the data they attained. Therefore, the design of this study was founded, in part, upon the state assessment criteria (Refer to Chapter I for actual design utilized in the present study).

#### Design of the Study

		Black	White
High Achievement	High S.E.S.		
	Low S.E.S.		
Low Achievement	High S.E.S.		
	Low S.E.S.		

Figure 5.--Design for Sample Selection Criteria

Specifically, achievement level, and socio-economic status were determined by state assessment test index scores; and, the racial composition of each school (i.e. percentage of black and white students) was also information obtained from the state assessment program. With regard to achievement, the mean achievement level was defined as fifty. Thus, schools scoring fifty and above were considered achieving average or above, and defined as average achieving and high achieving, respectively.

Those schools scoring below the mean of fifty were considered below average and defined as low-achieving. This was true with the exception of two black schools (School 13 and 17), which were designated high achieving with an index score of 49.6, and 47.2, respectively.

With regard to S.E.S., the state assessment was utilized for the initial matching on socio-economic status (See Appendix B). The Duncan Scale was used as a check; and, a high correlation between the two measures was found ( $r = .74$ ). Refer to Appendix C for the comparison between the two measures. It should be noted here that, in light of the contention encompassing the measurement of socio-economic status, the state assessment program's index of S.E.S. was believed to have excelled all other indices that presently measures school S.E.S. It measured not only expenditure patterns of individuals; but, also educational level attained by each parent, educational aspirations of the students, extent of travel done by the family, and home solidarity. However, the means gotten should still be mentioned as approximations.

The racial composition of each school, included with the other state assessment data, was the information obtained from the school records; and, based upon the composition of the student body. Predominately black or predominately white schools were designated by a seventy percent, or better, student body majority for either race (See Table 1).

#### Population and Sample

The population constituted all of the elementary schools in the State of Michigan. The sample from this population consisted of deliberate matched pairs of schools, with respect to, racial composition,

achievement level, and S.E.S. level. Indices for high to low socio-economic status were difficult to determine when seeking to match blacks and whites. Therefore, schools were matched as closely as the population would allow. Such action was undertaken with full knowledge of a Type I error. Meaning, rejection of the null hypothesis(es) when it was, indeed, true, or acceptance of a variable, as a significant predictor of S.C.A.A., when it was not. This was opposed to a type II error, which would have rejected variables as a non-significant predictor of S.C.A.A. when it was. Thus, eliminating any variables from consideration in future research endeavors).

The mean socio-economic status level was defined as forty-nine. Thus, schools scoring forty-nine and above were defined as high S.E.S.; and, schools scoring below the mean of forty-nine were defined as low S.E.S. (See Figure 1, Chapter I). Taking into account the mitigating circumstances, and resultant scarcity of high achieving and/or high S.E.S. black schools, the sample selection criteria of these schools were not entirely similar with that of white schools. The sample utilized, however, was to interpret, broadly, similarity; taking into account these differences. Table 1 lists the characteristics of the schools selected for the study. Figure 6, represents the design of the selected sample schools.

Increasing problems arose when achievement had to be linked to S.E.S. For example, it was quite easy to locate high S.E.S. high achieving white schools; but, quite difficult to find black ones. In fact, only two such schools (11 and 15) met this criteria in the State. However, we were not allowed to collect the data in one of the schools (11) because of community dissension concerning our entry. There was also difficulty in

TABLE 1.--Characteristics of Schools Selected for the Study--Race, Achievement Level, S.E.S. Level, and Sample "N" of Students.

School	Race Predominant-% <sup>a</sup>	Achievement Level	S.E.S. Level	N <sup>c</sup>	
WHITE	01	85	High - 59.6	High - 55.1	140
	02	100	Low - 48.1	High - 55.24	173
	03	100	High - 54.4	High - 58.2	244
	04	100	Low - 47.8	High - 54.9	202
	05	100	High - 58.0	High - 50.1	88
	06	97.7	Low - 43.6	High - 49.4	67
	07	100	High - 56.7	Low - 43.2	104
	08	100	Low - 44.6	Low - 44.9	88
	09	97.7	High - 55.1	Low - 46.65	151
	10	95.1	Low - 43.7	Low - 46.8	81
11 <sup>b</sup>	95.5	High - 51.8	High - 50.0		
BLACK	12	95.5	Low - 37.3	High - 49.2	149
	13	92	High - 47.2	Low - 43.8	116
	14	86.2	Low - 38.0	Low - 46.7	105
	15	70	High - 55.1	High - 61.3	276
	16	99	Low - 47.2	High - 52.9	406
	17	90.5	High - 49.6	Low - 47.0	105
	18	94.7	Low - 39.6	Low - 46.7	384

<sup>a</sup>Predominantly = 70% or greater

<sup>b</sup>Selected as part of original sample; but, community factors prevented data collection.

<sup>c</sup>This is the N of students who were originally sampled. However, at various stages of this analysis, the N will change due to design restrictions and the presence of missing data, which eliminated those questionnaires from use.

		Black	White
High Achievement	High S.E.S.	15	01, 03, 05
	Low S.E.S.	13, 17	07, 09
Low Achievement	High S.E.S.	12, 16	02, 04, 06
	Low S.E.S.	14, 18	08, 10

Figure 6.--Design of Selected Sample Schools<sup>a</sup>

<sup>a</sup>The numbers in the cells represent the school reference codes.

locating low S.E.S. low achieving white schools; but, quite easy to find black ones. Problems increased when trying to locate high S.E.S. low achieving white schools or low S.E.S. high achieving black schools. Despite all of these difficulties, however, the schools were all located and utilized, save for school 11.

Therefore, the sample, for this research, consisted of the children in the fourth, fifth, and sixth grades from a selected sample of seventeen (17) elementary schools throughout Michigan. The fifth grade children were the strata of population of greatest interest because of the State Assessment information; thus, all of the fifth grade children were utilized in the sample. Data were collected, and utilized in the sample from random sections of the fourth and sixth grade children. This not only increased the sample size; it also consisted of the student populace in the higher grades. These students would have the greatest familiarity with the school; thus, their perceptions of the normative school climate would be most representative of the actual school climate. Of the seventeen schools tested, ten (10) were predominately white, and

seven (7) were predominately black. As previously stated, and elucidated, this sample was non-randomly selected (see Delimitations of Study in Chapter I). The selected sample was based on the specific characteristics of S.E.S. level and achievement level differences within predominately black schools and predominately white schools.

### Instrumentation

The instrument utilized in this study is really part of a larger School Social Environment study under the direction of Wilbur B. Brookover. The questionnaire used was developed for students by Brookover and Richard Gigliotti. The instrument was pre-tested to check for needed revisions; and, a pilot test was administered at six elementary schools in a mid-western industrial city. This instrument can be found in Appendix A.

### Data Collection Procedures

Part of the data, for this research, utilizes the results from the state assessment test, administered during the 1969-1970 academic school year; the first one ever given. The student data were collected during the academic school year, 1970-1971; thus, making the fifth grade strata population of greatest interest, as previously stated. All of the data were obtained by the students reading and answering the questionnaire. There were very few occasions where the reading level was such, it necessitated that the instrument be read to the students. It was administered to them, in their respective classroom group, by one of four trained staff persons who visited each classroom, just once. On two occasions, this writer participated in the above.



Data were collected from all of the fourth, fifth, and sixth grade students who were physically present in the selective sample of classrooms in the schools, the day the questionnaire was administered. Enumeration of the sample is included in Table 1. Any absenteeism that day could be regarded as either random, and not significant; or possibly, significant. Significant, if the absentee student was chronic in nature; and, may have helped to establish the criteria which qualified the school as part of the study. Alas, because no file or listing were kept on the non-response rate of the students, this researcher can only suggest that this be done in future research endeavors, to determine the direction of this possible relationship. Generally, however, this procedure of collecting the data was found to be both effective and economical.

#### Major Variables Operationally Defined

The major variables utilized in this research, were literally defined in Chapter I. However, as pointed out in the Theory Chapter, it is significantly more crucial to operationally define one's constructs and/or instruments than it is to literally define them. Only then, can the comparison of similar research be assessed more accurately.

The ten (10) major variables are all operationalized in the instrument technique used in this study--the Student Questionnaire from the parent study of School Social Environment (Appendix A). The entire instrument was divided into subscales comprised of four-eight items. Before operationalizing each variable individually, however, a significant interjection must first be made. This research is examining the relationship between S.C.A.A. and School Climate Variables in differential types

of school settings; and, is using S.C.A.A. as the dependent variable. This is important in that, the construct school climate is comprised of, and measured by, nine of the ten major variables; the tenth variable being self-concept of academic ability (S.C.A.A.).

### School Climate

School climate is a social-psychological construct in this research. The variables which constitute, and will be used to measure school climate, are as follows:

1. Reported Student Press for Competition or Individual Performance (R.S.P.C.)
2. Reported Teacher Press for Competition or Individual Performance (R.T.P.C.)
3. Importance of the Student Self-Identity or Role (I.S.S.I.)
4. Reported Academic Norms of Schools (NORMS)
5. Sense of Control (SEN-CON)
6. Perceived Peer Expectations and Evaluations (P.F.E.E.)
7. Perceived Teacher Expectations and Evaluations (P.T.E.E.)
8. Perceived Principal Expectations and Evaluations (P.Prin.E.E.)
9. Perceived Parent Expectations and Evaluations (P.P.E.E.)

Thus, school climate is operationalized as depicted above. To determine how each of the nine variables are operationalized, the writer will now present them, individually.

### Reported Student Press for Competition or Individual Performance (R.S.P.C.)

R.S.P.C. is the scale comprised of items (Q--10-13) from the Student Questionnaire. The scale was designed to measure the exertion of pressure or influence, in the school, for competition and/or individual

performance, as it is perceived by the student. The four items are multiple choice with each item tallied from one to five. Operationally defined, it is the sum of the tallied responses to the R.S.P.C. scale (Appendix A). A high R.S.P.C. is denoted by a low tally on all the items except number twelve. To simplify analysis procedures, low tallies were all linearly changed to their high tally equivalents.

#### Reported Teacher Press for Competition or Individual Performance (R.T.P.C.)

The R.T.P.C. scale consists of four multiple-choice items (Q.--48, 49, 51, 54) which is tallied from one to five on each item. The scale was designed to measure the teachers' exertion of pressure or influence, for competition or individual performance in school, as it is perceived by the students. It is operationally defined as being, the sum total of tallied responses to the R.T.P.C. scale (Appendix A). A high R.T.P.C. is designated by a low tally on all items. For analysis purposes, the low tallies were converted into their high tally equivalents.

#### Importance of the Student Self-Identity or Role (I.S.S.I.)

The I.S.S.I. Scale consists of four multiple-choice items (Q.--15-18) with each item tallied from one to four. The scale was designed to measure the commitment or investment that a student places in his role, as a student, in relation to the maintenance of his global self-concept. Operationally, it is defined as the sum total of tallied responses to the I.S.S.I. scale (Appendix A ). A high I.S.S.I. is designated by a low tally. The tallies were linearly converted to their high score equivalents to facilitate and standardize the statistical analysis.

### Reported Academic Norms of Schools (NORMS)

The NORMS scale was designed to measure the overall urge or force, within the school, for academic performance, as perceived by the students. These perceptions, by the students, were based on their observation of their fellow students in the classroom, in the entire school, and of their teachers. The NORMS scale consisted of five multiple-choice items (Q.--19-23), with each item tallied from one to four, or five. Operationally, NORMS is the sum total of tallied responses to the NORMS scale (Appendix A). High NORMS is designated by a low tally on all of the items except question number twenty-one. Linearly converting the low tallies to their high tally equivalents, simplified the statistical analysis.

### Sense of Control (SEN-CON)

The SEN-CON scale consists of five multiple-choice items (Q.--26-30) which are tallied from one to four; and, are designed to measure, in the spirit of Coleman, et al (1966) and Rotter (1966), the students' perceptions of control over his environment. SEN-CON, defined operationally, is the sum total of tallied responses to the SEN-CON scale (Appendix A). A high SEN-CON is designated by a high tally on all of the items except question number twenty-eight. To facilitate analysis, however, item twenty-eight was transformed to its high tally equivalent.

The next four scales of perceived expectations and evaluations are designed to measure the expectations and evaluations a student perceives another person holds of him, with regard to his academic

ability, as compared with others in his school class. The scales will be operationally defined as follows:

	Peer (Best Friend)	
	Teacher	
Perceived	Principal	Expectations and Evaluations
	Parent	

#### Perceived Peer Expectations and Evaluations (P.F.E.E.)

The P.F.E.E. scale consists of seven multiple-choice items (Q.--41-47); and, each item tally differs from one to three, or four, or five. The P.F.E.E. is operationally defined as, the sum total of tallied responses to the P.F.E.E. scale (Appendix A). High P.F.E.E. is designated by a low tally on all of the items except question number forty-one. The low tallies were changed to their high tally equivalents to facilitate statistical analysis.

#### Perceived Teacher Expectations and Evaluations (P.T.E.E.)

The P.T.E.E. scale consists of seven multiple-choice items (Q.--57-63), with each item tally differing from one to three, or five. Operationally, P.T.E.E. is the sum total of tallied responses to the P.T.E.E. scale (Appendix A). High P.T.E.E. is designated by a low tally on all of the items except question number fifty-seven. The low tallies were converted to their high tally equivalents to facilitate statistical analysis.

### Perceived Principal Expectations and Evaluations (P. Prin. E.E.)

The P. Prin.E.E. scale consists of five multiple-choice items (Q.--71-75); each item tally is from one to five. The operational definition of P.Prin.E.E. is, the sum total of tallied responses to the P.Prin.E.E. scale (Appendix A). High P.Prin.E.E. is designated by a low tally on all of the items. The low tallies were converted to their high tally equivalents to facilitate statistical analysis.

### Perceived Parent Expectations and Evaluations (P.P.E.E.)

The P.P.E.E. scale consists of seven multiple-choice items (Q.--64-70) with each item tally differing from one to three, or five. Defined operationally, P.P.E.E. is the sum total of tallied responses to the P.P.E.E. scale (Appendix A). High P.P.E.E. is designated by a low tally on all of the items except question number sixty-four. To facilitate statistical analysis, the low tallies were converted to their high tally equivalents.

The above listed nine major variables operationally constitutes, in toto, the operationalization of School Climate; as it is utilized in this study. The items, which comprised the subscales of each of the nine variables, consisted of the questions from the eighty-one item School Social Environment Student Questionnaire (10-13, 15-23, 26-30, 41-49, 51, 54, 57-75). This instrument also contained the items used to operationally measure the S.C.A.A.; the dependent variable in this study.

### Self-Concept of Academic Ability (S.C.A.A.)

Designed to measure the student's perceptions of his ability to achieve academically, as compared with others in his school class,

S.C.A.A. is operationalized as, the sum total of tallied responses to the S.C.A.A. scale (Appendix A). The patented scale was developed by Wilbur B. Brookover at Michigan State University and, consists of eight multiple-choice items (Q.--31-38) which varies from one to three, or four, or five, on each item tallied. A high S.C.A.A. is designated by a low tally. The low tallies were linearly transformed to their high tally equivalents to simplify the statistical analysis.

### Reliability of Variables

The reliability of these scales were estimated by Hoyt's (1941) analysis of variance procedure. This procedure gave the percentage of variance in the distribution of pupil scale scores that may be regarded as true variance. In simpler terms, the variance not due to the unreliability of the instrument. (Scale Intercorrelation, Appendix D).

TABLE 2.--Hoyt's Analysis of Variance

Variables	(N = 2,627)
R.S.P.C.	.6956
R.T.P.C.	.5901
I.S.S.I.	.6884
NORMS	.5300
SEN-CON	.6486
P.F.E.E.	.7160
P.T.E.E.	.6581
P.Prin.E.E.	.7684
P.P.E.E.	.6687
S.C.A.A.	.7543

From those general hypotheses, as stated in Chapter I (pp.10-11), the following hypotheses, stated in the null form, have been derived; using the self-concept of academic ability as the dependent variable.

Specific Null Hypotheses to be Tested

1. There will be no interaction between grade level, sex, S.E.S. level, achievement level, and race with respect to the self-concept of academic ability score.
2. There will be no difference in the self-concept of academic ability score between each grade level (i.e. 4th, 5th, and 6th).
3. There will be no difference in the self-concept of academic ability score between the male students and the female students.
4. There will be no difference in the self-concept of academic ability score between the students in high S.E.S. schools and low S.E.S. schools.
5. There will be no difference in the self-concept of academic ability score between the students in high achieving schools and low-achieving schools.
6. There will be no difference in the self-concept of academic ability score between the students in predominately black and predominately white schools.
7. There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between students in predominately black schools and in predominately white schools.
8. There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between the students in high achieving schools and in low-achieving schools.
9. There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between the students in high S.E.S. schools and in low S.E.S. schools.
10. There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between the students at each grade level (i.e. 4th, 5th, and 6th).



11. There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between the male students and the female students.

### Research Design and Analysis of the Data

As stated in Chapter I, the analysis of this study was to be done in two stages. The data were analyzed, and all of the statistics were tested for significance at the .05 level, save for the equal multiple correlations test which was a two-tail test (.025). The following design and method of data analysis were used, in order to answer the research hypotheses that were posed in this study. However, it is necessary to, first, give a brief summary of the notation utilized throughout the remaining portion of this section; and, in Chapters V and VI.

Let

R = Race	G = Grade Levels
A = Achievement Levels	X = Sex
S = S.E.S. Levels	

Let

BLACKS	= Students in predominately black schools
WHITES	= Students in predominately white schools
S.H-ACH.	= Students in high achieving schools
S.L-ACH.	= Students in low achieving schools
S.H-S.E.S.	= Students in high S.E.S. schools
S.L-S.E.S.	= Students in low S.E.S. schools
4G	= Students in the fourth grade
5G	= Students in the fifth grade
6G	= Students in the sixth grade
MALES	= The male students
FEMALES	= The female students

Let

$X_0$  = Self-Concept of Academic Ability (S.C.A.A.)

$X_1$  = Reported Student Press for Competition (R.S.P.C.)

$X_2$  = Reported Teacher Press for Competition (R.T.P.C.)

$X_3$  = Importance of Student Self-Identity or Role (I.S.S.I.)

$X_4$  = Reported Academic Norms of Schools (NORMS)

$X_5$  = Sense of Control (SEN-CON)

$X_6$  = Perceived Peer Expectations and Evaluations (P.F.E.E.)

$X_7$  = Perceived Teacher Expectations and Evaluations (P.T.E.E.)

$X_8$  = Perceived Principal Expectations and Evaluations (P. Prin.E.E.)

