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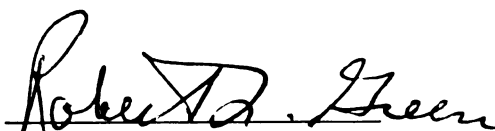
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THE RELATIONSHIP OF SELF AND ACADEMIC ATTITUDES AND
ACADEMIC ACHIEVEMENT OF NEGRO AND WHITE STUDENTS TO
SCHOOL RACIAL COMPOSITION: AN EXPLORATORY STUDY

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ABSTRACT

THE RELATIONSHIP OF SELF AND ACADEMIC ATTITUDES AND ACADEMIC ACHIEVEMENT OF NEGRO AND WHITE STUDENTS TO SCHOOL RACIAL COMPOSITION: AN EXPLORATORY STUDY

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The purpose of this study was to determine whether academic achievement, social status, educational attitudes, and self-concepts of Negro and white students were related to school racial composition. A questionnaire designed to measure these variables was administered to four hundred ninety nine, eleventh and twelfth grade students in four urban, industrialized midwestern cities. One school in each of the four cities was selected according to the ratio of Negro to white students: School A, seventy-seven percent Negro; School B, fifty-five percent Negro; School C, twenty-four percent Negro; and School D, eight percent Negro.

Several statistical analyses were performed in order to determine the relationships among the variables. White students had significantly higher grade-point averages in Schools A and C, and significantly higher socio-economic status in Schools A, C, and D. White students also had significantly more positive attitudes toward education in

Schools A and D. White students had significantly higher self-concepts of academic ability in Schools C, while Negroes had greater self-concepts of academic ability in School B. The two racial groups did not differ significantly in self-esteem (a general or global measure of self-concept) in any of the schools. Like-race comparisons between the two most segregated schools indicated that white students in predominantly Negro School A had significantly higher grade-point averages and self-concepts of academic ability than white students in the most predominantly white School D. Negroes in School A had significantly higher mean scores than Negroes in School D on all variables except self-esteem. Negroes showed less variation than whites on most variables in each school.

Multiple regression analyses were performed in order to determine the importance of each independent variable in accounting for the amount of explained variance and prediction of grade-point average. All of the independent variables (socio-economic status, self-concept of academic ability, attitudes toward education, and self-esteem) were included in a multiple correlation equation and the resulting multiple correlations were squared to determine the amount of variance in grade-point average. When the variables were singly deleted, the squared multiple correlations were generally stable except when self-concept of academic ability was deleted for both racial groups in

each school. Deletion of self-concept of academic ability substantially reduced the magnitudes of the squared multiple correlation coefficients. Optimum weighting of the variables indicated that self-concept of academic ability also contributed more unique variance to grade-point average than any other single variable. When beta weights were not significant for self-concept of academic ability, neither of the beta weights of the remaining variables was significant.

Each independent variable was correlated with grade-point average while the variation in each of the other variables was controlled. Comparisons of zero- and first-order correlations indicated that controlling for variation in socio-economic status, attitudes toward education, and self-esteem had virtually no effect on the correlation between self-concept of academic ability and grade-point average for Negro and white students. Controlling for variation in self-concept of academic ability had both facilitating and depressing effects on correlations between the other independent variables and grade-point average.

In order to determine the relationship of school racial composition and race of students to academic achievement (grade-point average), an analysis of covariance was utilized. An adjusted analysis of variance indicated that the school and race factors were related to grade-point average when the four covariates (socio-economic

status, self-concept of academic ability, and attitudes toward education) were simultaneously controlled.

Interaction between the school and race factors was not significant, but differences in adjusted grade-point means were found. With the exception of the comparison between School B and School C, significant mean differences occurred between all schools. The analysis disclosed that the magnitudes of the adjusted grade-point means were associated with the degree of school desegregation: the more even the ratio of whites to Negroes in a school the greater the magnitude of the adjusted grade-point means.

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CHAPTER I

THE PROBLEM

Attempts to establish positive self-esteem among Black Americans represent one of the most omnipresent and immediate problems confronting educators today. Traditionally, most research studies relating to personality development have consistently yielded the critical finding that Negroes exhibit lower self-esteem than Caucasians (Horowitz, 1936; Seeman, 1946; Radke, Trager, and Davis, 1949; Radke, Sutherland, and Rosenberg, 1950; Clark and Clark, 1952; Roen, 1960; Katz, 1964; Pettigrew, 1964). It has also been ascertained that Negroes generally perform inadequately on academic tasks, and some educators have postulated a relationship between the Negro's low self-concept and underachievement. However, recent studies suggest that the self-concept among Negroes is changing to a positive direction (Coleman et al., 1966; McDill, Meyers, and Rigsby, 1966). While many plausible explanations have been offered to account for the apparent change, few researchers have attempted to determine whether this change in self-concept is associated with academic achievement.

The problem is further complicated by research (Levy, 1956) which indicates that one's conception of

school may be an intricate part of his self-concept. In one of the most comprehensive surveys of racial isolation in the public schools, sponsored by the U.S. Commission on Civil Rights (1967), predominantly Negro schools were described as academically inferior. The report further indicated that the stigma ascribed to these schools affects the attitudes of both teachers and students, with teachers holding low academic expectations of their students. Students interpret this communication and reciprocate by performing inadequately on academic tasks, thus, completing the "Self-Fulfilling Prophecy." Consequently, the community's negative perception of Negro schools affects the learning process by depressing the self-esteem of both teachers and students.

Although most research documents higher self-concepts and academic achievement in white schools than in Negro schools, educators are perplexed as to why an appreciable number of students in predominantly Negro schools succeed in academic pursuits. However, only a paucity of studies has been conducted to determine how process variables such as self and academic perceptions, attitudes toward education, and socio-economic status, as limiting factors in the learning process, are related to academic achievement and school racial composition. The purpose of the present investigation is, therefore, to further explore

these relationships and to add to the knowledge of social-psychological processes and academic achievement.

Statement of the Problem

The first purpose of this study was to determine whether mean differences in attitudes toward education (ATE), self-esteem (SE), self-concept of academic ability (SCA), socio-economic status (SES), and grade-point average (GPA), exist among white and Negro students according to school racial composition.

The second purpose of this investigation was to determine the proportion of variance in academic achievement uniquely and collectively accounted for by socio-economic status, self-concept of academic ability, attitudes toward education, and self-esteem.

The third purpose of this study was to determine the efficiency of socio-economic status, and self and academic attitudes as independent variables in predicting academic achievement.

The fourth purpose of this investigation was to determine whether the magnitude of the relationship between academic achievement and each of the independent variables of SES, SCA, ATE, and SE is affected when each independent variable is controlled one at a time.

The fifth purpose of this study was to determine whether school racial composition and race of student are

related to academic achievement when socio-economic status, self-concept of academic ability, attitudes toward education, and self-esteem are simultaneously controlled.

Importance of the Problem

One of the major objectives of America is that of providing educational opportunities that will enable all citizens to profitably benefit from and contribute to our complex and affluent society. While our educational system has been commended for its contribution to the vast proliferation of scientific and intellectual achievements, it has provided too few of our citizenry the educative skills and knowledge that are necessary to successfully function in our highly technological society. The enormity of the situation was revealed in the comprehensive surveys sponsored by the U.S. Office of Education (Coleman et al., 1966) and the U.S. Commission on Civil Rights (1967). These surveys indicated that, in addition to substantial variation in quality of education across the country, differential student performance was related to the social and racial composition of the schools. Students of racial minorities, particularly Negro students, were generally of lower socio-economic status and were characterized by lower achievement at every grade level than the average white student. These differences were more pronounced for minority students who attended segregated schools.

The U.S. Supreme Court, in its school desegregation decision in 1954, declared that separate schools for Negro and white students are inherently unequal. During the following year the Court issued a mandate for racial desegregation of schools. But after more than ten years most of the schools of the nation remained segregated. Coleman and his associates (1966) found that approximately eighty percent of white pupils in the first grade attended schools that were ninety to one hundred percent white, while more than sixty-five percent of all Negro pupils in the first grade attended schools that were between ninety and one hundred percent Negro. In the South, most students attended schools that were one hundred percent white or Negro. On the faculty level, it was found that white teachers frequently taught Negro students, but that white children were seldom, if ever, taught by Negro teachers.

Since the Coleman report was released, the Supreme Court has issued orders of affirmative action by school districts across the nation. Perhaps the most dramatic change has occurred in the southern region of the United States, where rigid and total segregation was prescribed by law. Numerous evasive proposals were submitted by school districts in this area, but the U.S. Supreme Court refused these proposals and ordered immediate desegregation. The rate and method of compliance varied greatly. In some southern states, many schools in the

Negro community were closed abruptly and the entire student population and a few of the teachers and supervisory personnel were transferred to predominantly white schools. In some instances, the mass exodus of white students from desegregated schools at some point in time created a minority of white students.

While some districts were able to establish private white schools, the majority of the school districts found it financially unfeasible to do so and, therefore, desegregated their schools. In many smaller cities and towns, total desegregation has been obtained by maintaining one high school, one junior high school, and one or two elementary schools.

The abrupt meeting of the two presumably different school social-cultures precipitate confusion and problems of adjustment, at least temporarily, for both racial groups. Attendant to the difficulties involved in change of school social climate is that of gauging of academic achievement of students in desegregated situations. There is a need to ascertain whether academic self-concepts, attitudes toward education, general self-esteem, socio-economic status, and performance expectations of teachers, parents, and peers, and other relevant variables change when the two racial groups integrate and to what extent and how these variables are associated with the ratio of white to Negro students in schools.

One of the most crucial findings of both the Coleman report and the U.S. Civil Rights Commission report was that Negro students' achievement was maximal when Negroes were a very small minority in a predominantly white school. As cited above, however, many schools are integrating all students with varying ratios of white and Negro students. This problem takes on a new significance in view of the fact that although both reports recognized non-cognitive variables as important aspects in the learning process, neither report systematically included these variables as predictors of academic achievement. Contrary to most previous studies, Coleman et al. (1966) found no difference in academic self-confidence between Negroes and whites. Rather than observing this result as evidence of no difference in self-esteem, the investigators attributed this lack of difference to invalidity in the Negro students' responses to paper and pencil measures of academic self-esteem.

While research results indicate that the academic performance of Negro students improve when they transfer from a segregated to a desegregated school, Negroes achieve below their white classmates in the same school. It is apparent from these results that non-cognitive variables play an intervening role between the status variables of achievement and school racial composition. Educational research in this area is sparse and, at best, "educated

guesses." After reviewing the literature relative to the effects of education upon Negro self-concept, Grambs (1965) concluded that:

Studies of school desegregation have shown tendencies toward better school achievement on the part of Negro youth, but so far relatively little has been done to explore either the changes in self-concept that might have occurred or the causes for such change.

The same conclusion was reached by Katz (1964), who reviewed research concerning the situational determinants of Negroes' performance in academic-social environments. According to Katz, so few systematic empirical studies have been conducted in this area that most of the evidence is inferential at best.

Concurrent with the problem of providing equal educational opportunity is the Negro American's attempt to establish self-pride and self-determination. This social phenomenon, generally called the "Black Power Movement," is conspicuously characterized by its direct, didactic approach to influence the racial self-attitudes of Black Americans. Emphasizing the themes of "Black Pride" and "Racial Identity", the objective of this movement is to reverse the self-devaluing tendencies and to instill positive self-esteem.

Nowhere has the impact of "black awareness" manifested itself more than in education. In the past few years, educators have witnessed black students, teachers, and parents demanding an education that is relevant to their

needs. At the community level, black residents are demanding community control of their schools. These demands have led to teacher strikes, mass student demonstrations, changes in the curriculum, reorganization of school boards, and violent confrontations.