$X_9$  = Perceived Parent Expectations and Evaluations (P.P.E.E.)

also

$R^2$  = the sample squared multiple correlation

$b$  = the sample regression weights, beta weights

$r_{0.1}$  = the sample zero order correlation between S.C.A.A. and the first predictor variable

$X_0$  = the predicted value of a student's S.C.A.A. score.

given

$$R^2 = b_1 r_{0.1} + b_2 r_{0.2} + \dots + b_9 r_{0.9}$$

$X_0 = b_1$  (subjects score on predictor  $X_1$ ) &  $b_2$  (Score on  $X_2$ ), etc.

definition

The squared multiple correlation coefficient,  $R^2$ ; sometimes called the coefficient of multiple determination. This represents the proportion of variance accounted for by the predictors using a linear regression equation.

The purpose of the comparison was two fold: (1) to determine if there was an overall difference between the groups (R,A,S,G,X); and (2) to establish a point of reference in interpreting possible differences, between the groups, on those variables predictive of S.C.A.A.

Research hypothesis one (1), which is really a part of the analysis provided in the Finn Program mentioned below, speaks to the interaction of the groups (R,A,S,G,X) in regard to S.C.A.A. Interactions indicate whether individual levels of the above five independent variables function in concerted action. For example, is low S.C.A.A. a function of black low achieving, low S.E.S., and/or fourth grade school students; or on the other hand, is a high S.C.A.A. a function of white, high achieving, high S.E.S., and/or sixth grade school students. If such interactions do manifest themselves at the .05 probability level, graphing will be used to explicate the phenomena.

Research hypotheses two through six (2-6) examined student differences between races, achievement levels, S.E.S. levels, grade levels, and sexes, on their perceived S.C.A.A. The statistical analysis used, to determine whether or not the groups differed on S.C.A.A., was computed using the Finn Program (1967). The Finn Program was utilized for several reasons:

1. The Finn Program is best suited to perform univariate analysis of variance.
2. This procedure allows for unequal cell sizes or incomplete experimental designs; such a procedure is necessary for this study.
3. This program yields, as part of its output, an univariate F test-for significant differences between the groups (race, S.E.S., achievement, grade, and sex) on S.C.A.A., and least square estimate of effects. The least square estimates gives the direction and magnitude of the effect of the independent variables.

Its purpose (post-hoc) allows one to determine which subgroup has the higher score on that independent variable; its purpose will be explicated further in this section.

4. The univariate F test has an advantage over individual t tests, in that the probability of a type I error is held at the specified level; in this case, .05.

Research hypotheses seven through eleven (7-11) was the second stage of the analysis; and, determined the squared multiple correlations ( $R^2$ ) for each group to be compared. To compute the  $R^2$ , a linear regression equation was derived for the following groups: (1) students in black schools, (2) students in white schools, (3) students in high-achieving schools, (4) students in low achieving schools, etc. After deriving the linear regression equation for each group, the amount of variance accounted for,  $R^2$ , was tested for significance. Finally, with the regression equations computed, and tested for significance, it becomes possible to test whether the respective  $R^2$ , between each group (e.g. BLACKS vs. WHITES: S.-ACH., H-ACH. vs. S.ACH., L.ACH.; etc.) differ in the proportion of variance in S.C.A.A. that is predictive from the school climate variables.

In order to test for the differences between the  $R^2$ , transformation into Fisher Z was required. The reason for the transformation was due to the non-random selection of the sample. Usually, when the sample is selected at random, from the population of interest, the sampling distribution of R may be regarded as approximately normal. However, when the sample is not randomly selected, the distribution of the multiple R may be skewed, either to the left or to the right, depending upon the sample selection.

R. A. Fisher (1942) has shown that the sampling distribution of a particular function of  $R$ , is approximately normal for samples of moderate size, no matter what the sample selection is.

The function is given by:

$$A = 1/2 \log_e (1+R)/(1-R))$$

Since the transformation is 'one to one,' inferences about  $Z$  are applicable to  $R$ .

A test of the hypotheses that the two groups of interest (e.g. BLACKS, WHITES, S.H-ACH., S.L-ACH., etc.) show equal correlations, is provided by the ratio:

$$\frac{Z_1 - Z_2}{s(Z_1 - Z_2)}$$

where  $Z_1$  is the transformed value of the correlation coefficient for the first group (e.g. BLACKS, etc.)

$Z_2$  is the transformed value of the correlation coefficient for the second group (e.g. WHITES, etc.)

$$s(Z_1 - Z_2)$$

$$\sqrt{1/(N_1-3)+1/(N_2-3)}$$

For reasonably large samples, this ratio can be referred to the normal distribution.

As a post-hoc technique, where there is a difference in the  $R^2$  between groups, the investigator will seek to see if the smallest set of school climate variables possibly differs between the groups of interest. Where there is no difference, the smallest set of school climate variables, from the entire sample, will suffice. This set of school climate variables, which accounts for S.C.A.A.

to the respective  $R^2$  at the .05 level or better. In simpler terms; the smallest set of school climate variables which can be used to account for the variance in S.C.A.A. without significantly decreasing the squared multiple correlations, using the full set of nine (9) predictor variables.

That is, the variables which will be derived, will account for a greater portion of the variance in S.C.A.A. than the sum of their unique parts. This is true because of the overlap, or joint explanatory power of a group of variables. Therefore, in order to provide information for this post-hoc technique, a stepwise deletion procedure will be conducted on the total sample, and respective groups, as explained above. This will be accomplished by using the Least Squares Deletion Program (Ruble, 1966).

In stepwise deletion, all of the predictor variables are used in an initial least squares regression equation. The variable selected for deletion, is the variable that will be missed the least; that is, a greater part of its variation can be accounted for than if any other variable had been deleted. The F statistic, calculated at a given step, tests the null hypothesis ( $H_0$ ) that, the variable chosen for deletion, can account for none of the variation in the criterion variable above that which can be accounted for by the remainder of the predictor variables; against the alternative ( $H_1$ ), that the variable to be deleted can account for variation in the dependent variable above that accounted for by the remainder of the predictor variables. Once deleted, a variable is not reentered. The deletion process continues until a variable is encountered, whose deletion would significantly decrease the overall multiple correlation squared at the .05 level. When this stopping criteria is met, every variable remaining in the

regression equation contributes significantly at the .05 level, or greater, to the multiple correlation coefficient squared.

### Summary

The procedures followed in collecting and analyzing the data used in determining the relationship between certain social-psychological variables, comprising school climate, and S.C.A.A. were explained in this chapter. The population was defined, the method of sample selection described, the instrument used in gathering the data, and the major variables, operationally defined, was the information explicated here. In Chapter V, the results are analyzed and interpreted.

## CHAPTER V

### ANALYSIS AND INTERPRETATION OF THE DATA

#### Introduction

The results of this study are presented in a format which attempts to answer the eleven (11) research hypotheses listed in Chapter IV. As previously stated, the data were to be analyzed in two stages, and the statistics were to be tested for significance at the .05 level save for the equal multiple correlations test (two-tail ; with significance at .025). All of the analysis was done by either the Control Data Corporation (CDC 3600 or 6500) Digital computer at Michigan State University.

In referring back to the previous chapter, the following notations will be frequently used, in this chapter; especially in the first stage of this analysis. This is done for the express purpose of expediency and brevity.

Let

R = Race

G = Grade Levels

A = Achievement Levels

X = Sex

S = S.E.S. Levels

Let

BLACKS = Students in predominately black schools

WHITES = Students in predominately white schools

S.H-ACH. = Students in high achieving schools

S.L-ACH. = Students in low achieving schools



S.H-S.E.S.	= Students in high S.E.S. schools
S.L-S.E.S.	= Students in low S.E.S. schools
4G, 5G, 6G	= Students in the fourth, fifth, and sixth grades, respectively
MALES	= The male students
FEMALES	= The female students

Let

S.C.A.A.	= Self-Concept of Academic Ability
R.S.P.C.	= Reported Student Press for Competition
R.T.P.C.	= Reported Teacher Press for Competition
I.S.S.I.	= Importance of Student Self-Identity
NORMS	= Reported Academic Norms
SEN-CON	= Sense of Control
P.P.E.E.	= Perceived Peer Expectations and Evaluations
P.T.E.E.	= Perceived Teacher Expectations and Evaluations
P.Prin.E.E.	= Perceived Principal Expectations and Evaluations
P.P.E.E.	= Perceived Parent Expectations and Evaluations

### First Stage of the Analysis

The first stage of the analysis was designed to determine the relationship between the groups race, achievement levels, S.E.S. levels, grade levels, and sex, (R,A,S,G,X) and self-concept of academic ability (S.C.A.A.). The purpose of this analysis was to determine the differences in the S.C.A.A. scores between (1) the students in predominately black schools (BLACKS) and in predominately white schools (WHITES); (2) the students in high achieving schools (S.H-ACH.) and in low achieving schools (S.L-ACH); (3) the students in high S.E.S. schools (S.H-S.E.S.) and in low S.E.S. schools (S.L-S.E.S.); (4) the students in the fourth grade (4G) fifth grade (5G) and sixth grade (6G); (5) the male students (MALES) and the female students (FEMALES). It consisted of hypotheses one through six (1-6).

Research hypothesis one (1) revealed the interactions of the groups (R,A,S,G,X) in regard to S.C.A.A. This hypothesis, like hypotheses two through six (2-6), utilized the analysis provided in the Finn Program. The interactions indicated whether individual levels of the independent variables functioned in concerted action. Meaning, "In addition to being interested solely in the effect one variable (independent) has on another variable (dependent), investigators frequently ask whether this effect is the same for all levels of a second, independent variable. If this effect is not the same, then an interaction between the two independent variables is said to exist" (Glass and Stanley, 1970:406). Graphing was used to explicate the phenomena for such interactions that manifested themselves at the .05 probability level.

In research hypotheses two through six (2-6) a univariate F test was used, in order to determine if statistically significant differences existed, between the groups, tested separately, on S.C.A.A. Meaning, the differences in the S.C.A.A. score between the: (2) 4G, 5G, and 6G; (3) MALES and FEMALES; (4) S.H-S.E.S.. and S.L-S.E.S; (5) S.H-ACH. and S.L-ACH.; and, (6) BLACKS and WHITES. The Finn Program (1967) was used to compute the statistical analysis utilized. This program yielded, as part of its output, a univariate F test for significant differences between the groups (R,A,S,G,X) on S.C.A.A., and least square estimate of effects. The univariate F tests has an advantage over individual t tests in that the probability of a type I error is held at the specified level; in this case .05 (refer to the "Research Design and Analysis of Data" section in Chapter IV). The least square estimate of effects yielded the direction and magnitude of the effect of the

independent variables (R,A,S,G,X). Its purpose post-hoc allows one to determine which of the sub-groups scored higher on the independent variables.

### Second Stage of the Analysis

In the second stage of the analysis (hypotheses 7-11) a linear regression equation was derived and computed for each group of students (e.g. BLACKS, WHITES, S.H-ACH., S.L-ACH., etc.) in order to determine the regression weights assigned to each school climate variable in the prediction of S.C.A.A. From this information, the multiple correlation ( $R^2$ ) for each group of students to be compared (e.g. BLACKS vs. WHITES; S.H-ACH. vs. S.L-ACH.; etc.) was computed. The regression equations derived for each group of students were tested for significance. Finally, whenever the test for equal multiple correlations showed that there was a difference in  $R^2$ , the least square deletion program was utilized as a post-hoc technique; to indicate the smallest set of school climate variables that could be used to predict S.C.A.A. without significantly decreasing the overall squared multiple correlation ( $R^2$ ).

### Results

Eleven (11) research hypotheses, stated in the null form, are answered in this study. The hypotheses are discussed sequentially and the data pertaining to these hypotheses are presented in the form of discussion, tables and graphs. A summary of the analysis of the S.C.A.A. scale means, on the groups of interest, is reported in Table 3.

Before reporting the results, two interjections, pertinent to the first stage of this analysis, are necessary here. Firstly, because

TABLE 3.--Mean S.C.A.A. Scores, Sample N and the Transformed Score of the Groups of Interest

Groups of Interest	N <sup>a</sup>	Mean Score	Transformed Score <sup>b</sup>
Black	1339	14.784	23.216
White	1288	15.840	22.160
High Achievement	1067	15.328	22.672
Low Achievement	1560	15.265	22.735
High S.E.S.	1672	15.186	22.814
Low S.E.S.	955	15.503	22.497
Fourth Grade	716	15.330	22.670
Fifth Grade	1110	15.141	22.859
Sixth Grade	801	15.499	22.500
Males	1317	15.520	22.480
Females	1310	15.075	22.924

<sup>a</sup>Due to strict methodological procedures in the first stage of this analysis, the N's presented in this table will be different from the N's presented in the tables of the second stage of the analysis. The reason being that, School 13 was not included in the former because the design for a one-way ANOVA would not have been completely cross (i.e. School 13 was BLACKS and designated as: S.L-S.E.S. -43.8 and S.H-ACH. -47.2; whereas, School 04 was WHITES and designated as: S.H-S.E.S. -54.9 and S.L-ACH. -47.8).

Since the regression procedures, utilized in the second stage of the analysis, were more flexible than the ANOVA procedures, this allowed the use of the S.E.S. and achievement level designations relative to the Black-White sample. Therefore, School 13 was included in the statistical procedures for that stage of the analysis; and hence the differences in the N's throughout various stages of this study's analysis.

<sup>b</sup>Transformed score refers to the process used to simplify analysis procedures. Because a high S.C.A.A. was denoted by a low tally on the response items of the scale, the low scores were linearly transformed to their high score equivalents. As true with all of the sub-scales, operationalized in this research study, this procedure was done for elucidation of interpretation. Thereby, a higher tally denoted a more positive S.C.A.A., R.S.P.C., etc.

the design employed in this study has unequal cells (non-orthogonal), the statistical tests must be examined from the last test back to the first tests, to assure that each test is not confounded by prior significance. A direct test of any effect is dependent on whether the previous test of an effect was significant or not. Therefore, once a significant test has occurred, the remaining tests are not a direct test of that particular effect. Meaning, that a linear combination of the previous tests and any test of interest would all be involved. Thus, the computer programmer, generally, puts the statistical tests in varied order to adequately provide for such an occurrence; and hence, allows for the interpretation of results, without accounting for confounding of prior significance.

Secondly, as previously stated in the methodology chapter, the Black schools' achievement levels and socio-economic status levels are not exactly comparable to the White schools. Meaning, that because the white schools usually have higher achievement levels and socio-economic status levels than the black schools, the matching for comparisons were, therefore, relative. Thus, any results of interactions or main effects must be interpreted with such knowledge. Had the black and white school samples been more comparable, some of the statistical results that may have surfaced, may have been prevented with this type of sample selection.

### First Stage of the Analysis

The first stage of this analysis consisted of hypotheses one through six (1-6) and its purpose was two-fold: (1) to determine if there

overall difference between the groups (R,A,S,G,X); and (2) to establish a point of reference in interpreting possible differences between the groups, on those social-psychological (school climate) variables predictive of S.C.A.A. This stage of the analysis was divided into two phases. The first phase consisted of hypothesis one (1) which addressed itself to any interactions of the groups (R,A,S,G,X) in regard to S.C.A.A. The second phase constituted hypotheses two through six (2-6) and examined the student differences between races, achievement levels, S.E.S. levels, grade levels, and sexes, tested separately, on their perceived S.C.A.A.

#### Interaction Effects on S.C.A.A.

Before indicating the results, a brief discussion is made discerning the types of interactions. Lubin (1962) made a distinction between two types of interaction: ordinal and disordinal; both are properties of graphs. Simply, when the lines do not cross, the interaction is said to be ordinal; when the lines do cross, interaction is said to be disordinal. In the ordinal case, the rank order of the categories of one variable, on the basis of their dependent variable scores, is the same within each category of the second independent variable.

The importance of this distinction for interpretation is this. When interaction is ordinal, it makes sense to assume, for example, that when girls score higher than boys on the dependent variable, the superiority exists for girls, totally, on this variable. Meaning, that even though an interaction exists, a single statement about boys and girls, over-all, without qualification or reference to some other variable, is still meaningful. However, when there is a disordinal interaction, using the above example, indications are that only in some cases are girls more superior to boys on the dependent variable.

Null Hypothesis 1.--There will be no interaction between grade level, sex, S.E.S. level, achievement level, and race with respect to the self-concept of academic ability score.

The results of the five factor, and the four factor interactions are reported in Table 4. The univariate F ratios for the source of variation reported in Table 4 indicates that there is no significant five way or four way interaction between race, achievement level, socio-economic status level, grade level, and sex. Meaning, that the effects of the above five factors on the dependent variable (S.C.A.A.) is not specific to individual combinations of levels of the independent variables (R,A,S,G,X). Finding no significant five way or four way interactions permitted the testing of the three way interaction.

As indicated in Table 5, there are two (2) significant three way interactions. The sources of variation reported in Table 5 indicates that significant three way interactions occur between races, grade levels, and sex; (RGX) and S.E.S. levels, grade levels, and sex (SGX). Explication of the phenomena of both of the above significant interactions is illustrated in Figure 7 and Figure 8, respectively.

TABLE 4.--Univariate ANOVA of Interactions (Race, Achievement Levels, S.E.S. Levels, Sex, and Grade Levels with Respect to S.C.A.A.)

FOUR-FACTOR and FIVE FACTOR				
Source of Variation	d.f.	Mean Square Between	F-Value	Probability Less Than
RASG	2	14.5378	1.1409	.3197*
RASX	1	15.6468	1.2279	.2680*
RAGX	2	12.9604	1.0171	.3618*
RSGX	2	8.2954	.6510	.5217*
ASGX	2	9.6436	.7568	.5693*
RASGX	2	10.8166	.8489	.4281*
Within	2489	12.7423		

\*p > .05

TABLE 5.--Univariate ANOVA of Interactions (Race, Achievement Levels, S.E.S. Levels, Sex, and Grade Levels with respect to S.C.A.A.)

THREE-FACTOR				
Source of Variation	d.f.	Mean Square Between	F-Value	Probability Less Than
RAS	1	.2911	.0228	.8799 *
RAG	2	19.7724	1.5517	.2121 *
RAX	1	10.7078	.8403	.3594 *
RSG	2	27.3733	2.1482	.1170 *
RSX	1	2.0047	.1573	.6917 *
RGX	2	57.7822	4.5347	.0109 **
ASG	2	6.2257	.4886	.6136 *
ASX	1	44.6919	3.5074	.0613 *
AGX	2	10.1286	.7949	.4518 *
SGX	2	46.1996	3.6257	.0268 **
Within	2489	12.7424		

\*\*  $P \leq .05$

\* $P > .05$



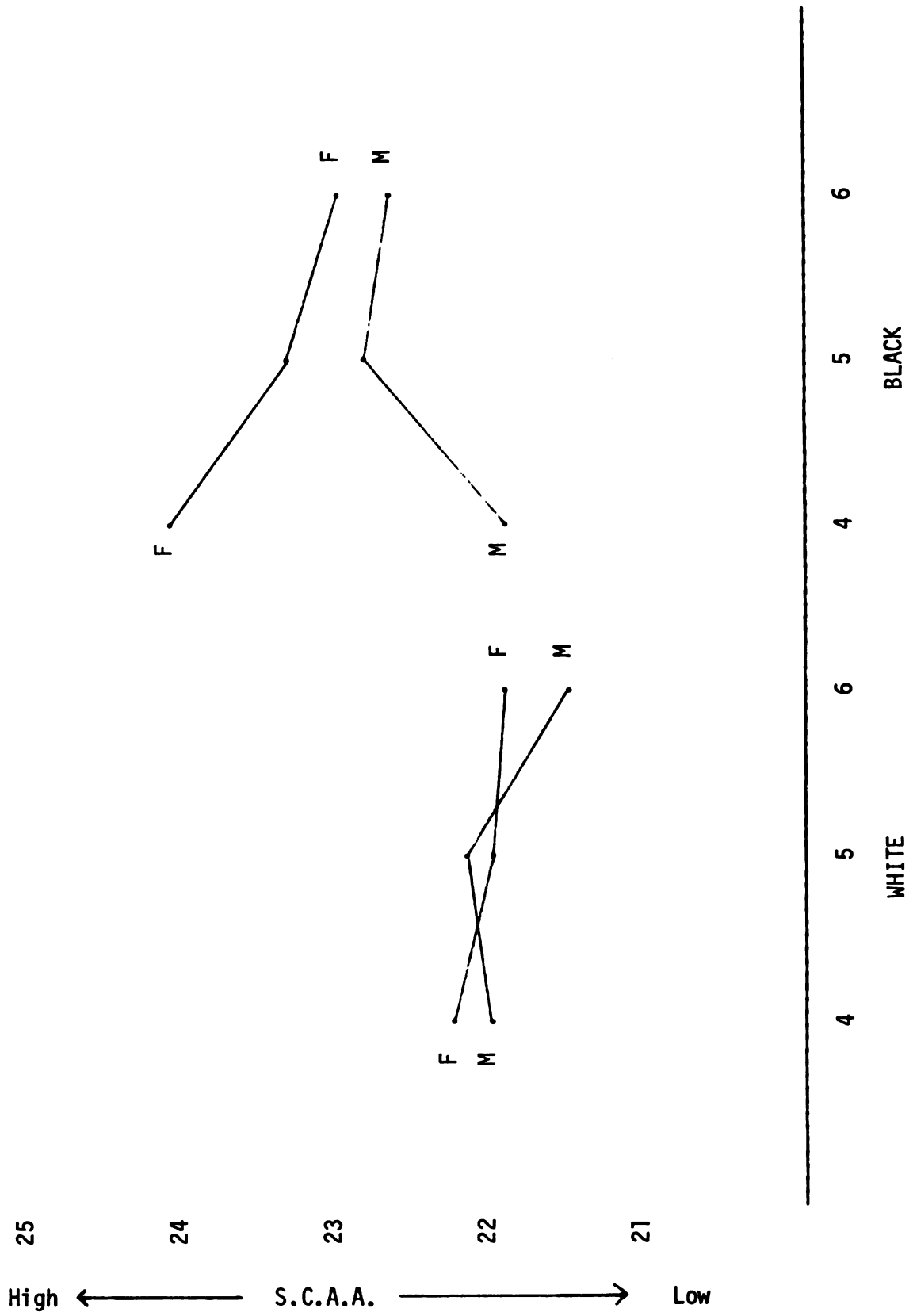
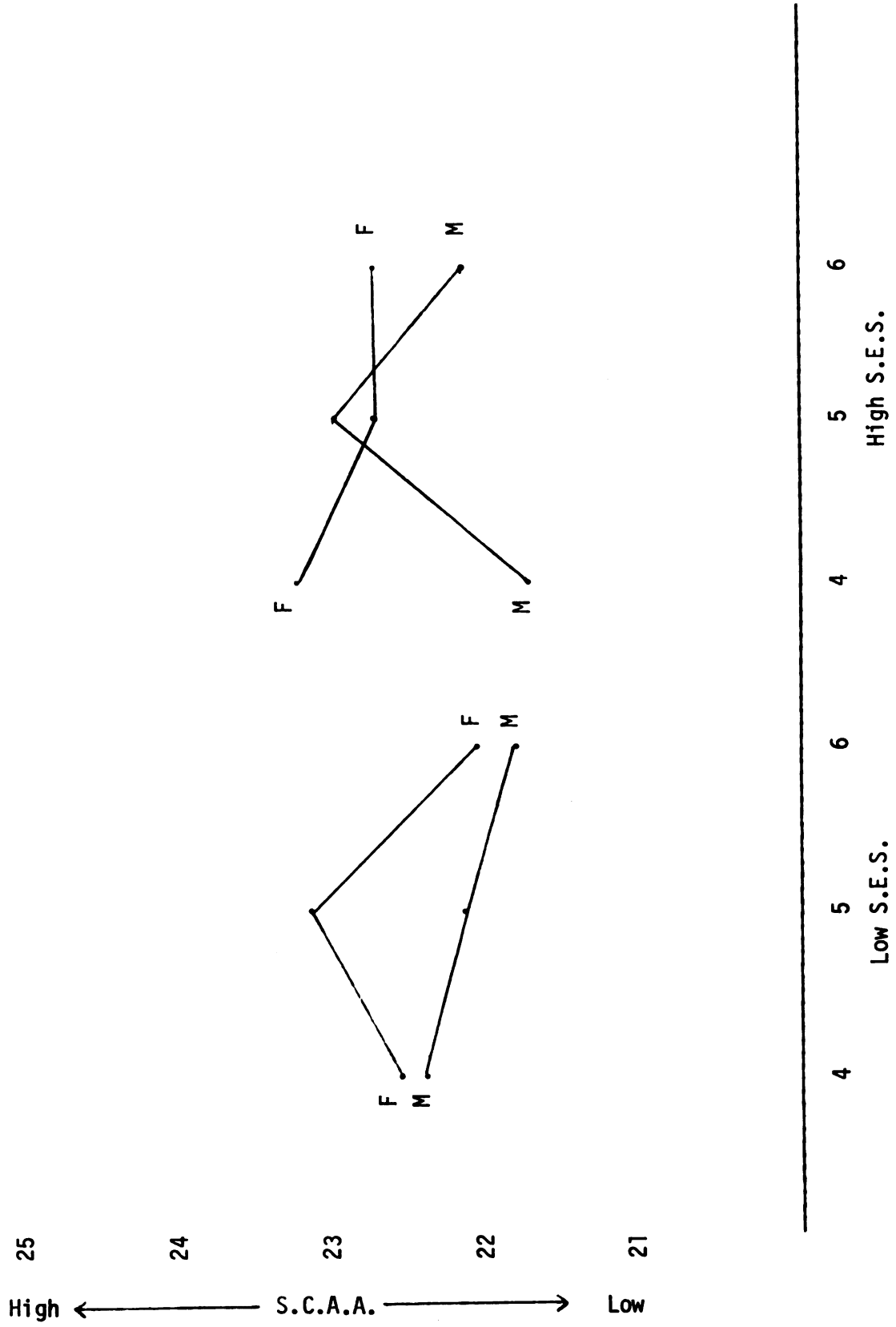


Figure 7.-- Race X Grade X Sex



### Race X Grade Level X Sex Interaction

The significant three way interaction between RGX reported in Figure 7, indicates that the white females have a higher S.C.A.A. than the white males in grades fourth and sixth; but, a lower S.C.A.A. than they have in the fifth grade. However, the S.C.A.A. of the white females gradually, yet steadily, decreases from the fourth through the sixth grade; whereas, the S.C.A.A. of the white males is low in the fourth grade, highest in the fifth grade, and lowest in the sixth grade. Meaning, that their S.C.A.A. varies from fourth through sixth grade; but, sharply decreases from fifth to sixth grade. In essence, the difference between the white males' and white females' S.C.A.A. is different at different grade levels; and, is a disordinal interaction.

The black females have a higher S.C.A.A. than the black males in grades four through six. However, in this ordinal interaction, the black females' S.C.A.A. decreases from fourth through sixth grade; whereas, the black males' S.C.A.A. increases from fourth through sixth grade. There is a somewhat sharp decrease for the females from fourth to fifth grade; with the exact opposite occurring for the black males.

### S.E.S. X Grade Level X Sex Interaction

The results of the significant three way interaction between SGX are indicated in Figure 8. Illustration, via ordinal interaction, indicates that the females in the low S.E.S. level have a higher S.C.A.A. than the males in the low S.E.S. level. Their S.C.A.A. is highest in the fifth grade and slightly lower in the sixth grade, than in the fourth grade. The S.C.A.A. of the males in the low S.E.S. level, however, is lower at each successive grade level.

The females in the high S.E.S. level have a higher S.C.A.A. than their male counterparts in the fourth and sixth grade; but, a lower S.C.A.A. in the fifth grade. In this disordinal interaction, the females' S.C.A.A. varies from fourth through sixth grade with a somewhat sharp decrease from fourth to fifth grade, which remains the same through the sixth grade. On the other hand, the males' S.C.A.A. somewhat sharply varies from fourth through sixth grade with the fifth grade having the highest S.C.A.A. depicted; and, the sixth grade having a slightly higher S.C.A.A. than the fourth grade. Thus, the S.C.A.A. of males in the high S.E.S. level decreases from the fourth through sixth grade, with the S.C.A.A. of the fourth grade being the lowest reported.

Testing further for any two factor interactions, the results in Table 6 indicate that there are two significant interactions: AX and GX. These significant interactions are illustrated in Figure 9 and 10, respectively.

#### Achievement X Sex Interaction

The achievement X sex interaction is a disordinal interaction. It is difficult to interpret; but, there appears to be no intuitive trends for achievement levels. The S.C.A.A. of the males in the low achievement level is the same for the males in the high achievement level. For the females, however, the S.C.A.A. is higher for the females in the low achievement level than for the females in the high achievement level.

#### Grade X Sex Interaction

Figure 10 is an ordinal interaction, and illustrates the significant two-factor interaction between grade and sex. The females have a higher S.C.A.A. than the males, in grades four through six,

TABLE 6.--Univariate ANOVA of Interactions (Race, Achievement Levels, S.E.S. Levels, Sex, and Grade Level with respect to S.C.A.A.)

TWO-FACTOR				
Source of Variation	d.f.	Mean Square Between	F-Value	Probability Less Than
RA	1	28.7240	2.2542	.1334 *
RS	1	2.8040	.2201	.6391 *
RG	1	1.4017	.1100	.8959 *
RX	1	23.9941	1.8830	.1702 *
AS	1	.9715	.0762	.7825 *
AG	1	5.5303	.4340	.6480 *
AX	1	52.5267	4.1222	.0425 **
SG	1	2.9240	.2295	.7950 *
SX	1	.1507	.0118	.9135 *
GX	1	59.6688	4.6827	.0094 **
Within	2489	12.7423		

\*\*  $p \leq .05$

\* $p > .05$

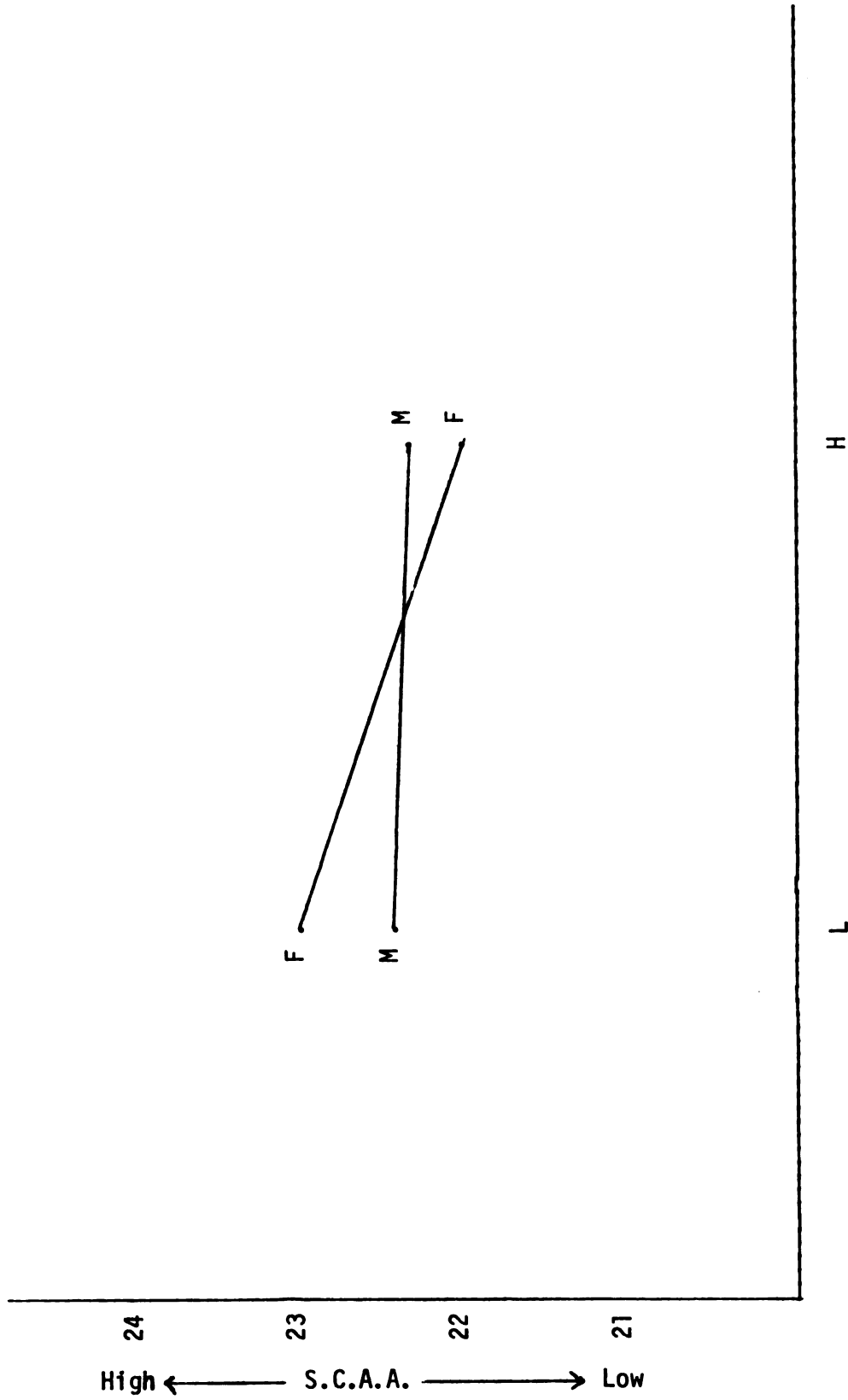


Figure 9.--Achievement X Sex

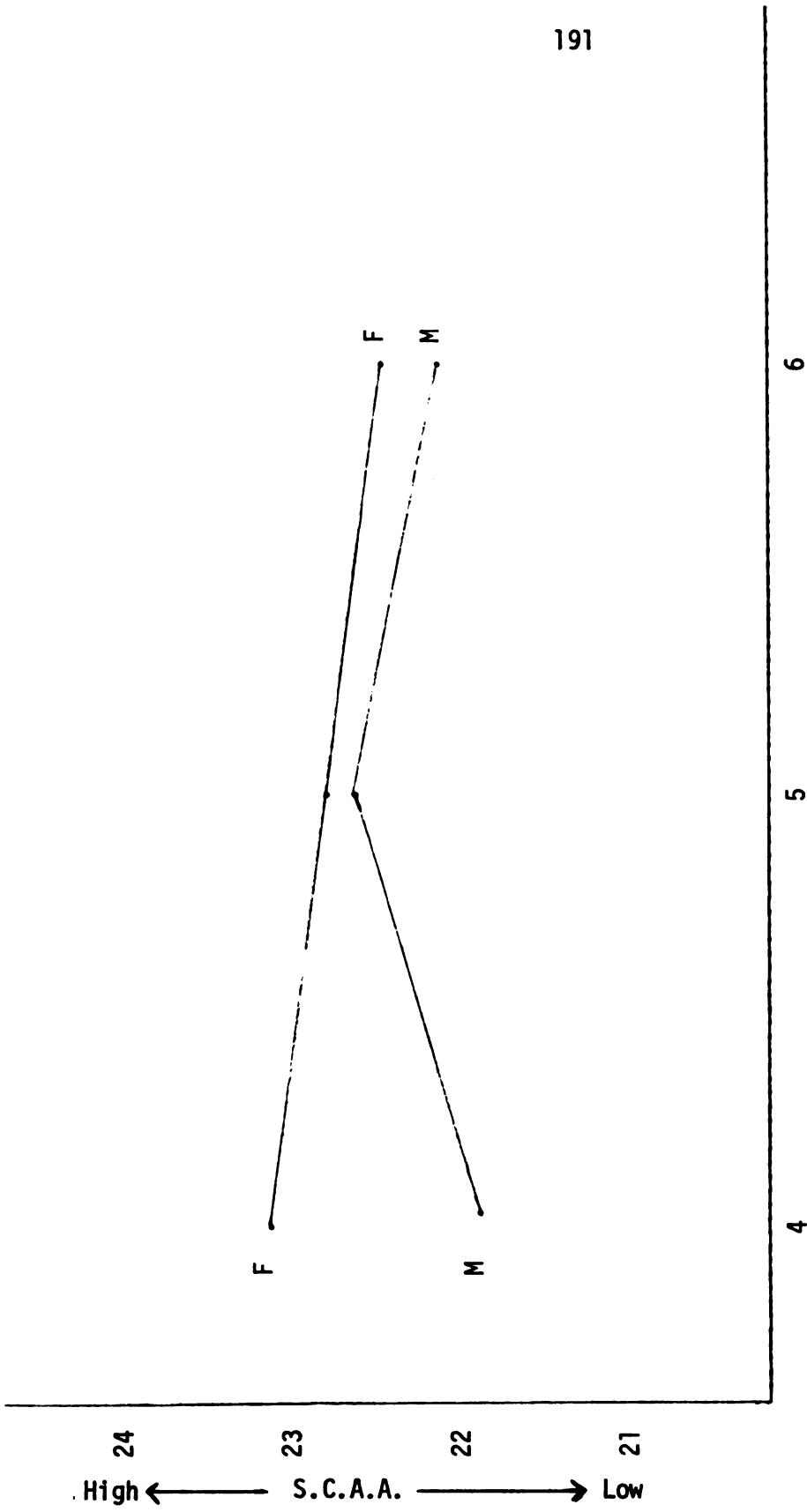


Figure 10.--Grade X Sex

although their S.C.A.A. lowers at each successive grade level. Meaning, that the females' S.C.A.A. is higher in the fourth grade and lowest in the sixth grade. The males' S.C.A.A. varies from the fourth through sixth grade, with a somewhat sharp increase from the fourth to fifth grade, which lowers after this period. The fourth grade males report the lowest S.C.A.A. and the fifth grade males report the highest S.C.A.A. Therefore, the null hypothesis of no interaction between R,A,S,G,X and S.C.A.A. was rejected. This means that the effects of race, achievement level, socio-economic level, grade level, and sex on the self-concept of academic ability is specific to individual combinations of levels of the independent variables. Since these significant interactions are present, the effects of each variable must be interpreted with caution.