Education has historically played a decisive role in our society; its function is to transmit culture, to socialize the young, and to maintain beliefs, customs, skills, and knowledge. However, the contribution of education to the well-being of Negro Americans is dubious. Negro students fail to achieve as well (Boykin, 1955), leave school earlier (Conant, 1961), perform less adequately on academic aptitude measures (Jensen, 1969), and manifest lower self-esteem (Williams and Cole, 1968), than white students. In response to such outcomes of education Black Americans are currently demanding changes that will produce improved academic achievement and, thus, a quality education.

Since thousands of Negro and white students are attending desegregated schools and this practice will probably continue in the future, it is important to study the interrelationship of social-psychological factors in order to further determine the process by which some school environments become related to high self-worth and academic achievement while others become associated with low self-evaluation and low achievement.

Theoretical Orientation

The theoretical orientation underlying this investigation is derived from reference group theory, role theory, and symbolic interactionist theory. Although the three theories emphasize various aspects of social-psychological phenomena, the pervasive theme of these theories is the influence of others on an individual's behavior. Thus, plans for action are influenced by the expectations and approval of significant others. The individual's behavior, however, is not directly influenced by the actual behavior of others. Rather, it is the individual's interpretation of the intentions of others; that is, what the situation symbolizes.

Of the three theoretical approaches mentioned above, the basic orientation of this investigation is most influenced by the symbolic interactionist theory of George Herbert Mead (1934). According to this theoretical approach, the interaction of an individual with his social environment results in experiencing a sense of self. In this reciprocal process, not only does one interact with others but he also reacts to his own actions in the same manner that he would expect others to react. The individual, then, acts socially toward himself as well as to others. Thus, one may become the object of his own actions, but the capacity to see oneself as a social object emerges only after one has acquired the ability to incorporate the point of view

of other persons. Such a transformation enables one to ascribe attitudes, traits, abilities, beliefs, motives, and other characteristics of oneself and consequently, one is able to direct and control his behavior. The outcome of this process is the derivation of a "self" or "self-concept".

Mead further theorizes that since the self emerges and develops in the process of social experience and activity, self-conceptions will be created, maintained, or altered by the quality and variation of experiences with significant others:

We carry on a whole series of different relationships to different people. We are one thing to one man and another thing to another. . . . We divide ourselves up in all sorts of different selves with reference to our acquaintances. . . . There are all sorts of different social reactions. It is the social process itself that is responsible for the experience of the self; it is not there as self apart from this type of experience (p. 142).

While many theorists (Cooley, 1902; Lunholm, 1940; Snygg and Combs, 1949; Rogers, 1951; Sarbin, 1952; Jersild, 1952; Maslow, 1954), including Mead (1934), have considered the self-concept to be a vital determinant of human behavior, the self-concept has recently assumed increased importance in educational theory and practice. Snygg and Combs, reasoning from a phenomenological approach, conclude that an individual's perception of self is a very important aspect of intelligence or the ability to learn. In exploring the relevance of the symbolic interactionist approach to

functioning in school, Brookover has demonstrated a logical (1959) and an empirical (Brookover, et al., 1962, 1965, 1967) relationship between self-concept of ability and achievement, a narrower but more concise aspect of the self. Although the theoretical orientation of the present investigation bears some semblance to the perceptual framework of Snygg and Combs, it is more directly derived from the symbolic interactionist theory of Mead. Whereas the former approach stresses primary emphasis on the individual's subjective experiences, the later approach places equal emphasis on both the social situation in which the individual behaves and the origin and nature of the self.

As the foregoing theorists suggest, the self-concept is a significant variable in the learning process. Brookover's formulation of self-concept of academic ability accounts for self-other attitudes toward more definable situations than other global conceptions of self and, thus, will be employed as the specific theoretical and empirical basis of the present investigation. The basic postulates of this social-psychological conception of human behavior are stated as follows:¹

1. The social norms and expectations of others define the appropriate behavior for persons in various social situations.

¹The four postulates are found in W. B. Brookover and E. L. Erickson, Society, Schools, and Learning (Boston: Allyn and Bacon, 1969), pp. 15-16. The general hypothesis is found in W. B. Brookover and D. Gottlieb, A Sociology of Education (2d. ed.; New York: American Book Company, 1964), p. 34.

2. Each person learns the definitions of appropriate behavior through interaction with others who are important or significant to him.
3. The individual learns to behave in the ways that he perceives are appropriate or proper for him.
4. The individual also acquires conception of his ability to learn various types of behavior through interaction with others whose evaluations are important.

The general hypothesis of the present investigation is, thus, that the functional limits of one's ability to learn are determined by his self-conception of self-image as acquired in social interaction.

The relevance of self-concept theory has seldom been systematically applied to Negro academic achievement. In perhaps the most comprehensive review and assessment of research relative to self-concept, Wylie (1961) failed to find or mention any research which considered race as a component of self-concept. However, factors such as family organization, religion, social class, parental education and sex have received considerable serious attention from researchers. It is the general case, Gottlieb and TenHouten (1965) argue that social scientists employ such traditional independent variables and that "It is interesting to note that race, as an independent variable, is rarely utilized in any systematic way" (p. 135).

As it was explained above, one's self-concept emerges from perceived evaluations of others. According to Roen (1960), Negro Americans' low self-concept is a result of the inferior status projected on them by society. Consequently, such pervasive discrimination tends to produce personality problems which depress their academic achievement more than that of Caucasians. Evidence of high self-esteem by Negroes in recent years, however, warrants systematic examination of the relationship between self-concept theory and Negro academic performance in various academic settings.

CHAPTER II

REVIEW OF LITERATURE

A critical review of the literature indicates a scarcity of research concerning the manner in which self-concept and school racial composition are related to academic achievement. It appears that research in this area generally has been directed toward either the relationship between self-concept and academic achievement or the relationship between school racial composition and academic achievement, while the interaction of these three variables has received little research effort. Several investigators, however, have alluded to such an interaction in a number of studies.

In the previous chapter it was reported that Negroes typically exhibit lower self-esteem and lower academic achievement than Caucasians, and that self-esteem and academic achievement are higher in white than in Negro schools. It was suggested, however, that self-esteem of Negroes might be changing in a positive manner. The bases of these propositions will now be examined in the following review of the research literature relative to academic achievement and self-concept of students attending schools of varying racial compositions.

Determinants of Self-Concept and Academic
Achievement in Racial Settings

The social-psychological consequences of racial discrimination in American society have been cited most often as the most plausible explanation for the Negro's low self-esteem and academic achievement. Pettigrew (1964) reasoned that pervasive racial discrimination would tend to lead to ego problems such as conscious or unconscious desires to punish oneself or others, and maintenance of some level of self-worth by avoiding comparisons of oneself with others (whites) in a threatening situation. According to Pettigrew:

. . . identity problems are inextricably linked with problems of self-esteem. For years, Negro Americans have had little else by which to judge themselves than the second-class status assigned them in America . . . they accept the American emphases on 'status' and 'success'. . . . But when they employ these standards for judging their own worth, their lowly positions and their relative lack of success lead to further self-disparagement (p. 9).

These personality problems in turn could have a depressing effect on both "functioning intelligence" and measured intelligence. Pettigrew's conclusion has been supported by other studies. Weisskopf (1951) has presented case studies of numerous ways in which personality problems can obstruct normal intellectual development. In an effort to determine whether the relationship between personality problems and intelligence is more pronounced among Negroes or whites, Roen (1960) matched Negro and white subjects

on numerous social variables and then correlated a set of personality measures with the subjects' intelligence test scores. The results indicated a higher correlation between personality and intelligence for Negroes. Furthermore, it was found that Negroes with low intelligence scores also had low ratings on a self-confidence questionnaire.

After critically reviewing the evidence from available research on desegregation, Katz (1964) concluded that:

. . . there does not exist at present any comprehensive system of variables for predicting the specific effects of different conditions of stress on the Negro child's performance of various academic tasks (p. 390). . . . much of the evidence is only inferential (p.381).

In order to compensate for the paucity of controlled studies of the effect of self-esteem and school racial composition on academic achievement, Katz reviewed and summarized some experiments conducted by him and his associates. These experiments primarily dealt with comparisons of Negroes' performance on learning tasks in the presence of whites or other Negroes. Katz cites a study in which he, Epps and Axelson sought to determine whether anticipated comparison with whites and other Negroes affected digit-symbol performance of a group of students at an all-Negro college. Prior to administration of the task some students were told how other Negroes at the college performed on the same task, while other students were told how whites fared throughout the nation. The results of

the study indicated that students who anticipated being compared with whites were more anxious and performed more poorly on the task.

A most interesting finding in Katz' experiments was the differential academic performance of average and above average Negro students in interracial school settings. Average achievers were apprehensive of being evaluated by a white person, except when they were reasonably assured that they had a good chance of succeeding. On the other hand, above average achievers welcomed the opportunity to be evaluated by a white person, irrespective of the objective probability of success.

A central observation of Katz' experiments was that, even when Negroes received objective evidence of successful competition with whites or of favorable evaluation by whites, they generally lacked self-confidence and responded compliantly. Thus, Katz concluded that racial inequality tends to produce social threat and failure threat that are detrimental to the Negro's academic performance.

In Pettigrew's and Katz' attempts to develop a systematic social-psychological framework of task performance in interracial situations, the idea evolved that Negroes could get an objective view of their self-concept and academic competence only through competition with and evaluation by whites. This does not happen because of the whites' race per se, but rather that whites have higher educational standards and higher self-esteem.

Thus, Pettigrew and Katz speculate that if Negro students believe that educational standards are higher in a white school than in a Negro school, they may experience low self-confidence which, then, adversely affects their academic performance. The validity of this speculation will now be examined.

Achievement in Segregated Schools

A few years previous to and following the 1954 U.S. Supreme Court decision outlawing racial segregation of schools, various reports (Boykin, 1955; Bullock, 1950) of academic achievement of Negro and white students were made available to the general public. The reports unequivocally and consistently indicated that white students' achievement was clearly greater than that of Negro students. Often time the results were used as evidence for arguments to maintain segregated schools.

Several studies were conducted in southern states. In one investigation (Southern School News, 1954), a state association of school administrators sponsored a study in which standardized achievement tests were administered to eighty percent of the state's pupils. In another study (Southern School News, 1956a), arithmetic achievement tests were administered to all eighth grade students in a county. In a third study (Southern School News 1956b), all sixth graders in a city were tested for overall achievement. The results indicated a consistent pattern: Negro students invariably achieved less well than whites.

The same pattern of academic performance of Negro and white students was also found in the North. In a survey of seniors in thirty-two high schools in eleven northern states, Ferguson and Plaut (1954) found that less than one percent of Negro students were in the upper fourth of their class. A survey (Landers, 1963) of all seventh grade students in the nation's largest city indicated that the majority of students with reading disabilities were Negroes and Puerto Ricans. A later study (Harlem Youth Opportunities Unlimited, 1964) revealed an even more devastating finding: over eighty percent of sixth grade students in Central Harlem schools were reading below satisfactory level.

The research results presented above suggest that, whether segregated schools are in the South or North, they have a profound adverse effect on the academic achievement of Negro students.

Achievement in Desegregated Schools

Several studies show that Negroes' academic achievement is benefitted when they attend desegregated schools. The massive Coleman report (1966) indicates that achievement is greater among Negroes when they are a small minority in a predominantly white school. The report failed, however, to document the converse situation of a small minority of whites in a predominantly Negro school.