#### Structural Effects on S.C.A.A.

Hypotheses two through six (2-6) statistically examined race, achievement levels, S.E.S. levels, grade levels, and sex, separately. However, to explicate these results, one table suffices to illustrate the above (see Table 7).

Null Hypotheses 2.--There will be no difference in the self-concept of academic ability score between each grade level (i.e. 4th, 5th, and 6th).

As indicated in Table 7, the three grade levels were not significantly different on the S.C.A.A. score. Therefore, the null hypothesis of no difference in the S.C.A.A. score between each grade level was not rejected.

Null Hypotheses 3.--There will be no difference in the self-concept of academic ability score between the male students and the female students.

The results of the sexes on S.C.A.A. are reported in Table 7. As indicated in the table, males and females did significantly differ on the



TABLE 7.--Univariate ANOVA of S.C.A.A.: Race, Achievement Levels, S.E.S. Levels, Grade Levels, and Sex on S.C.A.A.

Source of Variation	d.f.	Mean Square Between	F-Value	Probability Less Than
Race	1	707.1728	55.4979	.0001**
Achievement Level	1	40.9460	3.2134	.0732*
S.E.S. Level	1	116.3342	9.1297	.0026**
Grade Level	1	28.6776	2.2506	.1056*
Sex	1	92.6185	7.2686	.0071**
Within	2489	12.7423		

\*\*p  $\leq$  .05

\*p > .05

S.C.A.A. score. Hence, the null hypothesis of no difference in the S.C.A.A. score between males and females was rejected.

Null Hypothesis 4.--There will be no difference in the self-concept of academic ability score between the students in high S.E.S. schools and in low S.E.S. schools.

The results of S.E.S. levels on the S.C.A.A. are depicted in Table 7. As indicated in the table, significant differences exist in the S.C.A.A. between the students in high and in low S.E.S. schools. Therefore, the null hypothesis of no difference in the S.C.A.A. score at different S.E.S. levels was rejected.

Null Hypothesis 5.--There will be no difference in the self-concept of academic ability score between the students in high achieving schools and in low achieving schools.

The results of achievement levels on S.C.A.A. are indicated in Table 7. As illustrated in the table, students in high- and low-achieving schools did not

differ on the S.C.A.A. score. Therefore, the null hypothesis of no differences in the S.C.A.A. score at different achievement levels was not rejected.

Null Hypothesis 6.--There will be no difference in the self-concept of academic ability score between the students in predominately black schools and in predominately white schools.

The results of race on the S.C.A.A. are indicated in Table 7. As illustrated in the table, blacks and whites significantly differ on the S.C.A.A. score. Thus, the null hypothesis of no differences in the S.C.A.A. score between Blacks and Whites was rejected.

Table 8 illustrates the estimated effects (Refer to "Research Design and Analysis of Data" section in Chapter IV) for the cells associated with the difference between races, between S.E.S. levels, and between sexes. Briefly, the least square estimate of effects gives the direction and magnitude of the effect of the independent variables. It provided information in determining which of the sub-groups (e.g. BLACKS, WHITES; S.H-S.E.S., S.L-S.E.S., etc.), were higher on the independent variables. Again, one table suffices to explicate the above results. Table 8 illustrates that of the races, BLACKS were higher than WHITES on the S.C.A.A. score; of the S.E.S. levels, S.H-S.E.S. reported a higher S.C.A.A. score than S.L-S.E.S.; of the sexes, FEMALES reported a higher S.C.A.A. score than MALES.

### Second Stage of the Analysis

Hypotheses seven through eleven (7-11) delineates the second stage of this analysis. This stage of the analysis will depict the differences between each sub-group (e.g. BLACKS, WHITES; S.H-ACH., S.L-ACH. etc.) in the proportion of variance in S.C.A.A. that is

TABLE 8.--Variable Means of Groups with Significant Univariate ANOVA'S and the Least Square Estimate of Effects

Variable Groups	Group Means		Least Square Estimate of Effects
Race	Black	23.216	1.17476
	White	22.160	
S.E.S.	High	22.814	0.28978
	Low	22.497	
SEX	Male	22.480	- .38305
	Female	22.924	

predictive from the school climate variables. Meaning, which of the school climate variables are most predictive of the S.C.A.A. of the students in these types of schools compared (e.g. S.H-ACH., S.L-ACH.; S.H-S.E.S., S.L-S.E.S., etc.) there are several procedures utilized in this stage of the analysis. Before stating the null hypotheses and their respective results, there are two preliminary procedures which must be illustrated first. They are as follows: (1) presentation of beta weights and standard errors and the multiple correlations for all the groups of interest (e.g. BLACKS, WHITES, S.H-ACH., S.L-ACH., etc.); and (2) testing of the above regression equations to indicate whether or not the multiple correlations derived are significant. All of the tables for the above two procedures will be presented sequentially; thus, establishing the format for this stage of the analysis. The null hypotheses will, then, each be stated; afterwhich, the results from the following two procedures will be explicated.

They are: (1) presentation of the rationale for transforming the squared multiple correlations ( $R^2$ ) to Z scores; and (2) utilization of the least square deletion program as a post-hoc technique.

The regression equation derived predicted S.C.A.A. from the school climate variables for each sub-group compared (e.g. S.H-ACH., S.L-ACH., BLACKS, WHITES, etc.) In each regression equation, a beta weight was assigned to each predictor (i.e. school climate) variable in each sub-group. Beta weights are determined by the orthogonal component of the variable under consideration; thus, a comparison of the corresponding beta weights across the sub-groups allows for determination of whether or not each predictor variable has the same relative importance in predicting S.C.A.A. for each sub-group. Therefore, this is a preliminary procedure, whereby the beta weights derived makes it possible to conduct an analysis to compare the sub-groups and determine if there is a differential relationship of the predictor variables to S.C.A.A. across the sub-groups.

Using the calculation of the Least Squares Program (Ruble, et al, 1966), the regression equation was derived for each of the eleven (11) respective groups of interest, and the total sample with S.C.A.A. as the criterion. Tables 9-14 give the respective beta weights and their respective standard errors for the entire sample, and the eleven (11) groups of interest. The respective correlation coefficient matrices can be found in Appendix E .

Table 9 illustrates the same for the entire sample. Table 10 indicates the same for the BLACKS and WHITES, respectively. Refer to Table 27 to determine the amount of variance accounted for in S.C.A.A. from these eleven sub-groups.

TABLE 9.--Beta Weights and Standard Errors of the School Climate Variables with S.C.A.A. for all Students

School Climate Variables	All Students (N = 2627)	
	Beta Weights	Standard Errors of Betas
R.S.P.C. ( $X_1$ )	.008	.016
R.T.P.C. ( $X_2$ )	.027	.016
I.S.S.I. ( $X_3$ )	.024	.015
NORMS ( $X_4$ )	-.016	.016
SEN-CON ( $X_5$ )	-.020	.015
P.F.E.E. ( $X_6$ )	.277	.019
P.T.E.E. ( $X_7$ )	.311	.022
P.Prin.E.E. ( $X_8$ )	-.030	.016
P.P.E.E. ( $X_9$ )	.189	.021

TABLE 10.--Beta Weights and Standard Errors of the School Climate Variables with S.C.A.A. for Students in Black and White Schools

BLACKS (N = 1339)			WHITES (N = 1288)	
School Climate Variables	Beta Weight	Standard Errors of Betas	Beta Weights	Standard Errors of Betas
R.S.P.C. ( $X_1$ )	-.011	.023	.048	.022
R.T.P.C. ( $X_2$ )	.024	.023	-.006	.021
I.S.S.I. ( $X_3$ )	.031	.022	.030	.020
NORMS ( $X_4$ )	-.023	.024	.015	.023
SEN-CON ( $X_5$ )	-.006	.022	.008	.022
P.F.E.E. ( $X_6$ )	.276	.027	.262	.029
P.T.E.E. ( $X_7$ )	.305	.031	.321	.030
P.P.R.I.N. ( $X_8$ )	.010	.024	-.078	.022
P.P.E.E. ( $X_9$ )	.152	.031	.215	.028

TABLE 11.--Beta Weights and Standard Errors of the School Climate Variables with S.C.A.A. for Students in High and Low Achieving Schools

		S.H-ACH. (N = 1067)		S.L-ACH. (N = 1070)	
School Climate Variables		Beta Weights	Standard Errors of Betas	Beta Weights	Standard Errors of Betas
R.S.P.C.	(X <sub>1</sub> )	.003	.024	.012	.021
R.T.P.C.	(X <sub>2</sub> )	.046	.023	.006	.020
I.S.S.I.	(X <sub>3</sub> )	-.005	.022	.040	.020
NORMS	(X <sub>4</sub> )	.035	.025	-.036	.021
SEN-CON	(X <sub>5</sub> )	-.013	.023	-.000	.020
P.F.E.E.	(X <sub>6</sub> )	.297	.032	.267	.025
P.T.E.E.	(X <sub>7</sub> )	.370	.034	.277	.028
P.Prin.E.E.	(X <sub>8</sub> )	-.068	.025	-.007	.022
P.P.E.E.	(X <sub>9</sub> )	.137	.032	.211	.027

TABLE 12.--Beta Weights and Standard Errors of the School Climate Variables for Students in High and Low S.E.S. Schools

		S.H-S.E.S. (N = 1672)		S.L-S.E.S. (N = 955)	
School Climate Variable		Beta Weights	Standard Errors of Betas	Beta Weights	Standard Error of Betas
R.S.P.C.	(X <sub>1</sub> )	.011	.020	-.000	.026
R.T.P.C.	(X <sub>2</sub> )	.017	.020	.044	.020
I.S.S.I.	(X <sub>3</sub> )	.010	.019	.048	.025
NORMS	(X <sub>4</sub> )	-.009	.021	-.033	.027
SEN-CON	(X <sub>5</sub> )	.015	.020	-.065	.024
P.F.E.E.	(X <sub>6</sub> )	.250	.025	.324	.033
P.T.E.E.	(X <sub>7</sub> )	.304	.028	.322	.036
P.Prin.E.E.	(X <sub>8</sub> )	.022	.021	-.041	.027
P.P.E.E.	(X <sub>9</sub> )	.200	.027	.162	.034

TABLE 13.--Beta Weights and Standard Errors of the School Climate Variables with S.C.A.A. for Students in the Fourth-Sixth Grades

School Climate Variables	4G (N = 716)		5G (N = 1110)		6G (N = 801)	
	Beta Weights	Standard Errors of Betas	Beta Weights	Standard Errors of Betas	Beta Weights	Standard Errors of Betas
R.S.P.C. ( $X_1$ )	.008	.030	.013	.025	.006	.029
R.T.P.C. ( $X_2$ )	.035	.029	.025	.025	.015	.028
I.S.S.I. ( $X_3$ )	.058	.029	.009	.024	.013	.027
NORMS ( $X_4$ )	-.029	.031	-.001	.026	-.023	.029
SEN-CON ( $X_5$ )	-.037	.029	-.035	.024	.048	.028
P.F.E.E. ( $X_6$ )	.317	.038	.238	.031	.292	.035
P.T.E.E. ( $X_7$ )	.296	.044	.329	.034	.295	.039
P.Prin.E.E. ( $X_8$ )	-.003	.032	-.051	.026	-.041	.030
P.P.E.E. ( $X_9$ )	.158	.041	.213	.033	.184	.037

TABLE 14.--Beta Weights and Standard Errors of the School Climate Variables with S.C.A.A. of the Male and Female Students

MALES (N = 1317)			FEMALES (N = 1310)		
School Climate Variables	Beta Weights	Standard Errors of Betas	Beta Weights	Standard Errors of Betas	
R.S.P.C. ( $X_1$ )	.044	.023	-.034	.023	
R.T.P.C. ( $X_2$ )	.026	.022	.024	.022	
I.S.S.I. ( $X_3$ )	.033	.021	.020	.022	
NORMS ( $X_4$ )	-.025	.023	-.002	.024	
SEN-CON ( $X_5$ )	-.035	.022	-.008	.022	
P.F.E.E. ( $X_6$ )	.268	.028	.291	.028	
P.T.E.E. ( $X_7$ )	.329	.032	.290	.030	
P.Prin.E.E. ( $X_8$ )	-.028	.024	-.035	.023	
P.P.E.E. ( $X_9$ )	.189	.030	.194	.029	



The second preliminary procedure tested, separately, the regression equations to see whether or not the multiple correlations derived, for each respective group of interest, were significant. In statistical terms, the regression equations tested is that, the vector of regression coefficients (Beta) is a zero vector (0). In all, and each of the respective groups of interest, the F ratio was significant. Therefore, it was concluded that the regression coefficients associated with the predictor variables do explain a significant amount of the variance in S.C.A.A. scores. This is the same as saying that  $R^2$ , the squared multiple correlation coefficient, was significant for each respective group of interest.

The results are presented in sequential tables; and, indicate the results for the: (1) total sample, (2) students in black schools (BLACKS) and (3) students in white schools (WHITES), (3) students in high achieving schools (S.H-ACH.), (4) students in low achieving schools (S.L-ACH.), (5) students in high S.E.S. schools (S.H-S.E.S.), (6) students in low S.E.S. schools (S.L-S.E.S.), (7-9) students in the fourth (4G), fifth (5G), and sixth (6G) grades, respectively, (10) the male students (MALES), and (11) the female students (FEMALES). All of these tables can be found in the appendices section (Appendix F).

#### School Climate Effects on S.C.A.A.

Hypotheses seven through eleven (7-11) statistically, examined each respective sub-group separately. The test of each hypothesis involved the transformation of multiple R into Fisher Z. The illustration, and rationale for this procedure was described in the "Research Design and Analysis of Data" section in the methodology chapter. Briefly, the overall test is as follows:

The test statistic employed was the ratio:

$$\frac{Z_1 - Z_2}{s(Z_1 - Z_2)}$$

where  $Z_1$  is the Fisher Z for the multiple correlation in the first group (e.g. S.H-ACH., etc.)

$Z_2$  is the Fisher Z for the multiple correlation for the second group (e.g. S.L-ACH., etc.)

$s(Z_1 - Z_2)$  is the standard error of estimate of the difference in correlations. The results will be explicated in one Table (Table 26).

Null Hypothesis 7.--There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between students in predominately black schools and in predominately white schools.

The results are reported in Table 15. The value of the test statistic Z was significant at the .025 level. Consequently, the null hypothesis was rejected; and, it was concluded that the proportion of variance in self-concept of academic ability (S.C.A.A.) accounted for, by the school climate variables, was greater among the students in predominately white schools than in predominately black schools.

Hypothesis 8.--There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between the students in high achieving schools and in low achieving schools.

The results are reported in Table 15; and, they are the same as reported in hypothesis seven (7). Consequently, this null hypothesis was also rejected. It was concluded that the proportion of variance in S.C.A.A. accounted for, by the school climate variables, was greater in the individual's S.C.A.A. in high achievement schools than in low achievement schools.

TABLE 15.--Test for Equal Multiple Correlations of the Groups of Interest, with  $R^2$  the Sample  $N$ ,  $Z$  Score, and Test Statistic  $Z$

Groups	$R^2$	$N$	$R^2$ Transformed to $Z$	Test Statistic $Z$
Black Schools' Students	.4216	1339	.4477	-2.267 <sup>a</sup>
White Schools' Students	.4950	1288	.5361	
High Achievement Schools' Students	.5147	1067	.5627	
Low Achievement Schools' Students	.4342	1560	.4599	2.636 <sup>a</sup>
High S.E.S. Schools' Students	.4364	1672	.4722	-1.927
Low S.E.S. Schools' Students	.4962	955	.5493	
Fourth Grade vs Fifth Grade	.4648 (4)	716	.4973	.2625
Fourth Grade vs Sixth Grade	.4510 (5)	1110	.4847	0
Fifth Grade vs Sixth Grade	.4667 (6)	801	.4973	.2739
Male Students	.4653	1317	.4973	
Female Students	.4515	1310	.4847	.3150

<sup>a</sup> $p \leq .025$  (Two-tailed test)

Hypothesis 9.--There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between the students in high S.E.S. schools, and in low S.E.S. schools.

The results are reported in Table 15. The value of the test statistic  $Z$  was not significant at the .025 level. Hence, the null hypothesis was not rejected; and, it was concluded that the proportion of variance in S.C.A.A. accounted for, by the school climate variables, was approximately the same in S.H-S.E.S. and S.L-S.E.S.

Hypothesis 10.--There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between the students at each grade level (i.e. 4th, 5th, and 6th).

The results are indicated in Table 15. Since the value of the test statistic  $Z$  was not significant at the .025 level, the null hypothesis was not rejected. It was concluded that the proportion of variance in S.C.A.A. accounted for, by the school climate variables, was approximately the same at each grade level.

Hypothesis 11.--There will be no difference in the multiple correlations between school climate variables and self-concept of academic ability between the male students and the female students.

The results are presented in Table 15. The null hypothesis was not rejected because the value of the test statistic  $Z$  was not significant at the .025 level. Conclusion was that the proportion of variance in S.C.A.A. accounted for, by the school climate variables, was approximately the same for males and females.

In predicting the S.C.A.A., the least square deletion program was utilized. In stepwise deletion, all the predictor variables (school climate variables) are used in an initial least squares regression equation. The variable selected for deletion is the

variable that will be missed the least; that is, a greater part of its variation can be accounted for than if any other variable had been deleted. It presented, using the full set of the nine predictor variables, the smallest set of school climate variables which could be used to account for the variance in S.C.A.A., without significantly decreasing the squared multiple correlations below the .05 level. Where there was no difference, the smallest set of school climate variables, from the entire sample, sufficed. This set of school climate variables, which accounts for S.C.A.A., was that which contributed to the respective  $R^2$  at the .05 level or better. Additionally, where there was a significant difference in the multiple correlations between groups, the least square deletion program was utilized on the respective groups of interest to determine that smallest set of school climate variables which predicted S.C.A.A. at the .05 level or better. For further indepth explication, refer to the methodology chapter.