Stallings (1959) and Hansen (1960) compared achievement of students before and after desegregation. In Louisville, Kentucky, after one year of desegregation, Stallings found higher gains in achievement for Negroes than for whites. After five years of school desegregation in Washington, D.C., Hansen observed that Negro achievement had improved, while white students' performance was about the same as under segregation. In Jackson, Michigan, Katzenmeyer (1963) found an increase in I.Q. level of Negro and white children between kindergarten and the second grade. The increase for the Negro children was statistically significant. Katzenmeyer attributed the increase in Negro I.Q. "as the consequence of school experience which enhances their opportunities for social interaction with the dominant white culture." Katz (1964) observed that although a substantial number of Negro students failed to compare favorably with white students, improvement over previous performance was noted. Katz warned, however, that scholastic achievement had improved in both racially-balanced and racially-imbalanced schools during this period of time. Therefore, improved performance could be attributed to other factors since educational standards had generally been raised in both segregated and desegregated schools.

In New York City, Lesser (1964) and his associates administered a battery of mental aptitude tests to more than four hundred Negro, Puerto Rican, Chinese, and Jewish

students in segregated and desegregated schools. The results indicated that students from the racially-balanced schools and integrated neighborhoods had significantly higher scores than students from racially-imbalanced schools and segregated neighborhoods. The investigators also found a "convergent effect" in the racially-balanced schools; that is, the scores of the various ethnic groups were very similar. Conversely, ethnic group scores were quite diverse in the racially-imbalanced schools. Lesser reasoned that other factors in addition to race, such as socio-economic status, partially account for these findings.

As part of a report assessing the status of equal educational opportunity in its school system, a board of education (Committee on Race and Education, 1964) in the northwest sought to ascertain the racial and social-class composition of elementary schools previously attended by twelfth graders. Only seniors who had attained a satisfactory grade-point average (at least a "C" average) were considered. It was found that whereas elementary school racial composition had little relationship to achievement of white seniors, higher achievement among Negroes was positively related to a greater proportion of white elementary schoolmates. The results further indicated that, although both Negroes and whites had benefitted more by attending a white middle-class than a white lower-class elementary school, the association was more pronounced

for Negro seniors. Among the white seniors, seventy percent had attended lower-class schools and seventy-six percent had attended middle-class schools; eight percent of Negro seniors had attended lower-class schools and thirty-three percent had attended middle-schools. The report concluded that academic achievement of both Negro and white students was enhanced by attendance at schools with a predominance of white, middle-class students.

The findings of the school board's report were confirmed by other studies. In one corroborative study, but with limited support, Crowley (1932) compared Negro students in segregated and desegregated schools, matched for mental age, chronological age, grade-point average, and I.Q. Results of standardized test scores indicated that students in desegregated schools performed significantly better on writing and spelling tasks. No significant differences were found in the other tasks. In a study comparing college grade-point averages with the racial composition of high schools previously attended by white and Negro students, Johnson, Wyer, and Gilbert (1967) also found that Negroes and whites with the highest averages had attended predominantly white schools.

An exception to the findings of studies just cited was reported by Clark and Plotkin (1963). These researchers examined the academic records of 519 Negro students who had attended integrated colleges between 1952 and 1956.

As expected, the students' scores (SAT scores) were generally below the national college norms. However, the predictive validity of the Scholastic Aptitude Test was shown to be in great error, at least for this population, by the surprising finding that a significant proportion of these students completed college with satisfactory grades than did the general college population. According to the investigators:

. . . the academic performance of these students is far beyond the level that would be indicated by such predictive devices as college board scores, family income, and educational background (p. 21).

Further analysis of the Clark and Plotkin data indicated regional differences in achievement among Negro students. The college grade-point averages of students who had attended southern high schools were higher than students from northern high schools. The investigators attempted to account for this difference by positing that there was both greater academic selectivity and higher motivation among southern students, and better academic quality of southern schools in this particular study. Despite the plausibility of these explanations, the investigators failed, as have educational researchers in general, to adequately account for the disproportionate degree of college success of Negro students who have attended either totally or predominantly Negro high schools.

Self-Concept and School Racial Composition

Several studies have yielded equivocal results concerning the relationship between self-concept and school racial composition. Weddington (1958) studied the influence of social class and race on stereotypes of young Negro and white children attending segregated schools. The results indicated that Negroes attributed more favorable traits to whites than to themselves. Since more favorable traits were attributed to higher status within each racial group, Weddington concluded that the results were more a function of social class than race.

A study (Dumbarton Research Council, 1966) of self-concept and school racial composition in Oakland, California, failed to find a significant difference between the self-concepts of segregated and desegregated Negro students. In a similar investigation, Garth (1963) studied the self-concepts of Negro students who remained in a segregated school and those who transferred to a previously all-white high school in a southern city. It was found that transfer students had lower self-concepts and were more critical of themselves. This finding was not supported by Lockwood (1966) who found no significant difference between the self-concepts of Negro students in segregated and desegregated elementary schools.

Self-Concept and Academic Achievement

Several studies have indicated that the self-concept is related to academic achievement. Barber (1952) found that pupils assigned to a remedial reading class were excessively anxious about themselves and their relationships with other people. In another study, Lumpkin (1959) compared fifth grade underachievers and overachievers in reading, matched for sex, mental age, chronological age, and home environment. The overachievers were found to exhibit significantly more positive self-concepts. In a study designed to determine the relationship between immature self-concepts and reading ability, Bodwin (1957) studied one group of pupils with reading disabilities, another group with arithmetic disabilities, and a third group with no apparent educational disabilities. Significant positive correlations of .72 at the third grade level and .62 at the sixth grade level were found between immature self-concept and reading disability. Significant positive correlations were also found between immature self-concept and arithmetic disability (.72 at the third-grade level and .68 at the sixth-grade level).

In a study to determine whether a relationship existed between self-concept and scholastic achievement across grades, Bruck (1957) compared self-concept measures of pupils from the third to the sixth grades in three public elementary schools and of pupils in the eleventh

grade of a senior high school. Significant correlations between self-concept and grade-point averages were found irrespective of grade level. The results of this study were supported by an investigation of Hamachek (1960), who found high achievement and self-perception of academic competence to be related to reading age of pupils in a university laboratory school. Seay (1960) also found that changes in self-concept were positively correlated with success or failure experiences in a remedial reading program for boys who were considered to possess normal intelligence but who had a reading disability.

In an ingenious study to determine whether poor self-concept or reading disability was the antecedent condition, Wattenberg and Clifford (1964) obtained mental ability and self-concept measures of kindergarten children in their first term of school. Measures of progress in reading and self-concept measures of the same pupils were obtained two-and-a-half years later. It was found that the self-concept measure in kindergarten significantly predicted progress in reading but not mental test scores. Feelings of competence and feelings of personal worth were the two most powerful components of the self-concept measure.

In one of the few studies of the relationship between self-concept and academic achievement of college students, Roth (1959) investigated the self-concepts of students in

a reading improvement program. It was found that students gaining the most improvement also had the highest self-concepts. Moreover, students who showed no improvement exhibited higher self-concepts than those who dropped out of the program.

Whereas most studies of self-perception are based on a general or global conception of self representing several dimensions, Brookover et al. (1962) have defined one aspect of the self-concept as the pupil's concept of his academic competence as perceived evaluations of others. In a study designed to determine the relationship between Caucasian students' self-concept of academic ability and perceived expectations held by significant others (parents, teachers, and friends), the investigators reported that self-concept of ability was significantly associated with school achievement (grade-point average) whether or not measured intelligence was controlled. It was also found that students with high scholastic averages had significantly higher mean self-concepts of ability than students with low scholastic performance even though all students had comparable measured intelligence scores.

Brookover's self-concept of academic ability scale correlated .31 with a general self-concept scale developed by Rosenberg (1965). It was found that whereas the general self-concept scale was significantly correlated with academic achievement, nearly all of the variance in

achievement was accounted for by variation in self-concept of academic ability. In an earlier study, Brookover et al. (1964) found that self-concept of ability was also related to specific subject matter areas when ability was controlled.

The viability of the self-concept of academic ability as a relevant variable in school performance was tested by Brookover et al. (1966). The objective of the study was to determine the relationship of the evaluations of significant others to self-concept of academic ability. In assessing the relative importance of parents, an "expert" on school learning, and a counselor on the school performance of low achieving pupils over a two-year span, the investigators found that experimentally induced changes in expectations of parents led to significant increases in both self-concept of ability and grade-point average. On the contrary, communication from the "expert" and the counselor did not have a significant effect on pupils' self-perception or grade-point average.

Attitudes Toward Education

According to the theory set forth on which the present investigation is based, one's self-concept evolves not only from perceived evaluations of significant others, but also from self-evaluation. Conceptually, then, various dimensions of the self-concept could be at variance with each other. It may be possible, for example, that one's

self-worth as perceived evaluations of others could differ from his own assessment of himself. This appears to be the situation among American Negroes concerning education. Much objective evidence (Newton and West, 1963; Doddy, 1963; Metropolitan Life Insurance Company, 1963) indicates that their chances of obtaining the same amount and quality of education as whites are very remote, given present economical, social, and educational conditions. Yet numerous studies, including the following review, indicate that Negroes attribute more value to education than do whites.

Boyd (1952) studied levels of aspiration of students in Portland, Oregon. Negro and white elementary students in a desegregated school were matched on socio-economic status and ability level (measured I.Q.). Negroes were found to express higher levels of educational aspirations and ambition than whites. Gist and Bennett (1963) also controlled for socio-economic status and I.Q., but failed to find significant differences in occupational and educational aspirations between Negro and white students in four Kansas City high schools.

Reiss and Rhodes (1959) and Geisel (1962) compared the educational norms and aspirations of Negro and white junior and senior high school students in two southern cities. It was found that Negroes valued education more and had higher educational aspirations than whites. Blake (1960)

found the educational aspirations of Negro students to be higher than those of white students in both segregated and desegregated schools in a midwestern city. One unanticipated finding was that Negroes in segregated schools expressed higher aspiration levels than Negroes and whites in integrated schools. No white students from segregated schools were included in the study, however.

There is also evidence that Negro parents attribute high value to education. Rosen (1959) found that Negro mothers in the Northeast considered education as the most important means for their children to achieve upward social mobility. Moreover, eighty-three percent had intentions for their sons to attend college. In a national poll of Negro Americans by Newsweek (1963), it was found that although one-fifth of the families interviewed had at least one child who had dropped out of school, ninety-seven percent of the parents indicated a desire that their children obtain at least a high school education. Krystall, Chesler, and White (1967) found that almost sixty-eight percent of Negro parents in a large southern city stated that a college degree was the least amount of education their children needed.

As the sample of studies show in the above review, Negroes attribute more value to education than do whites. This trend is consistent regardless of the section of the country and the racial composition of schools. Pettigrew (1964) contends that this high regard for education, when

coupled with the facilitative effects of racial desegregation on Negroes' self-esteem, could have significant academic implications. However, he does not explain how this could be achieved.

Racial Self-Concept and Academic Achievement

Morland (1966) extended the relevance of Brookover's productive research model by inferring that not only can racial self-conception be logically related to self-concept of academic ability, but that one's racial self-evaluation may also influence learning and subsequent performance on intelligence tests. Although Morland failed to document his inference, two studies of critical importance to the present investigation will now be examined.

A study was conducted by Taft (1954) to determine whether ego-involvement aids or retards the accurate recall of favorable and unfavorable meaningful material. Favorable and unfavorable information concerning Negroes and whites was contained in a story read to Negro and white subjects. On a test of immediate recall, the Negro subjects recalled more favorable and unfavorable items concerning Negroes than did the white subjects. The superiority of Negro subjects was even greater in the delayed recall of items favorable to Negroes, but their superiority was not evident in recall of unfavorable items. Although no significant differences were found between the two racial groups in the number of distortions of favorable or

unfavorable items, the white subjects tended to distort more items. Taft concluded that the Negro subjects were "vigilant" in the immediate recall series and were, therefore, sensitized to the material, but that they repressed the unfavorable information prior to the recall series.

In the second critical study, Gustafson (1957) conducted an investigation to determine whether ethnic group membership functions as a factor in the retention of selected facts pertaining to American history and culture. Three groups of tenth grade students equated for mental ability, age, and sex were studied: Dominant American, composed of Caucasian Americans of North European extraction; Jewish American; and Negro American. A pre-test administered to assess the initial knowledge of the three ethnic groups in American history and culture indicated that the Jewish American students scored higher on the Jewish American, Negro American, and Dominant American tests than Negro and Dominant American students. The Negro students did, however, score higher than Dominant American students on facts relative to Negroes' contributions, while Dominant American students scored higher than Negroes on contributions of whites.

Three weeks after the pre-test, a story concerning the role and contributions of the three ethnic groups in the development and culture of the United States was presented in simple narrative form. Special emphasis was

stressed on each group in question, but the story was designed to omit comparative contributions in terms of relative merit, and to avoid pejorative statements about any person or group. All statements were positive and favorable to each group. The results of the tests indicated that in each case, students scored higher on the test relating to their own ethnic group than students of the other two ethnic groups.

After an interval of thirty days, the tests were again administered to assess the relative retention of facts concerning the historical contributions of the three groups. As was found in the second testing session, in every instance, students scored higher on the test of their own ethnic group. Furthermore, the results indicated that the test performance of the Dominant American students were least divergent on the three tests, the Negro American Students' performance was most divergent, while the performance of Jewish American students was in the middle position.

The two studies just reviewed have demonstrated that ethnic and racial membership perform roles in the selection of what will be learned. Ethnic and racial membership per se do not determine what one will select to learn. Rather, factors such as attitudes, values, needs, accumulations of expectations, and familiarity created by past experience, are related to group membership and serve as selective mechanisms. As it is suggested in the present investigation,

the important relevance of race in our society conditions its citizens to operate from a racial frame of reference to a great extent. "Learners," therefore, enter educational situations with racial attitudinal "sets" or racial self-concepts already developed to some degree. Only a paucity of research, however, has been attempted to discover whether racial attitudinal tendencies are associated with academic achievement and other school-related variables.

As it was suggested that racial group membership differentially affects learning performance, one may ask whether membership also differentially affects the prediction of academic performance of Negroes and whites. The research evidence of this point is equivocal. Hills (1964), McKelpin (1965), Munday (1965), Boney (1966), and Stanley and Porter (1967) have found that the College Board Examinations (Scholastic Aptitude Test) and similar standardized tests predict equally well for white and Negro students. Stanley and Porter report that this relationship holds whether Negroes compete with Negroes, whites compete with whites, or whether Negroes and whites compete with each other.

Several studies report differential prediction. In a study designed to discover the relationship between academic achievement and personality and cognitive factors, Green and Farquhar (1965) did not find a significant correlation between aptitude and achievement for Negro males whereas a significant (.64) relationship was found

for white males. Moreover, the self-concept of academic ability scale was the best predictor of academic achievement (GPA) for Negro males (.36) and females (.64) and white females (.34). Another finding of great importance was that verbal aptitude was reliably predictive of achievement for Negro females in contrast to Negro males. The investigators suggest that these within-race and across-race differences might reflect grading on criteria other than academic performance.

Green and Farquhar's results were corroborated by Morse (1963). Morse investigated the effect of self-concept on the academic achievement of Negro and white eighth-grade students. It was found that the correlation between achievement (GPA) and measured intelligence was significantly higher for whites than for Negroes (.57 and .16, respectively). It was also indicated that academic self-concept was superior to I.Q. in predicting achievement for both racial groups.

Shulman (1968) investigated differences in employability, self-concept, and related measures among Negro and white students classified as mentally retarded. The Negro students were found to be significantly more intelligent (WISC I.Q.), more socially mature, more manually dexterous, and more productive in shop work. The white students scored higher, though not significantly higher, on the self-concept measure and the aspiration index. It was found

that the self-concept measure was positively correlated with employability (good work habits) for Negroes. The same effect was found for the aspiration index but at a lower level. In contrast, high self-concept scores and high levels of aspiration for the white students correlated negatively with employability. Shulman concluded from the results of his study that different kinds of predictive criteria must be used for assessing Negro and white subjects. However, it must be emphasized that these students were mentally retarded.

Rising Self-Concept of Negroes

A review of the research literature indicates that, generally, Negro Americans manifest lower self-evaluation than Caucasians. This pattern was found consistently until 1964 or 1965 when new evidence indicated a reversing trend for Negroes. That this trend has been reversed, and that the escalation of self-esteem of Negro Americans is genuine, supporting evidence has been found, although in rather disparate fashion. Pettigrew (1964) attributes the new rise in self-esteem to the 1954 Supreme Court decision condemning racial segregation in schools, the Negro's protests and self-assertion in the Civil Rights Movement, increasing educational and economic opportunities, the interest of social scientists to study their problems, and identification with the emergence of the proud new African nations.

Empirical research also supports an escalation of self-esteem of Negroes in educational settings. It was found in the massive and comprehensive Coleman report (Coleman et al., 1966), a national survey of equal educational opportunity, that there was no significant difference between Negro and white students relative to academic self-confidence or academic self-esteem. Coleman and his colleagues, however, attempt to explain away this lack of difference by inferring a lack of validity in the responses of Negro students. Blake (1960) interprets such a finding to mean that there is an unconscious inflation on the part of Negro students as an ego defensive mechanism against experiences of racial prejudice and discrimination. These explanations, however, could apply to previous studies and, therefore, are not unique to contemporary studies.

Also of critical importance in the Coleman report was the finding that "feeling of control of destiny" was the best single predictor of achievement for Negro students. It was found that white students felt that they had a greater degree of control of their lives than Negroes. This attitudinal factor, moreover, best distinguished between Negro and white students in general.

Research by McDill, Riggs, and Meyers (1966) produced even more dramatic results. The study was concerned with sources of educational climates in high schools. The sample included over 20,000 pupils in predominantly white schools

located in seven different geographical regions and eight different states. The results of this investigation indicated that, contrary to the findings of Roen (1960), Katz (1964), Pettigrew (1964), and Coleman et al. (1966), Negro pupils evidenced higher self-esteem than white pupils. Brookover (1969) also has evidence of increased self-esteem among Negro pupils, and he suggests that this evidence represents a definite attitudinal change. However, McDill, Rigsby, and Meyers use the same explanations as Coleman and his associates to explain away this finding, in addition to the possibility of a selection factor which places Negroes of above average self-esteem in predominantly white schools.

In contrast to the results of the Coleman report, the study by McDill and his associates indicated that the responses of Negro pupils showed a greater degree of control of their destiny than was shown by white pupils. Furthermore, perhaps the most surprising result was that Negro pupils scored higher on the intellectual scale.

A chronological review of the research indicates that the escalation in self-esteem of Black Americans began approximately about 1964 or 1965. This conclusion is also supported by Dennis (1968). Dennis' conclusion was partly based on the results of his studies (1963, 1968), in which the Draw-A-Man test was administered to a class of eighty Negro students at a predominantly Negro university. The test is unstructured except for the directions which

require the subject to draw a man, any kind of man he wishes to draw. According to the judgments of several independent raters, who were naive as to circumstances of the drawings, the drawings represented white persons, whereas no drawing unequivocally represented a Negro. One drawing was too ambiguous to make a determination. The study was replicated at the same university ten years later in 1967. Of the drawings of 88 Negro students, 18 percent unequivocally represented Negroes. Thus, over a ten-year period there was an 18 percent change in racial awareness or racial frame of reference. Dennis interpreted this change to reflect the effect of the Black Power Movement.

In a comparative study of self-perceptions of disadvantaged and advantaged students in grades four through eight, Soares and Soares (1969) found more positive self-concepts for disadvantaged students than for advantaged students on a number of bi-polar measures, including self-concept, ideal concept, reflected self-classmates, reflected self-teacher, and reflected self-parent. These results were questioned by Long (1969), who noted that Soares and Soares did not control for response set. According to Long, the results might be accounted for by a response set for extremity among the disadvantaged students. Both the Soares and Long, however, claim less for the study than the data permit. A close examination of the literature reveals that the majority of disadvantaged subjects are Negroes.

In the Soares and Soares study, for example, two-thirds of the disadvantaged group was composed of Negroes and Puerto Ricans while ninety percent of the advantaged group was composed of whites. Thus, the results of the study could be interpreted as poor Negro and Puerto Rican students having more favorable self-perceptions than white, middle-class students. Interpreted in this manner, the results of the study could be construed as support for improvement of self-worth among Negroes, but not necessarily a loss of self-worth among whites.

Some investigators have alluded to the Civil Rights Movement as a precipitating factor of the Negro's apparent rise in self-esteem. Interestingly, however, the new findings have seldom been related to the black social movement which is distinguishable from the Civil Rights Movement. The Civil Rights Movement is characterized by social and economic intergration whereas the Black Power Movement is characterized by identity and esteem infusion. The two movements, of course, are not mutually exclusive.

In one of the most unusual circumstances in the annals of American education, public school education was denied to both Negro and white students in Prince Edward County, Virginia. The schools were closed from 1959 to 1963 by the County school board in defiance of the 1955 Supreme Court mandate to desegregate schools. During this period

of time, white students attended a private segregated school while most of the 1700 Negro students did not receive formal education.

Green and his associates (1964) documented the extent of educational deprivation among the Negro students. The sample studied were students who had no education whatsoever during this period of time (1959-1963) when the schools were closed (the NO EDUCATION group) and students who received at least some education (EDUCATION group). Although the average performance of both groups was below that of national norms on the Stanford Achievement Test, the mean achievement of the EDUCATION group was higher than that of the NO EDUCATION group on all sub-tests. In most instances the differences were between one-and-a-half and two-and-a-half grade equivalent scores. However, the self-concept of academic ability measure for both of these two educationally disadvantaged groups did not differ significantly from a sample of Negro pupils in a neighboring county. Moreover, the two Virginia samples did not differ significantly from a large sample of Negroes in Michigan. Apparently, then, school attendance had little, if any, effect on Negroes' self-perceptions of academic competence, regardless of geographical region.

CHAPTER III

DESIGN AND METHODOLOGY

The Sample

The sample investigated in this study consisted of 499 Negro and Caucasian public school students in grades eleven and twelve in four urban, industrialized midwestern cities, during the 1968-69 school year.

School Racial Composition

One school in each of four cities was selected according to the ratio of Negro to white students.

Predominantly Negro School

The student population of the predominantly Negro school (School A) is seventy-seven percent Negro. In addition to being labeled as a "Negro" high school by community residents, this school is classified as middle-lower class according to socio-economic status. This school has a Negro principal, but most of the teachers and other personnel are white.

Racially-Balanced School

In the racially-balanced school (School B), Negroes compose just over fifty percent of the student population. While this school is presently considered a racially-mixed

school, it is also considered as a "transitional" school, changing from its former predominantly white status to that of a predominantly Negro school. Socio-economically, School B is considered to be changing from lower-middle class to upper-lower class. This school has a Negro assistant principal who is scheduled to replace the white principal the following school year. Most of the teachers and other personnel are white.