Stepwise deletion of the school climate variables revealed that three variables, P.F.E.E., P.T.E.E. and P.P.E.E. accounted for 45.54 per cent ( $R^2$ ) = .4554) of the variance in the S.C.A.A. score for all students (see Table 16). This is interpreted as follows: given knowledge of a person's scores on all the nine school climate variables measured in this study, the three variables listed above predict the level of S.C.A.A. for all students. The use of any of the other variables will not significantly add to the knowledge of his S.C.A.A. The above also applies to all of the groups of interest whose value of the test statistic Z was not significant at the .025 level. They were the students in: S.H-S.E.S. and S.L-S.E.S. schools; 4G, 5G, and 6G; MALES and FEMALES, (Refer to Table 15).

In delineating the stepwise deletion of the school climate variables, of the groups whose value of the test statistic  $Z$  was significant at the .025 level, the following results were obtained. The groups which accounted for a significant different amount of variance in S.C.A.A. were students in: (1) predominately black schools, (2) predominately white schools, (3) high achieving schools, and (4) low achieving schools.

Table 17 indicated that the school climate variables which significantly accounted for the variance in S.C.A.A., for the students in high achieving schools, were: perceived expectations and evaluations for peers, teachers, parents, and principal, respectively, and reported teacher press for competition (51.35%). Table 18 revealed that for the students in low achieving schools, perceived expectations and evaluations for peers, teachers, and parents, respectively accounted for 43.20 per cent of the variance in S.C.A.A.

Table 19 illustrated that the school climate variables; perceived expectations and evaluations of peers, teachers, and parents, respectively, accounted for 41.97 percent of the variance in S.C.A.A. for students in predominately black schools. Table 20 revealed that reported student press for competition and the perceived expectations and evaluations for peers, teachers, parents, and principal, respectively accounted for 49.37 percent of the variance in S.C.A.A. for students in predominately white schools.

TABLE 16.--Variables that Contribute, at the .05 Level or Better, to the Squared Multiple Correlation Coefficient for Predicting S.C.A.A. for All Students

Variables Deleted	Partial Correlation Coefficient	$R^2$ Delete	Cumulative % Variance Accounted for
R.S.P.C.			.4577
NORMS			.4576
SEN-CON			.4574
I.S.S.I.			.4571
P.PRIN.E.E.			.4566
R.T.P.C.			.4560
Variables that contribute at .05 level or better			
P.F.E.E.	.264	.414	.4554
P.T.E.E.	.266	.413	
P.P.E.E.	.172	.438	

TABLE 17. --Variables that Contribute at the .05 Level or Better to the Squared Multiple Correlation Coefficient for Predicting S.C.A.A. for High Achievement School's Students  $R^2 = .5147$

Variables Deleted	Partial Correlation Coefficient	$R^2$ Delete	Cumulative % Variance Accounted for
R.S.P.C.			.5147
I.S.S.I.			.5147
SEN-CON			.5147
NORMS			.5145
Variables that Contribute at .05 Level or Better			
P.F.E.E.	.282	.471	.5135
R.T.P.C.	.072	.511	
P.T.E.E.	.312	.461	
P.P.E.E.	.126	.505	
P.PRIN.E.E.	-.073	.511	



TABLE 18.--Variables that Contribute at the .05 Level or Better to the Squared Multiple Correlation Coefficient for Predicting S.C.A.A. for Low Achievement School's Students  $R^2 = .4342$

Variables Deleted	Partial Correlation Coefficient	$R^2$ Delete	Cumulative % Variance Accounted for
SEN-CON			.4342
R.T.P.C.			.4342
P.PRIN.E.E.			.4342
R.S.P.C.			.4342
NORMS			.4340
I.S.S.I.			.4331
Variables that contribute at .05 Level or Better			
P.F.E.E.	.259	.391	.4320
P.T.E.E.	.242	.397	
P.P.E.E.	.201	.408	

TABLE 19. --Variables that Contribute at the .05 Level or Better to the Squared Multiple Correlation Coefficient for Predicting S.C.A.A. for Black School's Students  $R^2 = .421$

Variables Deleted	Partial Correlation Coefficient	$R^2$ Delete	Cumulative % variance Accounted for
SEN-CON			.4216
P.PRIN.E.E.			.4215
R.S.P.C.			.4214
NORMS			.4214
R.T.P.C.			.4209
I.S.S.I.			.4204
Variables that Contribute at .05 Level or Better			
P.F.E.E.	.268	.374	.4197
P.T.E.E.	.261	.376	
P.P.E.E.	.141	.407	

TABLE 20.--Variables that Contribute at the .05 Level or Better to the Squared Multiple Correlation Coefficient for Predicting S.C.A.A. for White Schools' Students  $R^2 = .495$

Variables Deleted	Partial Correlation Coefficient	$R^2$ Delete	Cumulative % Variance Accounted for
R.T.P.C.			.4950
SEN-CON			.4949
NORMS			.4949
I.S.S.I.			.4947
Variables that Contribute at .05 Level or Better			
R.S.P.C.	.0743	.490	.4937
P.F.E.E.	.255	.458	
P.T.E.E.	.284	.449	
P.P.E.E.	.211	.470	
P.PRIN.E.E.	-.096	.488	

### Summary of Results

This chapter has presented the results of the statistical analysis performed on the data collected for this study. The results indicated that RGX, AGX, AX, and GX were all significant three-way or two-way interactions with respect to S.C.A.A. The univariate ANOVA of S.C.A.A. indicated that race, S.E.S. level, and sex seemed to account for the significance on S.C.A.A.; and, the least square estimated effects revealed that within each respective variable, BLACKS were higher than WHITES on S.C.A.A.; S.H-S.E.S. reported a higher S.C.A.A. than S.L-S.E.S.; and FEMALES reported a higher S.C.A.A. than MALES.

The multiple correlations derived for all groups of interest, with S.C.A.A. as the criterion, were all significant. In the test for equal multiple correlations within races, S.E.S. levels, etc., the significantly different multiple correlations were between BLACKS and WHITES; and S.H-ACH. and S.L-ACH. The amount of variance accounted for in the S.C.A.A. scores were 42.16 per cent and 49.50 per cent; 51.47 per cent and 43.42 per cent, respectively.

Finally, to provide further information, the least square deletion program was utilized to determine the smallest set of school climate variables which accounted for the variance in S.C.A.A. scores without reducing the  $R^2$  below the .05 level.

1. For all students, in toto, and all other groups of interest whose test statistic Z value was not significant → P.F.E.E., P.T.E.E., and P.P.E.E. (45.54 per cent).
2. For S.H-ACH. → P.F.E.E., R.T.P.C., P.T.E.E., P.P.E.E., and P.Prin.E.E. (51.35 per cent).

3. For L-Ach. → P.F.E.E., P.T.E.E., and P.P.E.E. (43.20 per cent).
4. For WHITES → P.F.E.E., P.T.E.E., and P.P.E.E. (41.97 per cent).
5. For BLACKS → R.S.P.C., P.F.E.E., P.T.E.E., P.P.E.E., and P.Prin.E.E. (49.37 per cent).

All Students	Whites	S.H-Ach.	Blacks	S.L-Ach.
R.S.P.C.				
P.F.E.E.	P.F.E.E.	P.F.E.E.	P.F.E.E.	P.F.E.E.
P.T.E.E.	P.T.E.E.	<span style="border: 1px solid black;">R.T.P.C.</span>	P.T.E.E.	P.T.E.E.
P.P.E.E.	P.P.E.E.	P.T.E.E.	P.P.E.E.	P.P.E.E.
P.Prin.E.E.		P.P.E.E.		
		P.Prin.E.E.		

Figure 11.--Systematic Inventory of School Climate Variables for All Students, WHITES, S.H-ACH., BLACKS, and S.L-ACH.

----- "significant others"

not a significant other as delimited in the literature; this is the order in which it appeared significant in the analysis.

These relationships will be discussed in greater detail in Chapter 6.

## CHAPTER VI

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Introduction

This chapter contains a summary of this research. The findings and conclusions are presented and discussed. The implications that this research expounded are cited; in addition to, the significance that this present study explicated. Finally, the limitations intrinsic in this study precede any suggestions and/or recommendations for future research endeavors. As in the previous two chapters, the following notations will be constantly referred to for the same reason as previously stated; expediency and brevity.

Let

R - Race

G = Grade Levels

A = Achievement Levels

X = Sex

S = S.E.S. Levels

Let

BLACK  
WHITES

= Students in predominately black schools  
= Students in predominately white schools

S.H-ACH.  
S.L-ACH.

= Students in high achieving schools  
= Students in low achieving schools

S.H-S.E.S.  
S.L-S.E.S.

= Students in high S.E.S. schools  
= Students in low S.E.S. schools

4G, 5G, 6G

= Students in the fourth, fifth and sixth grades, respectively.

MALES	= The male students
FEMALES	= The female students

Let

S.C.A.A.	= Self-Concept of Academic Ability
R.S.P.C.	= Reported Student Press for Competition
R.T.P.C.	= Reported Teacher Press for Competition
I.S.S.I.	= Importance of Student Self-Identity
NORMS	= Reported Academic Norms
SEN-CON	= Sense of Control
P.F.E.E.	= Perceived Peer Expectations and Evaluations
P.T.E.E.	= Perceived Teacher Expectations and Evaluations
P.Prin.E.E.	= Perceived Principal Expectations and Evaluations
P.P.E.E.	= Perceived Parent Expectations and Evaluations

### Summary

The purpose of this study was to determine the relationship between certain social-psychological variables, comprising the school climate, and the S.C.A.A. of fourth, fifth, and sixth grade students. When significant differences were present, illustrations and explication were made, accordingly.

The theoretical framework underlying this study were explicated under the rubrics of symbolic-interaction, reference group theory, and role theory; of which, symbolic-interaction was the major theoretical perspective posited.

The review of the literature was as comprehensible as possible. It was presented in four sections: self-concept and academic achievement, S.C.A.A. and academic achievement, school climate and academic achievement, and school climate and self-concept. Because of the tangential nature of the review of literature, emphasis was on the limited research on the latter two sections, and the paucity of research directly related to this study. In the last section, an attempt was made to include some of the literature that focused on the social-psychological variables operationalized in this research.

A highlight of some of the generalizations from the literature is as follows:

1. The literature on the self-concept is vast; but, confusing. In operationizing the theory of self-concept to research, there have been many problems. Also, the instrumentation of self-concept studies have been called into question.
2. The efficacy of self-concept, as it relates to academic achievement, seems to be well established.
3. There is a growing body of literature which posits that minority and/or poor students report high self-concepts, rather than low self-concepts. This postulate sheds doubt upon the proposition that minority students report negative self-concepts; and hence, low achievement because of their socio-economic circumstances.
4. School climate is still a muddled issue. It is discussed under many different kinds of rubrics (e.g. norms, college environment, student-types, organizational, etc.); and hence, a matter of supposition.
5. Research in the arena of elementary school climate is practically nil.
6. Research in the arena of elementary school climate and S.C.A.A. is nil; and hence, virginal with regard to research efforts.
7. The literature on the school climate variables operationalized in this research indicate that there are possibilities that a school climate is a reality.

The major objectives of the study were:

1. To determine if the S.C.A.A. vary or remain the same at grade levels fourth through six; and, between male and female. Secondary, was examining the above with respect to race, S.E.S. level, and achievement level.
2. To ascertain if the school climate variables affect the S.C.A.A. of students differently, in different types of schools (i.e. racial, S.E.S., achievement) and/or at different grade levels.
3. To determine which of the social-psychological variables, comprising the school climate, most strongly affect the S.C.A.A. of the student.
4. To determine if the school climate variables affecting the S.C.A.A. of white students are similar or different from those affecting black students.



The sample was selectively based on the specific characteristics of similar racial and S.E.S. composition; but significantly different levels of achievement. This information was obtained from the Michigan Educational Assessment program. The sample population consisted of 1,288 students from predominately white schools, and 1,339 students from predominately black schools. The data were collected from a sample of ten (10) white and seven (7) black elementary schools. The administering of the student questionnaire utilized the same procedural format in all schools.

The instrument employed in this study was designed to examine certain social-psychological and structural variables, constituting school climate, and their relationship, on the S.C.A.A. of fourth-sixth grade children. It consisted of the ten (10) major variables operationalized in this research. S.C.A.A. was the dependent variable operationalized and the other nine (9) variables constituted and measured school climate. They were as follows: (1) Reported Student Press for Competition (R.S.P.C.), Reported Teacher Press for Competition (R.T.P.C.), Importance of the Student Self-Identity or Role (I.S.S.I.), Reported Academic Norms (NORMS), Sense of Control (SEN-CON), Perceived Peer Expectations and Evaluations (P.F.E.E.), Perceived Teacher Expectations and Evaluations (P.T.E.E.), Perceived Parent Expectations and Evaluations (P.Prin. E.E.). Each of the ten (10) major variables constituted a sub-scale of four-eight items within the instrument. These scales were substantiated by Hoyt's Estimate of Reliability formula.

Eleven (11) statistical hypotheses were formulated and tested. The first hypothesis determined whether any interaction effects between

racess, achievement levels, S.E.S. levels, grade levels, and sexes (R,A,S,G,X) were manifested in S.C.A.A. The next five hypotheses were formulated to test, separately, the effect(s) of R,A,S,G,X, on S.C.A.A. The last five hypotheses, were formulated to determine what effect(s) school climate variables had on S.C.A.A., with respect to R,A,S,G, and X.

The major statistical tools employed in the study were a uni-variate analysis of variance tests, least square estimate of effects for significant univariates, least squares regression analysis, and least square step-wise deletion of variables. The decision rule in all of the statistical tests was to reject the null hypothesis at the .05 level, with the exception of a two-tail test (.025).

The information accumulated through the use of the questionnaire was analyzed, and resulted in the following findings. Due to the type of sample selected in this study, interpretation of the findings presented below must keep in mind the relative comparability of Black and White students with regards to achievement levels and socio-economic status levels.

### Findings

The first six findings are based upon the interaction effects between the five groups tested (R,A,S,G,X) and S.C.A.A. Because of their unpredictability; and the scant knowledge available regarding their effects, with reference to the "real world," these findings are highly tenable and speculative. They are based solely on this writers interpretations made from the significant interactions. They are reported here, however, because the writer views that knowledge of this nature, if empirically validated, could prove to be a significant milestone with respect to establishing a positive school

climate, in which all students can respond positively with regard to academic achievement. It is with this hope, that such tenable inferences would thus, provide an impetus in further research in this line of logic posited.

1. The white females have a higher S.C.A.A. than the white males in the fourth and sixth grade; but, a lower S.C.A.A. than they in the sixth grade.
2. The black females have a higher S.C.A.A. than the black males in grades fourth through sixth.
3. The females in the low S.E.S. level schools have a higher S.C.A.A. than the males in the low S.E.S. level schools in the fourth through sixth grade.
4. The females in the high S.E.S. level schools have a higher S.C.A.A. than their male counterparts in the fourth and sixth grade; but, lower than they in the fifth grade.
5. The S.C.A.A. of the males in the low achievement level schools is the same as the males in the high achievement level schools. The S.C.A.A. is high for the females in the low achievement level schools than for the females in the high achievement level schools.
6. FEMALES have a higher S.C.A.A. than MALES in the fourth through six grades.
7. The structural variables--race, S.E.S., and sex were the significant variables on S.C.A.A. Within each respective group, on the reported S.C.A.A., BLACKS were higher than WHITES, FEMALES were higher than MALES, and S. H-S.E.S. were higher than S.L-S.E.S.
8. The school climate variables, which accounted for the variance in S.C.A.A., were approximately the same for the following sub-groups: S.H-S.E.S., and S.L-S.E.S.; 4G, 5G, 6G, MALES and FEMALES.
9. The school climate variables, which accounted for the variance in S.C.A.A. were different, for the following sub-groups: BLACKS, (41.9%), WHITES (49.37%), S.H-ACH. (51.35%), and S.L-ACH. (43.20%).
10. In predicting the S.C.A.A. from the school climate variables for all students, in toto, for the following sub-groups-- S.H-S.E.S., S.L-S.E.S.; 4G, 5G, 6G; MALES and FEMALES--it was revealed that P.F.E.E., P.T.E.E., and P.P.E.E. were most significant (45.54%).

11. The following school climate variables are predictive of S.C.A.A. for S.H-ACH. (51.35%).
  - a. P.F.E.E.
  - b. R.T.P.C.
  - c. P.T.E.E.
  - d. P.P.E.E.
  - e. P.Prin.E.E.
12. The following school climative variables are predictive of S.C.A.A. for S.L-ACH. (43.20%).
  - a. P.F.E.E.
  - b. P.T.E.E.
  - c. P.P.E.E.
13. The following school climate variables are predictive of S.C.A.A. for BLACKS (41.97%).
  - a. P.F.E.E.
  - b. P.T.E.E.
  - c. P.P.E.E.
14. The following school climate variables are predictive of S.C.A.A. for WHITES (49.37%).
  - a. R.S.P.C.
  - b. P.F.E.E.
  - c. P.T.E.E.
  - d. P.P.E.E.
  - e. P.Prin.E.E.

### Conclusions

The conclusions that are drawn from this research are based upon the specific objectives of the study, as previously stated.

1. The white male and female students' S.C.A.A. is different at different grade levels. The S.C.A.A. of both white male and female varies from fourth through sixth grade. For the white females, the S.C.A.A. is high in the fourth, low in the sixth grade, and lowest of the two sexes, in the fifth grade. It lowers, however, from the fourth through sixth grades. For the white males, the S.C.A.A. is low in the fourth grade, highest, of the two sexes, in the fifth grade, and lowest in the sixth grade.
2. Although the black females have a higher S.C.A.A. than the black males at all three grade levels, their S.C.A.A. decreases from fourth through sixth grades; whereas, the Black males' S.C.A.A. varies (low-high-low) from fourth through sixth grade, respectively.

3. The S.C.A.A. of the females in the schools of low S.E.S. level varies from fourth through sixth grade. It is low in the fourth, lowest in the sixth, and highest in the fifth grade. The S.C.A.A. of the males in the schools of low S.E.S. level gradually decreases from the fourth through the sixth grade.
4. The S.C.A.A. of the males and females in the schools of high S.E.S. level, varies from fourth through sixth grade. For the females, it is high in the fourth grade and, somewhat sharply lowers in the fifth grade where it remains the same through the sixth grade. For the males, in the schools of high S.E.S. level, the S.C.A.A. varies from the fourth grade through sixth grade. It is lowest in the fourth grade, low; but, slightly higher in the sixth grade, and highest, of both sexes, in the fifth grade.
5. The S.C.A.A. remains the same for the males across all schools' achievement levels; whereas, for the females S.C.A.A. is lower in schools with higher achievement levels.
6. The FEMALES' S.C.A.A. are lower at each successive grade level. It is highest in the fourth grade and lowest in the sixth grade. The MALES' S.C.A.A. varies in fourth through sixth grade. It is lowest in the fourth grade, highest in the fifth grade, and lower after this period.