Predominantly White Schools

There were two predominantly white schools. In one school (School C) the student population is composed of twenty-four percent Negro students. The second school (School D) consists of eight percent Negro students. Both schools were classified as "white" schools by community residents. Socio-economically, School C has been rated as upper-lower class, and School D as lower-middle class. The principals of both schools are white, and almost all of the teachers and other personnel are white.

Instrumentation and School Records Data

Academic Achievement

The index of academic achievement was operationalized as the total grade-point average (GPA) of students' grades in English, mathematics, social studies, and science during the 1968-69 school year. All four schools used the same academic ranking classification.

<u>Academic Rank</u>	<u>Grade-Point Average</u>
Honors	4.0
Above Average	3.0
Average	2.0
Unsatisfactory	1.0

Self-Concept of Ability

Self-concept of ability hereafter referred to as "SCA" was operationally defined as students' scored responses to the Michigan State General Self-Concept of Ability Scale, A Guttman-type, eight-item, multiple choice scale designed to elicit a measure of a student's self-evaluative criteria by which a student compares his competency in academic tasks to that of his classmates.

The reliability and validity of the General Self-Concept of Ability Scale has been demonstrated. Internal consistency reliabilities and coefficients of reproducibility over a four-year period are presented in Table 1.

Similar internal consistency coefficients were also obtained in a six-year longitudinal study. The reliabilities for grades seven through twelve ranged from .85 to .86. Pearson Product Moment Correlations on test-retest data were computed in the same longitudinal study over a one year period. In Table 2 it can be seen that the correlations are very stable for each period of time.

TABLE 1.--Reliabilities and coefficients of reproducibility of self-concept of ability for four years.*

Grade	<u>Male</u>			<u>Female</u>		
	Hoyt's A. V.	C. R.	N	Hoyt's A. V.	C. R.	N
7th	.82	.95	513	.77	.96	537
8th	.91	.96	35	.84	.92	35
9th	.92	.97	35	.84	.93	35
10th	.86	.86	697	.84	.91	802

*Table reproduced from Brookover, et al., (1962), op. cit., p.52.

TABLE 2.--Test-retest coefficients of stability for self-concept of academic ability scale over a one year period longitudinal study.*

<u>Peroid</u>	<u>SCA</u>
8-9	.72
9-10	.71
10-11	.72
11-12	.68

*Table reproduced from Brookover, et al., (1967), op. cit., p.63.

The scale was, thus considered to be an internally consistent and reliable measure of self-concept of academic ability.

Attitudes Toward Education

A 22-item standardized Likert-type scale, the Attitudes Toward Education Scale¹, was employed to measure attitudes toward the value of education. The items were designed to elicit attitudes concerning the consequences of possessing an education upon one's leisure time and upon economic opportunity and conflicts between education and work.

The reliability of the Attitudes Toward Education Scale was determined by internal consistency and repeated measures techniques. Split-half reliabilities were .82 for a sample of 500 males and .83 for a sample of 500 females. Test-retest reliabilities were .84 and .85 for samples of 70 males and 75 females, respectively.

Self-Esteem

In order to get a measure of favorable and unfavorable attitudes towards oneself, a Guttman-type scale² with ten statements concerning general self-evaluation was used. Positive and negative statements were presented alternatively in order to reduce the incidence of response set. Reliability of internal consistency for this scale was

¹From E. A. Rundquist, and R. F. Sletto, Personality in the Depression (Minneapolis: University of Minnesota Press, 1936).

²From M. Rosenberg, Society and the Adolescent Self-Image (Princeton: Princeton University Press, 1965).

determined by reproducibility and scalability indices: reproducibility, 93 percent; scalability of items, 73 percent; scalability of individuals, 72 percent.

Student Socio-Economic Status

Students' socio-economic status was determined by assigning the father's (or the main family supporter's) occupation to values ranging from one to nine on the Social-Economic Grouping of Occupations.¹ More accurate determinations were made by also asking students to describe the duties of his father's (or whoever supports the family) work.

School Socio-Economic Status

Schools' socio-economic status was determined by criteria furnished by school principals. This included such indices as community property values; parents' income, education and occupation; students' school attendance, academic performance, and pursuits after graduation; state and federal financial assistance based on the economic and educational status of students; principals' observations and opinions.

Student and School Racial Identification

Students' racial identity was determined by the physical features commonly employed in the United States to cate-

¹From A. M. Edwards, Comparative Occupation Statistics for the United States, United States Government Printing Office, 1934, pp. 164-69.

gorize people into racial groups. The investigator, thus, used hair texture, skin pigmentation, and facial features as criterial characteristics.

Racial identification of schools classified as predominantly Negro or white, or racially-mixed, was determined by each school's ratio of white to Negro students. The numerical ratios were obtained from principals' reports submitted to state and federal agencies concerned with equal educational opportunities. Abbreviations used in this study are listed in Table 3.

TABLE 3.--Abbreviations employed in this study.

G P A =	grade-point average
S E S =	socio-economic status
S C A =	self-concept of academic ability (Self-Concept of Ability Scale-General)
A T E =	attitude towards education
S E =	self-esteem

Biographical Data

Biographical data were obtained from responses to questions relating to students' name, age, sex, school attended, designation of the main supporter of the family, and job-description of the main family supporter.

Analysis Procedures

In order to test the hypotheses set forth in this study, several statistical analysis were performed. Means and standard deviations were computed for all variables, and the Students "t" was used to test mean differences between Negro and white students in the same school, between white students in different schools, and between Negro students in different schools. Several multiple regression equations were employed to determine the degree of relationship between the independent variables (socio-economic status, self-concept of ability, attitudes toward education, and self-esteem) and the dependent variable (grade-point average), and the degree to which the independent variables were independent of each other in their effect on the dependent variable. Thus, beta weights and resulting multiple correlations, and partial correlations were computed.

In order to determine whether school racial composition and race of student would be related to grade-point average when variation in the independent variables was simultaneously controlled, an analysis of covariance was computed. F-test comparisons were made of adjusted grade-point means among the schools.

Procedure

The questionnaire was composed of four parts: a biographical information blank, the Self-Concept of Academic Ability Scale, the Attitude Toward Education Scale, and the

Self-Esteem Scale. The items of all scales were combined to form a single scale of 40 items, although the items maintained the same serial position within a specific scale. This procedure was employed to reduce the probability of subjects to detect the imbeddedness of differential attitudes in the questionnaire.

The questionnaire was administered by the investigator to intact classes of students at one sitting. Classes were selected according to availability as determined by principals and teachers. The selection procedure was spontaneous: the principal approached teachers at their classroom doors and asked if they would permit their classes to participate in a survey. This spontaneous approach was designed to obviate the opportunity for coaching and establishing response sets to the type and purpose of the questionnaire. Classes in English, Speech, Drama, American History, American Government, Urban Geography, Physics, and Businesses were selected in order to include a representative sample of students.

Students' racial identity was obtained after completion of the questionnaires in order to reduce the probability of students and teachers recognizing race as a component of the study. The questionnaires were distributed and collected individually by the investigator to insure the proper racial designation of respondents.

Working Hypotheses

- H₁: There is no difference in grade-point average, socio-economic status, self-concept of academic ability, attitudes toward education, and self-esteem between Negro and white students.
- H₂: A greater proportion of the variance in grade-point average is accounted for by SCA than by either SES, ATE or SE.
- H₃: Among the linear combination of SES, SCA, ATE, and SE as predictors of grade-point average, SCA will have the greatest predictive efficiency.
- H₄: The magnitude of the relationship between GPA and each of the independent variables of SES, SCA, ATE, and SE is affected when each independent variable is controlled one at a time, with the greatest change occurring when SCA is controlled.
- H₅: School racial composition and race of student are related to academic achievement when SES, SCA, ATE, and SE are controlled.

CHAPTER IV

RESULTS

The contents of this chapter involve testing of hypotheses previously stated. The data were analyzed in order to make comparisons within and among schools and racial groups. Within comparisons consisted of Negroes being compared with whites attending the same school. In order to make between school comparisons, like-race comparisons were made between Schools A and D.

Mean Differences Between Negroes and Whites Attending the Same School

Analyses were made to test the null hypothesis that:

- H_1 : There is no difference in grade-point average, socio-economic status, self-concept of academic ability, attitudes toward education, and self-esteem between Negro and white students.

Tables four through eight show statistical data and tests for this hypothesis. The means, standard deviations, and t-tests between Negro and white students attending the same schools are presented in Tables four through seven, while data for comparisons of students attending different schools are presented in Table eight. The magnitude of the mean values reflect differential connotations for the

major variables. A larger mean value for GPA (grade-point average) indicates greater academic achievement. Conversely, a larger mean value for the other variables indicates a less favorable situation, such as a lower socio-economic status, a poorer self-concept, a more negative attitude toward education, or less fortified self-esteem.

Data concerning School A (predominantly Negro school) are presented in Table 4. Examination of the data indicates significantly higher scores for whites in GPA, SES, and ATE. Further examination of the data reveal higher mean scores in SE and SCA for whites and Negroes, respectively, although mean differences in these two instances were not significant. It can also be seen that, except for ATE, there was less variation among scores of Negroes.

TABLE 4.--Means, Standard Deviations and t-Tests between Negro and White students attending the predominantly Negro school (School A).

Vari- ables	White Mean	S.D. N=47	Negro Mean	S.D. N=68	d.f.=113	t
GPA	2.21	0.74	1.87	0.49		2.76**
SES	4.87	1.94	5.78	1.70		-2.60**
SCA	2.62	0.61	2.52	0.43		0.97
ATE	2.01	0.33	2.20	0.35		-2.96**
SE	-2.68	2.84	-2.88	2.11		.42

**p < .01

The least variation within the four schools was found in School B. As shown in Table 5, whites attained higher scores on most of the variables, although the only significant difference was between SCA scores in favor of Negroes ($t=2.83$; $df=146$; $p<.01$). Moreover, Negro scores were less heterogeneous on all variables except SES.

TABLE 5.--Means, Standard Deviations and t-Tests between Negro and White Students attending the racially-balanced school (School B).

Variables	White Mean	S.D. N=96	Negro Mean	S.D. N=52	d.f.=146	t
GPA	2.36	0.63	2.18	0.55		1.80
SES	4.65	1.67	4.75	2.00		-0.31
SCA	2.71	0.56	2.45	0.52		2.83**
ATE	2.31	0.49	2.34	0.46		-0.37
SE	-2.83	2.93	-3.15	2.67		.68

** $p<.01$

Data presented in Table 6 indicate differences between whites and Negroes in School C (predominantly white school with 24 percent Negroes). Whites had significantly higher GPA scores ($p<.01$), and SES and SCA scores (both $p<.05$) than Negroes. Note that this is the only school in which Negroes had a lower mean SCA score than their white counterpart. Negroes again showed less variation, with more

homogeneous scores on four of the five variables. Table 7 shows that in the second predominantly white school (School D with 8 percent Negroes), whites had significantly higher scores in SES and ATE. As was the case in Schools A and B, Negroes in Schools C and D showed less variation, with less heterogeneity on four of the five variables.

TABLE 6.--Means, Standard Deviations and t-Tests between Negro and White Students attending one of the predominantly white schools (School C)

Vari- ables	White Mean	S.D. N=141	Negro Mean	S.D. N=19	d.f.=158	t
GPA	2.53	0.76	1.94	0.64		3.68**
SES	4.43	1.90	5.68	2.06		2.51*
SCA	2.46	0.58	2.66	0.38		-2.00*
ATE	2.27	0.50	2.25	0.48		0.17
SE	-3.26	2.38	-4.00	2.49		1.21

*p<.05
**p<.01

TABLE 7.--Means, Standard Deviations and t-Tests between Negro and White Students attending one of the predominantly white schools (School D).

Vari- ables	White Mean	S.D. N-37	Negro Mean	S.D. N-39	d.f.=74	t
GPA	1.62	0.63	1.50	0.58		0.86
SES	5.27	2.01	6.54	1.82		-2.88**
SCA	2.90	0.50	2.71	0.49		1.67
ATE	2.11	0.39	2.37	0.40		-2.87**
SE	-2.05	2.69	-3.12	2.59		1.78

**p<.01

In order to test for intra-race differences, students in two schools in the same metropolitan area were compared. The two schools had the most extreme ratios of whites and Negroes in their student populations (School A, 77 percent Negro; School D, 92 percent white). It was hypothesized that there was no difference in grade-point average, socioeconomic status, self-concept of academic ability, attitudes toward education, and self-esteem between whites in School A and whites in School D, and between Negroes in School A and Negroes in School D. Relevant data are presented in Table 8. It can be seen that GPA and SCA scores are significantly higher for whites in School A than for whites in School D. With the exception of SE, higher nonsignificant scores for whites in School A are indicated for the remaining variables.

Analysis of the data indicated that the most profound differences were between Negroes in Schools A and D. As shown in Table 8, Negroes in School A had higher scores on all variables, with significantly higher scores on four of the five variables. In addition, the scores of Negroes in School A were less variable than those of Negroes in School D in every instance.

As the analysis indicated, both null hypotheses were partially rejected. When scores of Negroes were compared with those of whites in the same school, significant differences were found in eleven of twenty-five comparisons. A

TABLE 8.--Means, Standard Deviations and t-Tests between like-races of students in Schools A and D.

White						
Variables	Mean	S.D. N=47 School A	Mean	S.D. N=37 School D	d.f.=82	t
GPA	2.21	0.74	1.62	1.62		3.94**
SES	4.87	1.94	5.27	2.01		-0.92
SCA	2.62	0.61	2.90	0.50		-2.31
ATE	2.01	0.33	2.11	0.39		-1.25
SE	-2.68	2.84	-2.05	2.69		-1.05
Negro						
Variables	Mean	S.D. N=68 School A	Mean	S.D. N=39 School D	d.f.=105	t
GPA	1.87	0.49	1.50	0.58		3.36**
SES	5.78	1.70	6.54	1.82		-2.13*
SCA	2.52	0.43	2.71	0.49		-2.02*
ATE	2.20	0.35	2.37	0.40		-2.21*
SE	2.88	2.11	3.12	2.59		.50

*p<.05

**p<.01

similar comparison of intra-race scores revealed significant differences in six of ten comparisons. It should be noted, however, that the second hypothesis approached rejection in one instance as mean scores of Negroes in School A were significantly higher than those of Negroes in School D on four of the five variables. Moreover, the statistically nonsignificant t-ratios were in favor of Negroes and whites in School A.

Multiple Regression Analyses

In order to test the hypotheses relating to the amount of explained variance and prediction of grade-point average, multiple regression analyses were performed. Analyses were made to allow for comparisons within and among schools and racial groups.

The first multiple regression analysis was used to test the following hypothesis:

H₂: A greater proportion of the variance in grade-point is accounted for by self-concept of ability than by either socio-economic status, attitudes toward education, or self-esteem.

All of the independent variables were included in a multiple correlation equation and the resulting multiple correlations were squared to determine the amount of variance in GPA accounted for collectively by the predictor variables. The magnitudes of the squared multiple correlations with

and without deletions of the independent variables are presented in Table 9. The squared multiple correlations were generally stable when variables were singly deleted except for SCA. It can be seen that, with the exception of whites in School D, the magnitudes of the squared multiple correlation coefficients were substantially reduced when SCA was deleted. It should also be observed that in only one instance did deletion of another predictor variable reduce the multiple correlation lower than deletion of SCA. For whites in School D, deletion of ATE proved to lower the multiple correlation more than SCA. The data, therefore, indicate that SCA accounts for more variation in GPA than the other three variables of interest.

The multiple regression equation predicting GPA from SES, SCA, ATE, and SE is presented in Table 10. Optimum weighting of the predictor variables and their corresponding multiple correlations are also indicated. It can be seen that the beta weights for SCA were significantly different from zero for whites and Negroes in Schools A and B, and for whites in School C and Negroes in School D. SES beta weights were significant for whites in School C and for Negroes in Schools B and D, while SE was significant for Negroes in School B. Moreover, beta weights for all variables except ATE were significant for Negroes in School B.

TABLE 9.--Magnitudes of squared multiple correlations with and without deletions of independent variables of GPA for Negro and White Students.

Squared Multiple Correlations with Independent Variables Singly Deleted					Squared Multiple Correla- tions with no Independent Variables Deleted
	SES	SCA	ATE	SE	
School A					
White	.52	.02	.52	.52	.52
Negro	.18	.01	.18	.18	.18
School B					
White	.51	.05	.50	.49	.51
Negro	.54	.21	.63	.53	.63
School C					
White	.40	.15	.43	.43	.43
Negro	.21	.03	.20	.18	.21
School D					
White	.13	.09	.07	.16	.17
Negro	.29	.09	.38	.35	.39

TABLE 10--Beta weights of predictor variables of GPA with
corresponding multiple correlations for Negro and
White Students

Beta Weights		Multiple R
School A		
Whites	$-.0586(\text{SES}) + -.7371(\text{SCA})^* + .0205(\text{ATE}) + .0650(\text{SE})$	= .72
Negroes	$-.0400(\text{SES}) + -.4198(\text{SCA})^{**} + .0316(\text{ATE}) + -.0363(\text{SE})$	= .42
School B		
Whites	$-.0086(\text{SES}) + -.7453(\text{SCA})^{**} + .1152(\text{ATE}) + .1285(\text{SE})$	= .71
Negroes	$-.0324(\text{SES})^{**} + -.7071(\text{SCA})^{**} + -.0151(\text{ATE}) + .3173(\text{SE})^{***}$	= .79
School C		
Whites	$-.1972(\text{SES})^* + .004 -.5935(\text{SCA})^{**} + .0824(\text{ATE}) + -.0375(\text{SE})$	= .66
Negroes	$.0549(\text{SES}) + -.4752(\text{SCA}) + .1037(\text{ATE}) + .1884(\text{SE})$	= .46
School D		
Whites	$.2089(\text{SES}) + -.3279(\text{SCA}) + .3497(\text{ATE}) + -.0741(\text{SE})$	= .41
Negroes	$.3307(\text{SES})^* + -.5725(\text{SCA})^{**} + .0558(\text{ATE}) + -.1812(\text{SE})$	= .62

*p<.05
**p<.01
***p<.001

It should be further noted that in the two instances in which the SCA beta weights did not differ significantly from zero, none of the beta weights of the remaining three predictor variables was significant. Also, with one exception, it was found that the SCA beta weight was greater than either of the remaining three predictor variables. In the exceptional case, the ATE beta weight was greater for whites in School D, although none of the beta weights for this group was significant.

Of the weightings for the two races in each school, the beta weights differed significantly from zero six times for SCA, three times for SES, and once for SE. Thus, SCA was found to be the most important predictor and to significantly increase the prediction of GPA.

In order to lend greater credence to the above conclusion, it was necessary to determine the relative effects of the predictors as intervening variables on the relationship between GPA and each of the predictors. Tables 11 through 14 show comparisons between zero- and first-order correlations in which variation in SES, SCA, ATE, and SE were partialled out of the correlation between GPA and each of the independent variables.

School A

As shown in Table 11, SCA was the only independent variable to correlate significantly with GPA (.01 level)

TABLE 11.--Zero-and first-order correlations between grade-point average and all other variables for Negro and White Students in School A.

Variables	Zero-Order	First-Order Correlational Matrix			
		SES	SCA	ATE	SE
White N=47					
GPA x SES	.02	---	.09	.02	.04
GPA x SCA	.71**	.72**	---	.71**	.71**
GPA x ATE	.02	.02	.04	---	.00
GPA x SE	.13	.13	.10	.13	---
Negro N=68					
GPA x SES	.03	---	.06	.03	.01
GPA x SCA	.42**	.42**	---	.42**	.41**
GPA x ATE	.02	.02	.04	---	.03
GPA x SE	.10	.09	.05	.10	---

**p<.01

for whites and Negroes. This relationship proved to be very stable, as controlling for SES, ATE, and SE had virtually no effect on the zero-order correlation.

School B

It can be seen in Table 12, that for whites, GPA was significantly related to SCA at the .01 level and to SES at the .05 level. However, most of the variation in the relationship between GPA and SES was accounted for by SCA, as indicated by the fact that the magnitude of the correlation was considerably reduced when SCA was partialled out.

Both SES and SCA were significantly correlated with GPA for Negroes at the .01 level. Although the correlation between GPA and SE was not significant, controlling for SCA increased the magnitude of this correlation to the .01 level of significance. On the other hand, when SCA was partialled out, the correlation between GPA and ATE was reduced from .26 to .08 although neither correlation was significant.

School C

Inspection of Table 13 indicates that SES, SCA, and SE are significantly related to GPA for whites. The correlation between GPA and SE, however, is not significantly different from zero when either SES, SCA, or ATE is controlled. It appears, therefore, that the interaction

TABLE 12.--Zero-and first-order correlations between grade-point average and all other variables for Negro and White Students in School B.

Variables	Zero-Order	First-Order Correlational Matrix			
		SES	SCA	ATE	SE
White N=96					
GPA x SES	.22*	---	.02n.s.	.22*	.22*
GPA x SCA	.69**	.67**	---	.70**	.70**
GPA x ATE	.07n.s.	.06	.16*	---	.07
GPA x SE	.01n.s.	.00	.18*	.01	---

Negro N=52					
GPA x SES	.38*	---	.42*	.36*	.38*
GPA x SCA	.66**	.67**	---	.63**	.72*
GPA x ATE	.26	.23	.08	---	.26
GPA x SE	-.14n.s.	.14	.43*	.15	---

*p<.05
**p<.01

TABLE 13.--Zero-and first-order correlations between grade-point average and all other variables for Negro and White Students in School C.

Variables	Zero-Order	First-Order Corralational Matrix			
		SES	SCA	ATE	SE
White N=19					
GPA x SES	.34***	---	.24**	.32***	.33***
GPA x SCA	.63***	.59***	---	.62***	.61***
GPA x ATE	.14	.10	.08	---	.12
GPA x SE	.20**	.18n.s.	.05n.s.	.19n.s.	---

Negro N=19					
GPA x SES	-.04	---	.01	.10	.05
GPA x SCA	.40	.40	---	.41	.45
GPA x ATE	-.13	.16	.15	---	.14
GPA x SE	.01	.02	.22	.03	---

**p<.01
***p<.001

of all three variables accounted for most of the variation in the GPA-SE relationship for whites.

A very different situation developed for Negroes in School C. None of the independent variables correlated significantly with GPA, although the correlation between

GPA and SE was not raised significantly when SCA was partialled out, the correlation did increase from .01 to .22.

School D

There were no significant correlations between GPA and the other variables for whites. Furthermore, partialling out different variables had little effect on zero-order correlations except when a correlation of .17 between GPA and SCA was increased to .29 when ATE was partialled out, and when a correlation of .18 between GPA and ATE was increased to .30 when ATE was controlled. (See Table 14).