As previously stated, the above six "interaction" conclusions are highly tenable and most unpredictable. They have been given a significant place in this study; however, based upon their possible springboard effect in future research endeavors.

7. The social-psychological variables comprising school climate, in this study, significantly affected the S.C.A.A. of students in schools of different racial composition, and of different achievement levels, of different S.E.S. levels, of different grade levels, and of both males and females.
8. The social-psychological variables, comprising the school climate which most strongly affected the S.C.A.A. of the student are the "significant others"--P.F.E.E., P.T.E.E., and P.P.E.E., respectively. These three variables were most significant in all of the eleven (11) groups of interest, and for all students, in toto.
9. The social-psychological variables, comprising school climate, affecting the S.C.A.A. of white students were different from those affecting black students; and, from those affecting students in high achieving and low achieving schools.

WHITES	S.H-ACH.	BLACKS, and S.L-ACH.
R.S.P.C.	R.T.P.C.	
P.F.E.E.	P.F.E.E.	P.F.E.E.
P.T.E.E.	P.T.E.E.	P.T.E.E.
P.P.E.E.	P.P.E.E.	P.P.E.E.
P.Prin.E.E.	P.Prin.E.E.	

Figure 12.--School Climate Variables Affecting the S.C.A.A. of: Whites, S.H-Ach.; Blacks, S.L-Ach.

--- denotes "significant others" as delineated in the research literature.

### Discussion

The most significant research question underlying this research was to ascertain whether school climate variables affected the S.C.A.A. of students differently, in different types of schools, and/or at different grade levels. Preliminary to the above, was the research question determining the relationship between S.C.A.A. and race, achievement level, S.E.S. level, grade level, and sex (R,A,S,G,X); but, more specifically so, at different grade levels and between sex. There is a paucity of evidence available with regard to the latter relationships.

Significant interactions occurred in this first stage of the analysis. However, because of their nature, it is imperative that explication be made before discussing the interactions themselves. Interactions are the unique and unpredictable (from main effects at least) result of combining factor levels. "Such failure to see our intuitive notions reflected perfectly in our mathematical models is a hazard (or reality) of an attempt to represent the real world mathematically" (Glass and Stanley, 1970:410).

It might be noted that analyses of variance are frequently made without full assurance that the variables do not interact. Such analyses may lead to useful results, but caution should be exercised as, "little is known about the effects of interaction on the results of the analysis" (Dixon and Massey, Jr. 1969:174). Therefore, the following inferences/interpretations made from the significant interactions, in this study, are speculative and should be judged accordingly.

The overall conclusions from the latter analysis illustrated that the females have a higher S.C.A.A. than the males in grades four through six; and in predominately black and low S.E.S. schools. In predominately white and high S.E.S. schools however, the males had a higher S.C.A.A., in the fifth grade. Also, the females S.C.A.A. lowered at each successive grade level in predominately white, and predominately black schools. It varied from fourth through sixth grades in the students in low S.E.S. and high S.E.S. schools; and, was higher in low achieving than in high achieving schools.

The male students' S.C.A.A. varied in all school settings. It varied in the students in predominately white, predominately black, and high S.E.S. schools, and fourth through sixth grades; and, was highest, of both sexes, in the fifth grade in predominately white and high S.E.S. schools. The male students' S.C.A.A. was lower at each successive grade level in low S.E.S. schools; and, was the same in both low and high achieving schools.

In the second stage of this analysis, there were four overall conclusions which determined whether school climate variables affected

the S.C.A.A. of students differently, in different types of schools, and/or at different grade levels. Firstly, the social-psychological variables, comprising school climate, significantly affected the S.C.A.A. of all students in schools of different grade levels, and of males and females. Secondly, the social-psychological variables, comprising school climate, significantly affected the S.C.A.A. of students differently in predominately black schools (BLACKS), students in predominately white schools (WHITES), students in high achieving schools (S.H-ACH.), and students in low achieving schools (S.L-ACH.). Thirdly, the most significant social-psychological variables, comprising school climate, that were predictive of S.C.A.A., were perceived peer expectations and evaluations (P.R.E.E.), perceived teacher expectations and evaluations (P.T.E.E.), and perceived parent expectations and evaluations (P.P.E.E.), respectively. The above three variables are designated in the literature as being the "significant others." These variables significantly accounted for the variance in S.C.A.A. for all students, in all of the groups of interest examined in this research. It should be noted that the perceived expectations and evaluations of the peer group (P.F.E.E.) perhaps play a more crucial role with regard to the student's perceived S.C.A.A. than realized at this level. The above will be addressed further in the section on implications.

Also, when there was a significant difference between the groups of interests in predicting the S.C.A.A., in addition to the three most significant school climate variables, only three others appeared significant. They were reported teacher press for competition (R.T.P.C.)



and perceived principal expectations and evaluations (P.Prin.E.E.) for students in high achieving schools (S.H-ACH.), and reported student press for competition (R.S.P.C.) and perceived principal expectations and evaluations (P.Prin.E.E.) for students in predominately white schools (WHITES).

Fourthly, the social-psychological variables, comprising school climate, affecting the S.C.A.A. of Whites were different from those affecting Blacks.

Therefore, the basic questions underlying this research were answered from the data collected and analyzed.

### Implications

This writer posits that the findings resulting from this research has vast implications for the educational process of all students in the school settings as they are presently realized (i.e. segregated and integrated). This study has, seemingly, begun to delineate some of the social-psychological processes which function within the school social environment; and, demonstrated some of the factors which might help explicate what happens in the school normative climate that would affect the student's perceptions of his ability to achieve academic success.

The theoretical perspectives-symbolic-interaction (self-other interaction), role theory, and reference group theory--underlying this study has illustrated how the educational process is social-psychological in nature; and, based upon the interaction with "significant others" who hold expectations and evaluations of the child as a learner, in his role of the student. Thus, the resultant behavior of these "significant others," based upon their expectations and evaluations,

indirectly influences the student's academic achievement, through their influencing the self-concept of the student. Meaning, that the expectations and evaluations the student perceives his "significant others" have of him, will directly affect his own perceptions of his academic ability, which will then, influence his academic achievement, either positively or negatively.

School climate, as a social-psychological entity does, indeed, manifest itself in schools that are: predominately black, predominately white; high-achieving and low achieving; high S.E.S. and low S.E.S.; fourth, fifth, and sixth grade; males and females. School climate was significantly different in schools that were predominately black, predominately white, high achieving and low achieving. However, more variation was accounted for by the school climate variables in predominately white schools and in high achieving schools than in predominately black schools and in low achieving schools. One salient intersection with reference to the above is that, the variance, not accounted for, could be due to one of two reasons: (1) there are social-psychological factors which have not been accounted for within the school setting and/or (2) social-psychological factors unaccounted for in the "outer" school setting which affects the "inner" school setting by influencing the student's self-concept of academic ability. Further research in this line of logic posited, is highly mandatory.

The above would apply to all eleven of the groups previously mentioned. However, it is most salient for the schools which accounted for the least variance (i.e. predominately blacks, and low achieving schools). This is not by chance alone. If one doubts the credence of

such a statement, all that is necessary would be to examine the public schools across this country. The resultant findings indicate that the majority of the predominately black schools are low achieving. Better still, in the entire state of Michigan, there are only two predominately black elementary schools which are achieving above the State mean. In essence, "reality" indicates that, seemingly, on an operational level, more is unknown than known about predominately black, and low achieving schools. This might imply that the educational process, seemingly would have to adapt their school policies and procedures accordingly, in order, to be more representative of the different school climates, obviously a reality, as they function within the respective, different types of schools (e.g. high achieving; low achieving).

Since the perceived peer expectations and evaluations (P.R.E.E.) was the first variable to show significance, in the least square step-wise deletion process, it is quite possible that the influence(s) of peer groups might be more significant at the elementary level than realized. This could also be a function of statistical artifact. Nevertheless, because of the, seemingly, inverse relationship between parents/peers with regard to elementary/secondary school, as posted here, and in previous research; in depth exploration is advocated.

Therefore, if a student's peer group relationships are more strongly influential in an "outer" rather than in an "inner" school setting, depending upon whether academic success is perceived as positive or negative, the student's S.C.A.A. and, seemingly, his academic achievement, would be influenced accordingly.

The implications that perceived teacher expectations and evaluations (P.T.E.E.) have in influencing the S.C.A.A. of the student; and possibly, his academic achievement, are seemingly, obvious. The school, through the agent of the teacher, provides the child with the knowledge and skills necessary to accomplish the goals he seeks. When the teacher's expectations and evaluations (P.T.E.E.) are perceived as negative, by the student, the results are similar to findings which are posited in the Rosenthal and Jacobson (1968) and Rist (1970) studies.

Although the role of the teacher is crucial in all grade levels, it is, especially so during the elementary school level due to the implications and effects it would have on the learner throughout his school career. Research evidence contend that ability grouping and tracking policies significantly influence the self-concept of the student; and thus, his academic achievement. Also, because the elementary schools are usually segregated, due to neighborhood segregation, the student populace is usually homogeneous; especially, in the low S.E.S. level. Since these are the formative years, this homogeneity affects the S.C.A.A., which in turn, has a crucial factor on later school development; especially, if the school is an integrated one. Meaning, that the student compares himself and his abilities to the other students in his class and/or in his school.

This would also have implications as to why the self-concept appears to be as high or higher for BLACKS than for WHITES. In the segregated school setting, their S.C.A.A. is based upon reference group membership. When their environment changes (i.e. integrated school) their reference group changes.

Previous research cited has depicted the relationship between S.C.A.A. and achievement, and the highly significant role of the parents in this process. Therefore, the three-way relationship among parents, teachers, and the peer group constitutes a social matrix within which the child has potentially diverse socialization experiences, especially regarding his academic performance. Thus, the implications in different school settings is apparently based upon which of the three "significant others" has the most influence on the student, as a learner.

Another implication depicting the school climate of the four groups (BLACKS, WHITES, S.H-ACH., S.L-ACH.,) is that, in addition to the three "significant others," reported teacher press for competition (R.T.P.C.) and perceived principal expectations and evaluations (P.Prin.E.E.) were predictive of S.C.A.A. in S.H-ACH.; and, reported student press for competition (R.S.P.C.) and P.Prin.E.E. were predictive of S.C.A.A. for students in predominately white schools (WHITES).

The above indicates that in addition to the "significant others," WHITES and S.H-ACH. have a support system of academic press for individual performance. Because R.S.P.C. is predictive of WHITES and R.T.P.C. is predictive of S.H-ACH., this indicates that, apparently, the press for competition is of a positive, more cooperative nature; whereby, the student's perception of his R.S.P.C. is supported by what he perceives is his R.T.P.C. In essence, the students in these schools are expected to succeed; therefore, their teacher's behavior reflects the above, accordingly. Since these school climate variables were not significant for BLACKS, and S.L-ACH., implications would be that the self-fulfilling prophecy functions more readily here. Only a small percentage of these schools' students are expected to succeed.

The fact that all elementary school settings (e.g. high S.E.S. and low achieving; low S.E.S. and high achieving) appear to be dominated by "female values" indicate that the school climate of elementary schools will have to include more male teachers, as role models, and/or teacher-student interaction will have to be perceived as a source of meaningful experience to the male students, especially those in the low S.E.S. level. This indicates that the teacher's style or technique of instruction will have to be flexible, taking into account the varying social backgrounds and cultural differences, of her students; and thus, attuned to the needs of her students. Otherwise, the self-fulfilling prophecy operates.

Trends from the significant interactions indicate how the school can instill negative feelings in the students. There is variation in the students S.C.A.A. at each successive grade level. These inferences, hypothetically, compared with Morse's (1964) findings indicate conflicting differences. The speculative inferences from this study's interaction effects indicate, that on the contrary, in most of the groups of interest tested (e.g. BLACKS, WHITES, etc.) the fifth grade strata populace, both males and females, reported their highest S.C.A.A. It varied at other grade levels. In addition to the speculative nature of the interaction inferences, comparison would not be totally similar in that he utilized a semantic differential instrument. Nevertheless, the fact that the S.C.A.A. varies at different grade levels indicates that something is functioning in the school climate to depict this characterization. Empirical validation would be most significant in helping to formulate strategies which could be used to influence the S.C.A.A. in a positive manner.

In the prediction of S.C.A.A. from the school climate variables, a significant percentage of the variance was accounted for. Previous research has illustrated how S.C.A.A. is more predictive of the black student's academic achievement, than a global self-concept instrument. In light of proposed anti-busing legislation and other confounding factors depicted in the "real world," strategies based upon altering present school settings might be a more salient manner in providing a positive school climate that would be responsive to the needs of all its students.

The findings in this study, presents a valid case for seriously challenging the primary rationale for justifying why the minority groups have a low rate of academic success. That rationale's systemic base lies in the fact that minority groups have low or negative self-concepts; and hence, low achievement because of their socio-economic circumstances.

In examining the findings of this study, alone, Blacks reported a higher S.C.A.A. than whites; students in the high S.E.S. level schools reported a higher S.C.A.A. than the students in the low S.E.S. level schools; females reported a higher S.C.A.A. than males. These findings were supported by the tenable inferences of the significant interactions in this study. Indications are, as perceived by this writer, and is supported in previous research as well as the present study, that the social environment of the school (school climate) is what makes the most significant difference in whether a student realizes academic success or not.

This is also supported by the findings in this research which indicates that school climate is differently predictive of the S.C.A.A. of

the student in schools that are: (1) predominately black, (2) predominately white, (3) high-achieving, and (4) low achieving. The most significant social-psychological variables, comprising school climate, accounting for this variation were the "significant others"--peers, teachers, and parents. This writer has previously indicated, in this section, the implications "underlying" the significance of those findings (S.H-ACH. and Whites, S.L-ACH. and BLACKS) in relation to perpetuation of those notions which adamantly survive in the educational process.

fact that, S.H-ACH. and WHITES also accounted for more of the variance in predicting the S.C.A.A. of the student than S.L-ACH. and Blacks, presents the interesting implication that "quality education" might be of a higher level in the former schools than even found in their counterpart schools (i.e. high-achieving black schools).

The fact that S.H-Ach. and whites had, in addition to "significant others," a supportive system (i.e. R.T.P.C., P.Prin.E.E. and R.S.P.C., P. Prin.E.E. respectively) emphasizing a positive and meaningful school experience for its students, implies that S.L-ACH. and BLACKS are not perceiving that they are receiving similar support from their school, as found in the former schools. Therefore, the climate configurations for black schools are different from white schools. Perhaps, under different methodological situations, some of those social-psychological variables might be deemed significant. Irregardless, the three school climate variables which, definitely, should be explored further, are the ones which were significant in S.H-ACH. and WHITES (i.e. R.T.P.C., R.S.P.C., and P.Prin. E.E.) The latter might not be significant in black schools, depending upon, if he is perceived as a "disciplinarian" or as an "other" who sets the tone of the academic norms in his school.



### Significance of Research

In view of the fact that this study is virginal, this line of research appears to be very crucial, as perceived by this writer. It has provided insight into a sphere which presently lacks such knowledge; the phenomenon of the self-concept of academic ability of the student (S.C.A.A.) in the elementary school. Also, through the manipulation of certain social-psychological and structural variables, our knowledge and understanding has been increased with regard to what kind of school climate might be necessary, which would be positively responsive to the needs of all its students.

Thus, the purpose of this present study was to provide insight into the areas presented above either in the form of generating further research and/or significant findings. Its specific intention was to determine if school climates affect the S.C.A.A. of students differently, in differential type of school settings (i.e. racial, S.E.S., achievement), and/or at different grade levels. If so, which of the social-psychological variables, comprising the school climate, most strongly affect the S.C.A.A. of the student; and hence, suggest what kind of atmosphere would encourage and reinforce education which would be positively responsive to the needs of all its students. Therefore, this research adds further credence to the line of research which posits that school climate is related to academic achievement; and, suggests which of the social-psychological variables, comprising the school climate deserve further exploration in elementary schools. Thereby, providing a systemic base to educators which would help them to determine, through the manipulation of certain social-psychological

and structural variables, a positive climate for all types of school settings. In essence, this writer perceives that theoretically, a positive school climate can be structured in any school setting; and that, hopefully, for the sake of our children, it is operationally viable.

### Limitations

Because of the many limitations of this research, the writer felt that they should be listed here, succeeding the discussion of results, and implications. This writer realized that the design of the study, which was intended to control those factors which confound comparative investigations within school settings, coupled with the non-random assignment of the sample, would necessitate qualifications of any results which may have emerged. Thus, all statements regarding the results are based on deduction, not fact. This study is more than exploratory, however; and, utility is still claimed because of the significance and impetus it has for continuing research effort in this area. Nevertheless, the following limitations should be perceived seriously, with regard to their modus operandi in this present study.

1. Because the sample was selectively based, generalizations of the findings are unable to be made beyond the specific schools studied. Meaning, due to the non-random assignment of the sample, the findings are applicable only to those schools whose selection criteria are the same as those delineated in this study.
2. Because the size of the sample was small, the variables which were not statistically significant cannot be discredited based on this fact, alone.

3. Because no systematic precautions or procedures were established with respect to missing data, the resultant findings could, possibly, be misrepresented or slanted due to the functioning of a methodological bias. For example, absenteeism may be random; but, if it is chronic, then this could be a systematic function which leads a school to be categorized in a certain manner.
4. The unit of analysis in this study is students. Although individual achievement scores were not available, achievement was based on mean school scores; and hence, ascribed on school attendance. Such a *modus operandi*, seemingly, leaves a lot to be desired, especially when one notes the homogeneous-heterogeneous nature of the school population with regard to achievement levels in schools which are identifiable by race or S.E.S. level. Whenever possible, it is best to have individual achievement data for the most accurate and meaningful analysis.
5. With regard to the questionnaire responses of the elementary school children, the validity of the instrument can be questioned. Since the instrument was designed to measure the perceptions of the student, there is concern as to whether the perceptions reported are accurate responses. Length and, perhaps, difficulty (for some students) of the questionnaire may have contributed to the above, if indeed significant.
6. In light of the contention encompassing the measurement of socio-economic status, the validity of its criteria is questioned, especially with regard to the students in black schools. There was a high non-response rate to this study's S.E.S. question. Although the State Assessment S.E.S. criteria was favorably correlated with the Duncan scale of S.E.S., the means gotten should still be viewed as approximations.
7. Because the sample was selectively based upon the specific characteristics of race, S.E.S. level, and achievement level, it is possible that in trying to control for those factors which might have confounded effects; the school climate variables, which may have been significant in a random sample, may not have been manifested in this study, due to our sample selection criteria.
8. The school, as a socio-cultural system, was not examined in this present study. The format of this present study coupled with one or more descriptive methods (e.g. participant observation; case study) would have enabled the investigator to make more than just speculative or inferential statements regarding the "outer" and "inner" school dynamics that facilitate or impede academic achievement. This is most salient when schools are characterized as attaining low achievement; but, achieve academic success.