Inspection of Table 14 indicates that only SCA correlated significantly with GPA (.01) for Negroes. This correlation increased to a significant level when SES was partialled out of the GPA-SCA relationship. It is also important to note that SCA depressed the relationship between GPA and SES. When SCA was partialled out, the correlation between GPA and SES increased from .17 (nonsignificant) to .35 which is significant at the .05 level.

From the above analysis it can be seen that of the eight instances, GPA was significantly correlated six times with SCA, three times with SES, once with SE, and neither time with ATE. Inspection of the data also shows that GPA was not significantly correlated with any of the four independent variables for Negroes in School C and for whites in School D.

TABLE 14.--Zero-and first-order correlations between grade-point average and all other variables for Negro and White Students in School D.

Variables	Zero-Order	First-Order Correlational Matrix			
		SES	SCA	ATE	SE
White N=37					
GPA x SES	-.19	---	.20	.20	.16
GPA x SCA	.17	.18	---	.29	.15
GPA x ATE	-.18	.20	.30	---	.19
GPA x SE	.15	.11	.14	.16	---
Negro N=39					
GPA x SES	-.17	---	.35*	.16	.20
GPA x SCA	.51**	.58**	---	.51**	.50**
GPA x ATE	.07	.05	.02	---	.06
GPA x SE	.23	.25	.18	.23	---

*p<.05

**p<.01

A crucial finding of this analysis, therefore, was the magnitudes of the zero-order correlations between GPA and the independent variables when each of the variables was controlled one at a time. The data indicated that partialling out SCA had both depressing and facilitating effects on the zero correlations. In three instances the

statistical significance of the zero correlation was changed; partialling out SCA increased the zero order relationship to a significant level in two instances and reduced the zero order correlation to a nonsignificant level in one instance. In another case, partialling out SES, SCA, and ATE one at a time reduced the zero order correlation from a significant to a nonsignificant level (whites in School C). Apparently, all three variables interacted to account for the variance in this particular instance.

Of all the comparisons between zero-and first-order correlations, the magnitude of the correlation between GPA and SCA for both racial groups in each school was virtually unaffected by controlling for SES, ATE, or SE. Thus, it is possible to retain the hypothesis that SCA affects the magnitude of the relationship between GPA and the independent variables more than either SES, ATE, or SE. This adds support to the conclusion that SCA accounts for most of the variance in academic achievement in this study.

Analysis of Covariance

It had been hypothesized that school racial composition and race of student would be related to academic achievement (GPA) when SES, SCA, ATE, and SE were controlled. In order to test this hypothesis, an adjusted analysis of variance was performed.

As indicated in Table 15, both main effects were significant at the .001 level although there was no significant interaction between them.

TABLE 15.--Analysis of covariance of school and race effects with the variation of SES, SCA, ATE and SE in grade-point average controlled simultaneously.

Source	ss	df	MS	F
School	13.086	3	4.362	15.88***
Race	10.448	1	10.448	38.05***
School-Race Interaction	.350	3	.117	.42
Error	133.737	487	.275	

***p< .001

Since the school factor was significant but did not interact significantly with race, an analysis was made to determine whether differences in GPA existed among schools when all four covariates were simultaneously controlled. Adjusted GPA means for each school are presented in Table 16. The Scheffe' method for post-hoc comparisons was used to test whether differences in mean scores among the four schools were statistically significant. It was found that, with the exception of the comparison between School B and School C, significant mean differences occurred between all schools.

TABLE 16.--Adjusted grade-point average means with all covariates (SES, SCA, ATE, SE) simultaneously controlled and adjusted mean differences between schools.

Schools	Adjusted GPA Means	F-ratios of Adjusted Means			
		School A	School B	School C	School D
A	2.10	--	8.46**	4.60*	15.03**
B	2.30	--	--	.10	42.66**
C	2.28	--	--	--	29.12**
D	1.79	--	--	--	--

*p<.05
**p<.01

The analysis disclosed a definite pattern among the adjusted means: the magnitudes of the means were associated with the degree of school desegregation. As shown in Table 16, the more even the ratio of whites and Negro in a school the greater the magnitude of the adjusted GPA mean score: 2.30 for School B (55-45 percent Negro to white), 2.28 for School C (76-24 percent white to Negro), 2.10 for School A (77-23 percent Negro to white), and 1.79 for School D (92-8 percent white to Negro). Thus, it appears that simultaneously controlling for SES, SCA, ATE, and SE in academic achievement (GPA) favors the more desegregated school.

CHAPTER V

DISCUSSION

This study, exploratory in nature, was designed specifically to determine whether academic achievement, social status, educational attitudes, and self-concepts of Negro and white students were related to school racial composition. The results reported in the last chapter and corresponding hypotheses will now be discussed.

Differences Between Negroes and Whites Attending the Same School

Higher mean grade-point averages for white students in each school confirm the vast majority of studies of educational achievement which indicate greater scholastic achievement for white than for Negro students. In addition to significantly greater achievement of whites in three of the schools, the higher nonsignificant mean in favor of whites in the fourth school suggests that the differences in academic achievement were not related to school racial composition.

The relatively low grade-point averages of whites (1.62) and Negroes (1.50) in School D are of particular notice. After the data were completely analyzed, guidance

counselors at School D were contacted to confirm the grades. The chairman of the counseling and guidance committee informed the investigator that the school had very high academic standards and that an "A" grade was "hard to come by." A review of the school's grade distribution revealed low averages and, thus, it appears that the low grade-point averages of School D obtained in this study could be accounted for by grade-assignment rather than by sample bias.

In view of the vast proliferation of research indicating a strong relationship between socio-economic status and school-related behaviors, racial comparisons on social status were analyzed. The results indicate higher status for white students in each school. Since each student's socio-economic status was determined by the occupation of the main provider in the household, the results confirm the overwhelming evidence that the socio-economic status of whites in our society is substantially greater than that of Negroes. The differences were significant in three of the schools.

Further analysis of the data reveals that the least variation between both racial groups within the four schools was in the school in which there was no significant difference in socio-economic status. For students in School B, the racially-balanced school, there was only one significant difference between Negroes and white on the five variables.

While the higher status of whites in each school would suggest no relationship between socio-economic status and school racial composition, it should be observed that students of similar social status in School B also were very similar on all the other variables except self-concept of ability. It is difficult, therefore, to assess the relative influence of socio-economic status and the racial composition of the schools.

Contrary to most previous investigations which show that Negroes value education more than whites do, the results of this study indicate that whites placed a higher premium on education. These students had higher attitudes toward education than Negroes in three of the four schools, although the difference was significant in two schools (Schools A and D). Thus, whites had significantly higher attitude scores in the two most segregated schools (the predominantly Negro school and the more predominantly white school) while no significant difference was found in the two most integrated schools. The null hypothesis was, therefore, retained for the two most integrated schools but rejected for the two most segregated schools.

This study differs from most other investigations concerning the relationship of self-concept to academic achievement, by accounting for both the academic self-concept and the general or global self-concept. Negro students expressed higher academic self-concepts than

white students in three of the schools. However, this advantage for Negroes was statistically significant only in the racially-balanced school (School B). On the other hand, whites in the next most integrated school (School C) had significantly higher academic self-concepts than their Negro classmates. Thus, significant differences in self-concepts of academic ability between white and Negro student were found in the two most integrated schools. Conversely, the general or global index of self-concept, self-esteem, revealed no significant differences although the mean scores of whites were greater in three of the four schools.

As a consequence of distinguishing between a generalized self-concept (self esteem) and a specifically defined aspect of the self-concept (self-concept of academic ability), valuable information was gained. When the generalized self-concept is considered, the previous studies are supported by the findings that whites have higher self esteem. As mentioned in the review of literature, most studies of the relationship between self-concept and achievement employed a measure of the general self-concept. However, when a specific aspect of the self is considered, Negroes in this study were found to have higher self-concepts of academic ability than whites. If both statistically significant and nonsignificant means are included, Negroes are found to have superior academic self-concepts in three of the schools, whereas whites had higher self-esteem in

three of the four schools. The results of this study, therefore, add support to Brookover's (1964) multidimensional conception of the self-concept.

Perhaps the most consistent finding in this study was the high degree of homogeneity among Negroes on the five variables. The standard deviations of Negro scores were smaller than those of whites in fifteen of the twenty comparisons. Morse's study (1963) on self-concepts of academic ability also found less variability among Negroes. Apparently, schools have a more unitary effect upon the academic performance and attitudes of Negroes than upon whites, irrespective of school racial composition. Of course, it must be realized that forces other than schools influence these behaviors. At any rate, the relationship of race to variability found in this study must be considered especially since it is known that variability affects the magnitudes of correlations.

Differences Between Whites and Between Negroes Attending Different Schools

It had been hypothesized that no difference existed in the five variables between whites in School A and whites in School D, and between Negroes in School A and Negroes in School D. Like-race comparisons were made between students in Schools A and D, the two most racially-imbalanced schools in this study. A preliminary survey by the investigator indicated that the two schools, located in adjacent municipalities, were generally

considered to be the east and west sections of a single city. A signpost along a busy street signifies the division of the two cities. The two school systems, among other social organizations, exhibited very similar patterns of organizational structure and procedures, in addition to cooperative and reciprocal working arrangements. On these bases, comparisons between these two schools were assumed to be more meaningful than those between schools vastly different in terms of physical distance, socio-economic status and opportunity, and racial composition.

White students who were the minority in the predominantly Negro school had higher scholastic averages and academic self-concepts than whites in the most predominantly white school. This finding is noteworthy in view of the high positive correlations found between grade-point average and self-concept of academic ability. The relationship between the two variables was highly significant (.71) for whites in School A, but low and nonsignificant (.17) for whites in School D. It is possible, therefore, that the low grade-point averages of School D students might have operated to degress their academic self-concepts.

This raises the question of whether grades are perceived as having absolute values. According to the massive Coleman report and the subsequent Civil Rights Commission report, communities perceive predominantly Negro schools as inferior to white schools and that this stigma

functions to lower teachers' expectations and students' performance. In this study the predominantly white School D is considered superior to the predominantly Negro School A. However, whites in the predominantly Negro school had higher scholastic averages and greater confidence in their academic ability than whites in the predominantly white school. Rather than positing that their low grade-point averages were equal to high performance in schools of low prestige, the white students in School D apparently judged their academic ability by perceived evaluations of their teachers. While the teachers' low grades were supposed to represent high quality of the school, they might have also communicated a lack of confidence in the students' academic competence. It is doubtful, for example, that a student at Harvard takes pride in his "C" grade because his performance might merit an "A" grade at an unaccredited college.

The most profound differences were found between Negroes in predominantly Negro School A and Negroes in predominantly white School D. Negroes in School A were superior on all variables, with the differences being significant for every variable except self-esteem. The same rationale used to explain the differences between white students in these two schools can be employed to account for Negro differences, namely, that grade assignment communicates confidence or lack of confidence in students' academic ability. Students then complete the "self-fulfilling prophecy" by performing to their perceptions of the communication. This phenomenon has been observed

in the classroom by Flowers (1966), Rosenthal and Jacobson (1966), and many other investigators.

The results of this study suggest, therefore, that ascription of inferiority to predominantly Negro schools or superiority to predominantly white schools does not necessarily elicit lower or higher teacher expectations, or lower or higher self-concepts of ability, attitudes toward education, self-esteem, and scholastic achievement of students.

Multiple Regression Analyses

The general hypothesis that self-concept of ability is a functionally limiting factor in academic achievement was supported by the results of this study. Several multiple regression analyses were performed to test hypotheses relating to the amount of explained variance and prediction of grade-point average.