In addition, the peer group plays a significant role in influencing the S.C.A.A; especially for the students in predominately black schools. They apparently, as stated by one of the university's sociologists, "make normative demands upon (elementary school) children about school achievement." The fact that there is a "growing body of literature and opinion" which addresses itself to the quantitative methods and/or criteria used to measure academic success or failure (i.e. state wide tests, achievement scores, questionnaires, etc.) indicates that the validity of such criteria is being questioned; especially its applicability to the minority student.

Many schools, and the number is growing, refuse to participate. This norm of non-cooperation with any official personnel results from lack of trust, which is derived from not knowing how this information will be used, coupled with the frustration of being "over-researched." This phenomenon manifested itself, in the present study, in one of the only two high-achieving black schools (School 11) in the State of Michigan. For further explication, refer to Henderson (1972:62) and Henderson (1973).

This is a real concern in our educational process today. It was noted, in limitations, the questionable validity delineating the S.E.S. criteria, based upon the State Assessment test, when responded by students. There was a high non-response rate, based on this question in the instrument; especially in the black schools. Even though the criteria correlated highly with the Duncan scale, it is still perceived that the means gotten be viewed as approximations. Thus, for the purpose of formulating and testing the hypotheses that were to be measured in this research, the investigator had to assume the validity of the criteria, as applied to this research.

### Recommendations

As previously stated, the methodological limitations inherent in this study made the findings tenable; and therefore, based on inferences, and not fact. Nevertheless, this analysis, although virginal, was more than exploratory and its significance is still claimed. Therefore, the following recommendations are derived, based upon the findings in this present study.

1. In future research endeavors into the exploration of the elementary school climate, a random sample should be used. This present analysis used a non-random sample; and, it suggested that for definitive results, in terms of generalizability, that the former sample selection criteria be utilized.
2. With regard to the sample selection, future research should also include a much larger sample from as many different types of school settings as feasibly possible, from as many different ethnic and minority groups as possible and from the different other grade levels. Meaning, that although this investigator perceives that the elementary school climate is the most crucial climate in terms of student academic development, strategies will have to be developed to eradicate the dysfunctionality of our junior high and high school students, also. Therefore, social-psychological analysis of their respective school climates is, also, of utmost importance.
3. Because the school climate may not constitute the "building" alone, the socio-cultural aspects of school climate should be analyzed to determine the relationship between the inter- and intra school climate. In order to accomplish this, this investigator stresses that participant observation, case study and other descriptive methodology take preference over, and/or are used in addition to, any quantitative methodology utilized.
4. Because of the increasing concern with the validity of standardized achievement and S.E.S. criteria, especially in its applicability to the minority student, this investigator highly stresses that categorization of the sample should utilize S.E.S. and achievement criteria relative to their strata of population, in place of, or, if not, in addition to any standardized criteria which must be used.

Based upon this present analysis, it seems highly improbable viability maintained in the stereotypic view that the low-achievement of minority and/or poor children is due to their low self-concept based upon their socio-economic circumstances. The school climate which exists in each school, may be different, according to each representative climate configuration present in each school.

However, theoretically, school climates can be positively meaningful and enhancingly responsive to all of its students based upon interaction between self-other relationships (symbolic-interaction) with the most significant/important persons in the student's academic life, and based upon the perceived expectations, evaluations, and behavior of those "significant others" (reference group theory), the behavior of the student will be influenced, which will be reflected in the actions of the individual in his role of the student (role theory). On an operational level, school climates can be, meaningfully, and accurately measured. Empirically, based upon the resultant findings of this present research, it is perceived that implementation, due to manipulation of significant social-psychological factors functioning in the school climate of the different types of schools, of a positive and responsive nature can be structured in any school setting. After all, whether overtly or covertly, school climates have been functioning successfully, in the opposite direction, for many of our school children, for many years.

Finally, the school will have to decide whether or not their goal is to provide a quality education for all of their students, or to provide "babysitting" services by socializing the students according

to the norms of the greater society at large; thereby, perpetuating and maintaining certain norms now advocated. Meaning, in the words of Bane and Jencks, the real reason for the dysfunctionality of so many of our nation's schools does not lie in the facade rationale that these children are uneducable; but, in the racist nature of our society and its institutions.

. . . differences between schools have very little effect on what happens to students after they graduate . . . if we are interested solely in equalizing opportunities for economic success, making schools more equal will not help very much. If we want an integrated society, we ought to have integrated schools, which make people feel they have a stake in the well-being of other races. If we want a society in which people are free to segregate themselves, then we should apply that principle to our schools. There is, however, no compelling reason to treat schools differently from other social arrangements, including neighborhoods . . . until we change the political and moral premises on which most Americans now operate (by) establish(ing) political control over the economic institutions that shape our society . . . like the schools, this pattern will continue (Bane and Jencks, 1972:37, 41, 42).

Therefore, this present analysis, although tenable "statistically," has significant and "reality" implications for theory, future research, and implementation regarding the educational impact, the elementary school environment has on the learner; and, the significance of the self-concept of academic ability (S.C.A.A.) in this process. In conclusion, it is hoped that this research will serve as a "spring-board" impetus with regard to future research endeavors in this realm of study.

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## APPENDICES



**APPENDIX A**

**STUDENT QUESTIONNAIRE**

**SCHOOL SOCIAL ENVIRONMENT STUDY  
STUDENT QUESTIONNAIRE**

Sponsored by

Michigan Department of Education  
and  
Michigan State University

Dr. Wilbur Brookover, Professor of Sociology and Education, Project Director

**DIRECTIONS:** We are trying to learn more about students and their work in schools. We would, therefore, like for you to respond to the following questions. This is not a test of any sort and will not affect your work in school. Your teacher and your principal will not see your answers. There are no right or wrong answers, we simply want you to tell us your answer to each question.

1. Name \_\_\_\_\_

PLEASE ANSWER THE FOLLOWING QUESTIONS BY CIRCLING THE NUMBER ON THE RIGHT OF YOUR BEST ANSWER TO THE QUESTION. PICK ONLY ONE ANSWER FOR EACH QUESTION!

2. How old were you on your last birthday?

9 years old	.....	1.
10 years old	.....	2.
11 years old	.....	3.
12 years old	.....	4.
13 years old	.....	5.

3. Are you a boy or girl?

boy	.....	1.
girl	.....	2.

4. What grade are you in?

3rd grade	.....	1.
4th grade	.....	2.
5th grade	.....	3.
6th grade	.....	4.
7th grade	.....	5.

5. Please write your teacher's name.

\_\_\_\_\_

6. Please write the name of your school.

\_\_\_\_\_

7. How many years have you been at this school?

- |                  |       |    |
|------------------|-------|----|
| Less than 1 year | ..... | 1. |
| 2 years          | ..... | 2. |
| 3 years          | ..... | 3. |
| 4 years          | ..... | 4. |
| 5 years          | ..... | 5. |
| 6 years          | ..... | 6. |
| 7 years or more  | ..... | 7. |

If your father does not live with you or if he is not alive, please answer this question for the person in your house who makes the most money.

8. What type of work does your father do? (Give a short description of his job)

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THE FOLLOWING QUESTIONS ARE TO BE ANSWERED BY CIRCLING THE NUMBER ON THE RIGHT OF THE CORRECT ANSWER. REMEMBER, NO ONE WILL SEE YOUR ANSWERS EXCEPT THOSE OF US FROM MICHIGAN STATE UNIVERSITY, SO PLEASE TELL US JUST WHAT YOU THINK. (Pick only one answer for each question)

9. If you could go as far as you wanted in school, how far would you like to go?

- |                               |       |    |
|-------------------------------|-------|----|
| Finish grade school           | ..... | 1. |
| Go to high school for a while | ..... | 2. |
| Finish high school            | ..... | 3. |
| Go to college for a while     | ..... | 4. |
| Finish college                | ..... | 5. |

10. How many students in this school try hard to get a good grade on their weekly tests?

- |                             |       |    |
|-----------------------------|-------|----|
| Almost all of the students  | ..... | 1. |
| Most of the students        | ..... | 2. |
| Half of the students        | ..... | 3. |
| Some of the students        | ..... | 4. |
| Almost none of the students | ..... | 5. |

11. How many students in this school will work hard to get a better grade on the weekly tests than their friends do?

- |                             |       |    |
|-----------------------------|-------|----|
| Almost all of the students  | ..... | 1. |
| Most of the students        | ..... | 2. |
| Half of the students        | ..... | 3. |
| Some of the students        | ..... | 4. |
| Almost none of the students | ..... | 5. |

12. How many students in this school don't care if they get bad grades?

- |                             |       |    |
|-----------------------------|-------|----|
| Almost all of the students  | ..... | 1. |
| Most of the students        | ..... | 2. |
| Half of the students        | ..... | 3. |
| Some of the students        | ..... | 4. |
| Almost none of the students | ..... | 5. |

13. How many students in this school do more studying for weekly tests than they have to?
- |                             |          |
|-----------------------------|----------|
| Almost all of the students  | ..... 1. |
| Most of the students        | ..... 2. |
| Half of the students        | ..... 3. |
| Some of the students        | ..... 4. |
| Almost none of the students | ..... 5. |
14. If most of the students here could go as far as they wanted in school how far would they go?
- |                               |          |
|-------------------------------|----------|
| Finish grade school           | ..... 1. |
| Go to high school for a while | ..... 2. |
| Finish high school            | ..... 3. |
| Go to college for a while     | ..... 4. |
| Finish college                | ..... 5. |
15. If the teacher that you like the best told you that you were a poor student how would you feel?
- |                                 |          |
|---------------------------------|----------|
| I'd feel very bad               | ..... 1. |
| I'd feel somewhat bad           | ..... 2. |
| It wouldn't bother me very much | ..... 3. |
| It wouldn't bother me at all    | ..... 4. |
16. How important is it to you to be a good student?
- |  |          |
|--|----------|
| It's the most important thing I can do                 | ..... 1. |
| It's important, but other things are just as important | ..... 2. |
| It's important, but other things are more important    | ..... 3. |
| It's not very important                                | ..... 4. |
17. If your parents told you that you were a poor student, how would you feel?
- |                                 |          |
|---------------------------------|----------|
| I'd feel very bad               | ..... 1. |
| I'd feel somewhat bad           | ..... 2. |
| It wouldn't bother me very much | ..... 3. |
| It wouldn't bother me at all    | ..... 4. |
18. If your best friend told you that you were a poor student, how would you feel?
- |                                 |          |
|---------------------------------|----------|
| I'd feel very bad               | ..... 1. |
| I'd feel somewhat bad           | ..... 2. |
| It wouldn't bother me very much | ..... 3. |
| It wouldn't bother me at all    | ..... 4. |
19. How do you think most of the students in this class react when one of you does a bad job on school work?
- |  |          |
|--|----------|
| They feel badly and want to help him (her) do better | ..... 1. |
| They feel sorry, but don't say anything              | ..... 2. |
| They really don't care                               | ..... 3. |
| They are secretly happy that it happened             | ..... 4. |

20. How do you think most of the teachers in this school react when one of the students does a bad job on school work?

They feel badly and want to help him (her) do better	..... 1.
They feel badly, but don't really help him (her)	..... 2.
They get mad and tell him (her) to start working harder	..... 3.
They get mad but don't say anything	..... 4.
They really don't care	..... 5.

21. What do you think most students say when a student has done good or better than he usually does in his school work?

He was just lucky, he won't do that good next time	..... 1.
Anyone could do it if they studied	..... 2.
I wish I could do as well as he did	..... 3.
I'm glad for him I hope he does as well next time	..... 4.

22. How important do most of the students in this class feel it is to do well in school work?

Almost everybody thinks it is the most important thing you can do.	..... 1.
Most students think it is quite important to do well	..... 2.
Doing well in school work is a good thing but other things are important too.	..... 3.
Most students don't seem to care how well they do, but it's okay for others to do well.	..... 4.
Most students don't seem to care how good they do, but they don't like other students to do good.	..... 5.

23. How important do you think most of the students in this school feel it is to do well in school work?

Almost everybody thinks it is the most important thing you can do.	..... 1.
Most students think it is quite important to do well	..... 2.
Doing well in school work is a good thing but other things are important too.	..... 3.
Most students don't seem to care how well they do, but it's okay for others to do well	..... 4.
Most students don't seem to care how good they do, but they don't like other students to do good.	..... 5.

PLEASE ANSWER THE FOLLOWING QUESTIONS BY CIRCLING THE NUMBER WHICH BEST ANSWERS THE QUESTION FOR YOU. PICK ONLY ONE ANSWER FOR EACH QUESTION.

24. Think about the boys or girls you play with at recess or after school. How often do they read in their free time?

Very often	..... 1.
Quite a bit	..... 2.
Sometimes, but not very much	..... 3.
Seldom	..... 4.
Almost never	..... 5.

25. When you and your friends are together after school or on week-ends, how often do you talk about your school work?

Very often	.....	1.
Quite a bit	.....	2.
Sometimes, but not very much	.....	3.
Seldom	.....	4.
Almost never	.....	5.

26. People like me will not have much of a chance to do what we want to in life.

Strongly agree	.....	1.
Agree	.....	2.
Disagree	.....	3.
Strongly disagree	.....	4.

27. People like me will never do well in school even though we try hard.

Strongly agree	.....	1.
Agree	.....	2.
Disagree	.....	3.
Strongly disagree	.....	4.

28. I can do well in school if I work hard.

Strongly agree	.....	1.
Agree	.....	2.
Disagree	.....	3.
Strongly disagree	.....	4.

29. In this school, students like me don't have any luck.

Strongly agree	.....	1.
Agree	.....	2.
Disagree	.....	3.
Strongly disagree	.....	4.

30. You have to be lucky to get good grades in this school.

Strongly agree	.....	1.
Agree	.....	2.
Disagree	.....	3.
Strongly disagree	.....	4.

31. Think of your friends. Do you think you can do school work better, the same, or poorer than your friends?

Better	.....	1.
The same	.....	2.
Poorer	.....	3.

32. Think of the students in your class. Do you think you can do school work better, the same, or poorer than the students in your class?

Better	.....	1.
The same	.....	2.
Poorer	.....	3.

33. When you finish high school, do you think you will be one of the best students, about the same as most of the students, or below most of the students?
- |  |          |
|--|----------|
| One of the best                        | ..... 1. |
| About the same as most of the students | ..... 2. |
| Below most of the students             | ..... 3. |
34. Do you think you could finish college?
- |   |          |
|---|----------|
| Yes, with no difficulty at all                    | ..... 1. |
| Yes, as long as I work hard                       | ..... 2. |
| Yes, but I will probably have a lot of difficulty | ..... 3. |
| No, it will be too difficult                      | ..... 4. |
35. If you went to college, do you think you would be one of the best students, about the same as most of the students, or below most of the students?
- |  |          |
|--|----------|
| One of the best                        | ..... 1. |
| About the same as most of the students | ..... 2. |
| Below most of the students             | ..... 3. |
36. If you want to be a doctor or a teacher, you need more than 4 years of college. Do you think you could do that?
- |   |          |
|---|----------|
| Yes, with no difficulty at all                    | ..... 1. |
| Yes, as long as I work hard                       | ..... 2. |
| Yes, but I will probably have a lot of difficulty | ..... 3. |
| No, it will be too difficult                      | ..... 4. |
37. Forget how your teachers mark your work. How good do you think your own work is?
- |  |          |
|--|----------|
| Excellent                              | ..... 1. |
| Good                                   | ..... 2. |
| About the same as most of the students | ..... 3. |
| Below most of the students             | ..... 4. |
| Poor                                   | ..... 5. |
38. What marks do you think you really can get if you try?
- |            |          |
|------------|----------|
| Mostly A's | ..... 1. |
| Mostly B's | ..... 2. |
| Mostly C's | ..... 3. |
| Mostly D's | ..... 4. |
| Mostly E's | ..... 5. |

NOW WE WOULD LIKE YOU TO ANSWER SOME QUESTIONS ABOUT PEOPLE THAT YOU KNOW.  
ANSWER THESE QUESTIONS BY CIRCLING THE NUMBER AS YOU DID IN THE OTHER  
QUESTIONS. (Pick only one answer)

39. When you do good work in school who do you most want to know about it?
- |                   |          |
|-------------------|----------|
| mother            | ..... 1. |
| father            | ..... 2. |
| brother or sister | ..... 3. |
| teacher           | ..... 4. |
| friend            | ..... 5. |
| other _____       | ..... 6. |
- (specify)

40. Who is the most interested in your work in school?

- |                   |       |    |
|-------------------|-------|----|
| Mother            | ..... | 1. |
| Father            | ..... | 2. |
| Brother or sister | ..... | 3. |
| Teacher           | ..... | 4. |
| Friend            | ..... | 5. |
| Other _____       | ..... | 6. |
| (Specify)         |       |    |

NOW WE WOULD LIKE YOU TO ANSWER SOME QUESTIONS ABOUT YOUR BEST FRIEND. STOP FOR A MINUTE AND THINK WHO YOUR BEST FRIEND IS. ANSWER THESE QUESTIONS BY CIRCLING THE NUMBER AS YOU DID IN THE OTHER QUESTIONS. REMEMBER, YOUR BEST FRIEND WILL NOT SEE YOUR ANSWERS. (Pick only one answer)

41. How far do you think your best friend believes you will go in school?

- |                               |       |    |
|-------------------------------|-------|----|
| Finish grade school           | ..... | 1. |
| Go to high school for a while | ..... | 2. |
| Go to college for a while     | ..... | 3. |
| Finish college                | ..... | 4. |

42. How good a student does your best friend expect you to be in school?

- |                                  |       |    |
|----------------------------------|-------|----|
| One of the best                  | ..... | 1. |
| Better than most of the students | ..... | 2. |
| Same as most students            | ..... | 3. |
| Not as good as most students     | ..... | 4. |
| He doesn't really care           | ..... | 5. |

43. Think of your best friend. Would your best friend say you can do school work better, the same, or poorer than other people your age?

- |          |       |    |
|----------|-------|----|
| Better   | ..... | 1. |
| The same | ..... | 2. |
| Poorer   | ..... | 3. |

44. Would your best friend say that your grades would be with the best, same as most, or below most of the students when you graduate from high school?

- |               |       |    |
|---------------|-------|----|
| With the best | ..... | 1. |
| Same as most  | ..... | 2. |
| Below most    | ..... | 3. |

45. Does your best friend think you could finish college?

- |       |       |    |
|-------|-------|----|
| Yes   | ..... | 1. |
| Maybe | ..... | 2. |
| No    | ..... | 3. |

46. Remember you need more than four years of college to be a teacher or doctor. Does your best friend think you could do that?

- |       |       |    |
|-------|-------|----|
| Yes   | ..... | 1. |
| Maybe | ..... | 2. |
| No    | ..... | 3. |



47. What grades does your best friend think you can get?

Mostly A's ..... 1.  
 Mostly B's ..... 2.  
 Mostly C's ..... 3.  
 Mostly D's ..... 4.  
 Mostly E's ..... 5.

NOW WE WOULD LIKE TO ASK SOME QUESTIONS ABOUT THE TEACHERS IN THIS SCHOOL. ANSWER THESE QUESTIONS AS YOU ANSWERED THE OTHER ONES BY CIRCLING THE NUMBER. REMEMBER, NO TEACHER WILL SEE YOUR ANSWERS SO BE AS HONEST AS YOU CAN.

48. Of the teachers that you know in this school how many tell students to try hard to do better on tests?

Almost all of the teachers ..... 1.  
 Most of the teachers ..... 2.  
 Half of the teachers ..... 3.  
 Some of the teachers ..... 4.  
 Almost none of the teachers ..... 5.

49. How many teachers in this school tell students to try and get better grades than their classmates?

Almost all of the teachers ..... 1.  
 Most of the teachers ..... 2.  
 Half of the teachers ..... 3.  
 Some of the teachers ..... 4.  
 Almost none of the teachers ..... 5.

50. Of the teachers that you know in this school how many don't care if the students get bad grades?

Almost all of the teachers ..... 1.  
 Most of the teachers ..... 2.  
 Half of the teachers ..... 3.  
 Some of the teachers ..... 4.  
 Almost none of the teachers ..... 5.

51. Of the teachers that you know in this school how many tell students to do extra work so that they can get better grades?

Almost all of the teachers ..... 1.  
 Most of the teachers ..... 2.  
 Half of the teachers ..... 3.  
 Some of the teachers ..... 4.  
 Almost none of the teachers ..... 5.

52. Of the teachers that you know in this school how many make the students work too hard ?

Almost all of the teachers ..... 1.  
 Most of the teachers ..... 2.  
 Half of the teachers ..... 3.  
 Some of the teachers ..... 4.  
 Almost none of the teachers ..... 5.

53. Of the teachers that you know in this school how many don't care how hard the student works, as long as he passes?

Almost all of the teachers	..... 1.
Most of the teachers	.....2.
Half of the teachers	..... 3.
Some of the teachers	..... 4.
Almost none of the teachers	..... 5.

54. If the teachers in this school think a student can't do good work, how many will try to make him work hard anyway?

Almost all of the teachers	..... 1.
Most of the teachers	..... 2.
Half of the teachers	..... 3.
Some of the teachers	..... 4.
Almost none of the teachers	..... 5.

55. Of the teachers that you know in this school, how many think it is not good to ask more work from a student than he is able to do?

Almost all of the teachers	..... 1.
Most of the teachers	..... 2.
Half of the teachers	..... 3.
Some of the teachers	..... 4.
Almost none of the teachers	..... 5.

56. Of the teachers that you know in this school, how many believe that students should be asked to do only work which they are able to do?

Almost all of the teachers	..... 1.
Most of the teachers	..... 2.
Half of the teachers	..... 3.
Some of the teachers	..... 4.
Almost none of the teachers	..... 5.

57. How far do you think the teacher you like the best believes you will go in school?

Finish grade school	..... 1.
Go to high school for a while	..... 2.
Finish high school	..... 3.
Go to college for a while	..... 4.
Finish college	..... 5.

58. How good of a student does the teacher you like the best expect you to be in school?

One of the best	..... 1.
Better than most of the students	..... 2.
Same as most students	..... 3.
Not as good as most students	..... 4.
She doesn't really care	..... 5.

59. Think of your teacher. Would your teacher say you can do school work better, the same, or poorer than other people your age?

Better ..... 1.  
The same ..... 2.  
Poorer ..... 3.

60. Would your teacher say that your grades would be with the best same as most, or below most of the students when you graduate from high school?

With the best ..... 1.  
Same as most ..... 2.  
Below most ..... 3.

61. Does your teacher think you could finish college?

Yes ..... 1.  
Maybe ..... 2.  
No ..... 3.

62. Remember you need more than four years of college to be a teacher or doctor. Does your teacher think you could do that?

Yes ..... 1.  
Maybe ..... 2.  
No ..... 3.

63. What grades does your teacher think you can get?

Mostly A's ..... 1.  
Mostly B's ..... 2.  
Mostly C's ..... 3.  
Mostly D's ..... 4.  
Mostly E's ..... 5.

NOW, WE WOULD LIKE YOU TO ANSWER SOME QUESTIONS ABOUT YOUR PARENTS.  
ANSWER THEM THE SAME WAY YOU ANSWERED THE OTHER ONES.

64. How far do you think your parents believe you will go in school?

Finish grade school ..... 1.  
Go to high school for a while ..... 2.  
Finish high school ..... 3.  
Go to college for a while ..... 4.  
Finish college ..... 5.

65. How good of a student do your parents expect you to be in school?

One of the best ..... 1.  
Better than most of the students ..... 2.  
Same as most of the students ..... 3.  
Not as good as most of the students ..... 4.  
They don't really care ..... 5.

66. Think of your mother and father. Do your mother and father say you can do school work better, the same, or poorer than your friends?

Better ..... 1.  
Same as most ..... 2.  
Poorer ..... 3.

67. Would your mother and father say that your grades would be with the best, same as most, or below most of the students when you finish high school?

The best ..... 1.  
Same as most ..... 2.  
Below most ..... 3.

68. Do they think you could finish college?

Yes ..... 1.  
Maybe ..... 2.  
No ..... 3.

69. Remember, you need more than four years of college to be a teacher or doctor. Do your mother and father think you could do that?

Yes ..... 1.  
Maybe ..... 2.  
No ..... 3.

70. What grades do your mother and father think you can get?

Mostly A's ..... 1.  
Mostly B's ..... 2.  
Mostly C's ..... 3.  
Mostly D's ..... 4.  
Mostly E's ..... 5.

NOW WE WANT TO ASK YOU SOME QUESTIONS ABOUT THE PRINCIPAL OF THIS SCHOOL. REMEMBER, YOUR PRINCIPAL WILL NOT SEE YOUR ANSWERS.

71. How many students in this school do you think the principal believes can get high grades?

Almost all of the students ..... 1.  
Most of the students ..... 2.  
Half of the students ..... 3.  
Some of the students ..... 4.  
Almost none of the students ..... 5.

72. How do you think your principal would grade the work of the students in this school, compared to other schools?

Would grade it much better ..... 1.  
Would grade it somewhat better..... 2.  
Would grade it the same ..... 3.  
Would grade it somewhat lower ..... 4.  
Would grade it much lower ..... 5.

73. How many of the students in this school do you think the principal believes will finish high school?

Almost all of the students ..... 1.  
Most of the students ..... 2.  
Half of the students ..... 3.  
Some of the students ..... 4.  
Almost none of the students ..... 5.

74. How many of the students in this school do you think the principal believes will go to college?
- |                             |          |
|-----------------------------|----------|
| Almost all of the students  | ..... 1. |
| Most of the students        | ..... 2. |
| Half of the students        | ..... 3. |
| Some of the students        | ..... 4. |
| Almost none of the students | ..... 5. |
75. How many of the students in this school do you think the principal believes will finish college?
- |                             |          |
|-----------------------------|----------|
| Almost all of the students  | ..... 1. |
| Most of the students        | ..... 2. |
| Half of the students        | ..... 3. |
| Some of the students        | ..... 4. |
| Almost none of the students | ..... 5. |
76. When I do a good job on my school work, I am more popular with other students.
- |                             |          |
|-----------------------------|----------|
| Yes                         | ..... 1. |
| No                          | ..... 2. |
| Doesn't make any difference | ..... 3. |
77. If I do well in school, it will be easier for me to get the job I want when I graduate.
- |                |          |
|----------------|----------|
| Yes            | ..... 1. |
| No             | ..... 2. |
| Doesn't matter | ..... 3. |
78. My parents allow me greater freedom when I do well in school.
- |                |          |
|----------------|----------|
| Yes            | ..... 1. |
| No             | ..... 2. |
| Doesn't matter | ..... 3. |
79. If you came home with a good report card, what would your parents most likely do?
- |                                      |          |
|--------------------------------------|----------|
| Nothing in particular                | ..... 1. |
| Praise me                            | ..... 2. |
| Give me special privileges           | ..... 3. |
| Give me money or some special reward | ..... 4. |
| Other _____                          | ..... 5. |
- (specify)
80. If you came home with a poor report card, what would your parents most likely do?
- |                                |          |
|--------------------------------|----------|
| Nothing in particular          | ..... 1. |
| Scold me                       | ..... 2. |
| Take away privileges           | ..... 3. |
| Punish me severely in some way | ..... 4. |
| Other _____                    | ..... 5. |
- (specify)
81. Sometimes what you want to happen is not what you think will happen. How far do you think you will go in school?
- |                               |          |
|-------------------------------|----------|
| Finish grade school           | ..... 1. |
| Go to high school for a while | ..... 2. |
| Finish high school            | ..... 3. |
| Go to college for a while     | ..... 4. |
| Finish college                | ..... 5. |

## **APPENDIX B**

### **SOCIO-ECONOMIC STATUS QUESTIONS USED IN STATE ASSESSMENT TEST 1969-1970**

SOCIO-ECONOMIC STATUS QUESTIONS USED IN STATE  
ASSESSMENT TEST 1969-1970

General Information Questions

Does your family have a dictionary? (SES)

- (A) Yes
- (B) No
- (C) I don't know

Does your family have an encyclopedia? (SES)

- (A) Yes
- (B) No
- (C) I don't know

Does your family have a vacuum cleaner? (SES)

- (A) Yes
- (B) No
- (C) I don't know

Does your family have a typewriter? (SES)

- (A) Yes
- (B) No
- (C) I don't know

Does your family have a dishwashing machine? (SES)

- (A) Yes
- (B) No
- (C) I don't know

How many cars does your family have? (SES) (Don't count trucks.)

- (A) None
- (B) One
- (C) Two or more

Do you have your own wrist watch? (SES)

- (A) Yes
- (B) No

Has anyone in your family traveled in an airplane in the last year?  
(SES)

- (A) Yes
- (B) No
- (C) I don't know

How much education does your father have? (SES)

- (A) Grade school--Grades 1-8
- (B) High school--Grades 9-12
- (C) College or special training after high school
- (D) I don't know

How much education does your mother have? (SES)

- (A) Grade school--Grades 1-8
- (B) High school--Grades 9-12
- (C) College or special training after high school
- (D) I don't know

How many different schools have you gone to since you started first  
grade? Count only the schools which you went to during the day.  
(SES, Att.A, Att.B,)

- (A) One--only this one
- (B) Two
- (C) Three
- (D) Four
- (E) Five or more

What is the highest grade you want to finish in school?  
(SES, Att.A, Att.B, Att.C)

- (A) I don't want to go to school any more
- (B) I only want to finish high school
- (C) I want to go to a special school, like a nursing or business school
- (D) I want to go to college

Are you planning to go to college? (SES, Att.A, Att.B, Att.C)

- (A) Yes
- (B) No
- (C) I'm not sure



## **APPENDIX C**

### **DUNCAN'S SOCIO-ECONOMIC INDEX SCORE OF SCHOOLS IN COMPARISON WITH THE STATE ASSESSMENT SOCIO-ECONOMIC SCORE OF SCHOOLS**

TABLE 21.--Duncan's Socio-Economic Index Score in Schools in Comparison with the State Assessment Socio-Economic Score of Schools

School	Duncan S.E.S. Index	S.E.S. Level	State Assessment S.E.S. Score
1	50.5	High	55.1
2	41.6	High	55.2
3	51.8	High	54.4
4	48.7	High	54.9
5	30.0	High	49.4
6	50.2	High	50.1
7	32.4	Low	43.2
8	26.0	Low	44.9
9	36.5	Low	46.6
10	29.0	Low	46.8
11	**		**
12	17.76	High	49.2
13	20.1	Low	43.8
14	18.8	Low	46.7
15	64.9	High	61.3
16	40.4	High	52.9
17	28.7	Low	47.0
18	19.1	Low	46.7

\*\*School 11 not available for data collection.

**APPENDIX D**

**SCALE INTERCORRELATIONS**



## SCALE INTERCORRELATIONS

## Reported Student Press Competition or Individual Performance

10	1.000		
11	.362**	1.000	
12	-.144	.073	1.000
13	.241*	.251*	.022

## Importance of Self-Identity Student or Role

15	1.000		
16	.244*	1.000	
17	.552**	.305**	1.000
18	.424**	.138	.405**

## Academic Norms of School

19	1.000			
20	.172	1.000		
21	.183	-.059	1.000	
22	.275**	.150	-.094	1.000
23	.283**	.209*	-.136	.497**

## Sense of Control

26	1.000			
27	.347**	1.000		
28	-.035	-.116	1.000	
29	.281**	.359**	-.125	1.000
30	.237*	.324**	-.137	.302 **

## Self-Concept Academic Ability

31	1.000						
32	.434**	1.000					
33	.237*	.239*	1.000				
34	.149	.164	.276**	1.000			
35	.212*	.236*	.450**	.231*	1.000		
36	.139	.135	.236*	.395**	.249*	1.000	
37	.257**	.293**	.273**	.208*	.307**	.195*	1.000
38	.159	.194	.229*	.211*	.243*	.201*	.342**

### Perceived Best Friend Expectation and Evaluation

41	1.000					
42	-.157	1.000				
43	-.146	.309**	1.000			
44	-.200*	.410**	.412**	1.000		
45	-.310**	.280**	.263**	.254**	1.000	
46	-.257**	.224*	.241*	.244*	.520**	1.000
47	-.245*	.300**	.337**	.341**	.335**	.333**

### Reported Teacher Press Competition or Individual Performance

48	1.000		
49	.332**	1.000	
51	.374**	.281**	1.000
54	.183	.211*	.227*

### Perceived Teacher Expectation and Evaluation

57	1.000					
58	-.195*	1.000				
59	-.142	.273**	1.000			
60	-.202*	.360**	.386**	1.000		
61	-.241*	.235*	.240*	.298**	1.000	
62	-.235*	.269**	.238*	.318**	.558**	1.000
63	-.270**	.319**	.295**	.305**	.296**	.328**

### Perceived Parent Expectation and Evaluation

64	1.000					
64	-.229*	1.000				
66	-.225*	.414**	1.000			
67	-.170	.400**	.458**	1.000		
68	-.306**	.282**	.254**	.242*	1.000	
69	-.296**	.220*	.211*	.238*	.478**	1.000
70	-.281**	.337**	.352**	.367**	.306**	.241*

\* Significant at or above .05

\*\* Significant at or above .01

## **APPENDIX E**

### **CORRELATION MATRICES OF VARIABLES IN STUDENTS WITHIN GROUPS OF INTEREST**

TABLE 22 --Matrix of Correlation Coefficients of Variables in Students within All Schools

[illegible]



TABLE 23--Matrix of Correlation Coefficients of Variables in Students within Predominately Black Schools

[illegible]

TABLE 24.--Matrix of Correlation Coefficients of Variables in Students within Predominantly White Schools

[illegible]

TABLE 25. --Matrix of Correlation Coefficients of Variables in Students within High Achieving Schools

[illegible]

TABLE 26--Matrix of Correlation Coefficients of Variables in Students within Low Achieving Schools

[illegible]

TABLE 27.--Matrix of Correlation Coefficients of Variables in Students within High S.E.S. Schools

[illegible]



**TABLE 29.--Matrix of Correlation Coefficients of Variables in Students within the Fourth Grade**

[illegible]

TABLE 3Q --Matrix of Correlation Coefficients of Variables within the Fifth Grade

[illegible]



TABLE 31.--Matrix of Correlation Coefficients of Variables within the Sixth Grade

[illegible]

TABLE 32 --Matrix of Correlation Coefficients of Variables in Male Students

[illegible]

TABLE 33--Matrix of Correlation Coefficients of Variables in Female Students

[illegible]

## **APPENDIX F**

### **ANALYSIS OF REGRESSION OF ALL GROUPS IN THE ANALYSIS**

TABLE 34.--Analysis of Regression--All Students (N=2626)

Source	Mean Square	d.f.	F
Regression	1.495	9	249.1666*
Error	.006	2617	
Total	1.501	2626	

\*P  $\leq$  .05

TABLE 35.--Analysis of Regression--Black School's Students (N=1339)

Source	Mean Square	d.f.	F
Regression	.719	9	119.833*
Error	.006	1329	
Total	.725	1338	

\*P  $\leq$  .05

TABLE 36.--Analysis of Regression--White School's Students (N = 1288)

Source	Mean Square	d.f.	F
Regression	.715	9	143.000*
Error	.005	1278	
Total	.720	1287	

\*P  $\leq$  .05

TABLE 37.--Analysis of Regression--High Achievement School's Students (N=1067)

Source	Mean Square	d.f.	F
Regression	.615	9	123.000*
Error	.005	1057	
Total	.620	1066	

\*P  $\leq$  .05

TABLE 38.--Analysis of Regression--Low Achievement School's Students (N=1560)

Source	Mean Square	d.f.	F
Regression	.897	9	128.143*
Error	.007	1550	
Total	.904	1559	

\*P  $\leq$  .05

TABLE 39.--Analysis of Regression--High SES School's Students (N=1672)

Source	Mean Square	d.f.	F
Regression	.865	9	144.167*
Error	.006	1662	
Total	.871	1671	

\*P  $\leq$  .05

TABLE 40.--Analysis of Regression--Low SES School's Students (N=955)

Source	Mean Square	d.f.	F
Regression	.635	9	105.833*
Error	.006	945	
Total	.641	954	

\*P  $\leq$  .05

TABLE 41.--Analysis of Regression--Fourth Grade Students (N=716)

Source	Mean Square	d.f.	F
Regression	.477	9	68.143*
Error	.007	706	
Total	.484	715	

\*P  $\leq$  .05

TABLE 42.--Analysis of Regression--Fifth Grade Students (N=1110)

Source	Mean Square	d.f.	F
Regression	.628	9	104.666
Error	.006	1100	
Total	.634	1109	

\*P  $\leq$  .05

TABLE 43.--Analysis of Regression--Sixth Grade Students (N=801)

Source	Mean Square	d.f.	F
Regression	.396	9	79.200*
Error	.005	791	
Total	.401	800	

\*P  $\leq$  .05

TABLE 44.--Analysis of Regression--Male Students (N=1317)

Source	Mean Square	d.f.	F
Regression	.831	9	138.500*
Error	.006	1307	
Total	.837	1316	

\*P  $\leq$  .05

TABLE 45.--Analysis of Regression--Female Students (N=1310)

Source	Mean Square	d.f.	F
Regression	.666	9	111.000*
Error	.006	1300	
Total	.672	1309	

\*P  $\leq$  .05





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