It was first hypothesized that self-concept of ability would account for a greater proportion of variance in grade-point average than either socio-economic status, attitudes toward education, or self-esteem. All four predictor variables were included in a multiple correlation equation in order to determine their combined amount of variance in grade-point average. The variation in each variable was then deleted one at a time.

The magnitudes of the squared multiple correlations were generally stable when variables were deleted except for self-concept of ability. With the exception of whites

in School D, the magnitudes of the squared multiple correlation coefficients were substantially reduced when self-concept of ability was deleted (see Table 9). The independent variables were then weighted in a multiple regression equation in order to test the hypothesis relating to the predictive efficiency of each variable to predict grade-point average. For the eight groups of Negro and white students, the beta weights were significant six times for self-concept of ability, three times for socio-economic status, once for self-esteem and neither time for self-esteem. It is noteworthy that when beta weights were not significant for self-concept of ability, neither of the beta weights of the remaining variables was significant. Thus, it was concluded that self-concept of ability was the most important predictor and to significantly increase the prediction of grade-point averages of whites and Negroes regardless of school racial composition.

It is also noteworthy that these four variables accounted for over half the variance in grade-point average in three instances. The highest accountable variance was .63 for Negroes in School B, the most racially-balanced school, where three of the four beta weights were significant. While no discernible pattern developed among Negroes in the various schools, the accountable amount of variance in grade-point average for whites was related to school racial composition. Accountable variance for whites

varied inversely to the ratio of whites to Negroes in the schools. That is, the greater degree that whites were the minority in a school, the greater amount of variance in their grade-point average could be accounted for. Thus, the effect of these social-psychological variable is related to school racial composition.

In order to lend greater credence to the conclusion that self-concept accounts for most of the explained variance in grade-point average, stability of the magnitudes of correlations between grade-point average and the predictors was tested by controlling for variation in each predictor. The hypothesis that the magnitudes of the correlations would be affected when the independent variables were controlled, with the greatest change occurring when controlling for self-concept of ability was confirmed. Highly significant zero-order correlations between grade-point average and self-concept of ability were found for whites except in School D. The magnitudes of these correlations also were related to school racial composition, with higher correlations in schools with greater percentages of Negroes (.71 in School A; .69 in School B; .63 in School C; and .17 in School D). Low, but significant zero-order correlations were found between grade-point average and socio-economic status in two instances and between grade-point average and self-esteem in one instance. Attitudes toward education did not correlate significantly with grade-point average.

Significant correlations between grade-point average and self-concept of ability were also found for Negroes in three schools. However, the magnitudes of the correlations were not as large as those of whites (except for School B), nor were the magnitudes related to school racial composition (.42 in School A; .66 in School B; .40 in School C; and .51 in School D). The only other significant zero-order correlation for Negroes was the correlation between grade-point average and socio-economic status for Negroes in School B. It was pointed out in the results that whites had higher grade-point averages while Negroes had higher self-concept of academic ability. When grade-point average was correlated with self-concept of ability, however, higher relationships were generally found in favor of whites. This finding is partially explained by the fact that less variability found among Negroes would tend to depress the magnitudes of the correlations.

Comparisons of zero-and first-order correlations revealed that the most stable correlations were those between grade-point average and self-concept of ability. Controlling for variation in each of the other predictors had virtually no effect on this relationship. On the other hand, self-concept of ability generally affected the magnitudes of correlations between grade-point average and the other three predictors. Partialling out self-concept of

ability both raised and lowered magnitudes of zero correlations; in some instances statistically nonsignificant correlations were reduced to nonsignificant levels (refer to Tables 12, 13, and 14). These results supported the general hypothesis that self-concept of ability is a functionally limiting variable of academic performance. The results also indicate that, in addition to accounting for most of the accountable variance in achievement, self-concept of ability appears to be an independent predictor of achievement. Thus, except for School D, the relationship between grade-point average and self-concept of ability seems to be very stable irrespective of school racial composition.

The final hypothesis tested was that school racial composition and race of student would be related to academic achievement when the analysis of covariance was performed in which the predictors were the covariates, and schools and race of student were the main effects. The results indicated that both main effects were significant at the .001 level, but there was no significant interaction between them.

Since the school main effect was significant but did not significantly interact with students' race, an analysis was made to determine the effect of simultaneously controlling the four covariates on achievement among the schools. Comparisons of adjusted means of grade-point

averages for each school indicated significant differences between all schools except between Schools B and C. These differences revealed the most definite pattern in the present study (see Table 16). It was found that the magnitudes of adjusted grade-point averages were related to the degree of school racial balance: the higher the adjusted means, the greater degree of racial balance in the schools. Thus, the least racial differences and the highest academic achievement were found in the most integrated school, School B. These results are at variance with so many recent investigations (Coleman, et al., 1966; Pettigrew et al., 1964) which report that achievement is maximal in educational settings where there is a small minority of Negroes and a predominance of white students. The weight of the evidence in the present study favors greater racial balance in schools.

The results of this study also add support to the proposition that self-esteem of Negroes has risen. Contrary to Katz (1964) and the Coleman Report (1964), school integration was not related to differences in self-concept between Negroes and whites. Coleman and his associates speculated that self-esteem of Negro students would diminish when they entered integrated schools. Even though no difference in self-concept was found between the two racial groups in their massive survey, it is bewildering how Coleman and his associates reached

such a conclusion. They merely disposed of this point by attributing the "no difference" results to invalidity of Negroes' responses to the survey items. Generalizing from a series of experiments concerning Negroes' performance in racially integrated situations, Katz postulated that if Negro students enrolling in a predominantly white school perceive the quality of academic performance to be higher there than in their previously attended Negro school, they would probably develop low self-esteem which then would depress their achievement. In the two predominantly white schools in the present study, however, whites had significantly higher self-concepts of ability in the predominantly white School C, while Negroes had higher but nonsignificant higher self-concepts of ability in the other predominantly white school, School D. In both schools, whites had higher but nonsignificant self-esteem scores.

A review of the literature indicates that very little systematic research has been conducted to assess the performance of whites in predominantly Negro schools. Perhaps this is part of the tendency to categorize Negro schools as inferior without systematic analysis. A very revealing exception to this practice was a study by McMillan, Erickson, and Brookover (1968) which yielded the unanticipated finding that the relationship between perceived teacher evaluations and self-concept of ability was significantly higher for white students with white teachers

in a predominantly Negro school than in racially-balanced schools. The investigators concluded that perhaps there is a tendency of white teachers to strongly identify with white students in a predominantly Negro school. One wonders whether this effect could have operated in the present study. Especially in School A, the predominantly Negro school, whites had higher grade-point averages and higher self-concepts of their ability than whites in the most predominant white School D. It is possible that the teachers and students in School A created a closer bond of mutual support, even mutual dependence, than if they had been in a predominantly white school.

CHAPTER VI

CONCLUSIONS AND IMPLICATIONS

Several major conclusions emerged from the findings of this study. First, designation of predominantly Negro schools as inferior does not necessarily adversely affect self and academic attitudes and achievement of students in these schools. Most studies designed to measure achievement in schools of varying racial compositions focus on the many inadequacies of predominantly Negro schools, while minimizing or ignoring the variables which are associated with a sizeable number of students who succeed in the educational enterprise. In the present study both Negro and white students in the predominantly Negro school had higher grade-point averages and greater confidence in their ability to succeed in academic tasks than their racial counterparts in the predominantly white school.

A second conclusion of this study is that self-concept of ability is an independent predictor of academic achievement. A very high and stable relationship between self-concept of ability and achievement was found when variation was controlled in either socio-economic status, attitudes toward education, or self-esteem. Conversely, controlling for variation in self-concept of ability

affected the relationship between achievement and each of the other independent variables. Traditionally, measured I.Q. and social class have been employed as the major predictors of achievement and, indeed, these two variables are consistently and positively correlated. The present study, however, supports investigations by Brookover and his associates (1965, 1967) and Morse (1963), who found much of the variation in the relationship between these two variables and achievement to be accounted for by self-concept of ability.

The third major conclusion is that the self-concept is a multifaceted construct. Perhaps the most surprising finding of this study was that self-esteem, a measure of general or global self-concept, was not significantly related to achievement of Negroes or whites. Furthermore, the two racial groups did not differ significantly on this variable. It is apparent from most research on the relationship of self-concept to school learning that some measure of self-concept is attained and then correlated with scholastic achievement. Since so many indices of self-concept are employed, various results have been reported. Few studies have sought an academic self-concept and even fewer have sought to determine whether academic self-concept is related to racial factors. The results of the present investigation suggest that such a study is warranted.

The fourth major conclusion of this study is that the racially-balanced school is associated with the greatest

academic achievement, even when variation in the other variables is controlled. This is in contrast to the Coleman report which indicated greatest achievement in predominantly white schools with few Negroes. Moreover, the results of this study showed the least interracial differences in the most racially-balanced school.

Implications for Further Study

Racial integration of schools has been considered by many as a necessary condition for increased achievement among Negroes. Massive integration of public schools is presently taking place in the United States, especially in the South where racially segregated schooling was legal only a few years ago. Integration is usually accomplished by either transferring a few Negroes to white schools, or by closing all-Negro schools and transferring the pupils to white schools. Little consideration is given to attendant problems other than obtaining specific numerical ratios of Negro and white pupils and the logistics to accommodate them. The results of this study suggest, however, that achievement is related to many factors in addition to school racial composition. It may aid those responsible for integration of schools to assess students' general and academic self-concepts, attitudes toward education, and socio-economic status, and then relate these variables to students' academic achievement and the

racial compositions of the schools. This knowledge, if properly employed, may facilitate integration for quality education.

Although the results of this study indicated that the most favorable academic conditions were found in the most integrated school, the predominantly Negro school was superior to the most predominantly white school. As previously mentioned, very little attention has been focused on the performance of white pupils in predominantly Negro schools or the performance of a significant number of "successful" Negroes in predominantly Negro schools. It may be useful for educators and community leaders to consider the underlying factors for these outcomes before they condemn certain schools as inferior, average, or superior.

As self-concept of academic ability was found to be highly related to achievement, it might be essential, perhaps necessary and educationally sound, to devote as much attention to methods of inducing self-confidence in academic competence as to other achievement-related methods. Indeed, this procedure might reduce the urgency of large sums of money, the need for large-scale bussing, and the precipitating conditions of poor self-concepts and under-achievement.

The point must be emphatically emphasized that the implications listed above should not be implemented without

appropriate research, since communities vary in terms of attitudes and commitment toward quality education, equality of opportunity, and racial composition. The present investigation is an exploratory study, but the findings suggest several directions for further research on the relationship of self-concept to academic achievement and school racial composition. These suggestions are contained in the following list.

1. Replication of the present study with other samples of Negro and white students in schools of varying racial compositions in different geographical sections of the country, in order to determine the reliability of the obtained results.
2. Replication of the present study using a variety of self-concept measures and other school-related variables.
3. Investigation of the interrelations among academic and self-attitudes, socio-economic status, and academic achievement according to age, sex, and school grade.
4. Investigation of the relationship between students' perceptions of grades and students' self-concepts of academic ability.
5. Determination of the effect of minority and majority student-teacher social interaction upon academic achievement.

6. Surveys of communities in order to determine different racial and ethnic groups' perceptions of schools of varying racial compositions. Recent news releases report that many Negroes are requesting continued operation of their all-Negroes schools.
7. Determination of teachers' estimates of students' academic competence and the relationship between the teachers' estimates and students' academic performance.
8. Comparison of students' self-concepts of academic ability and other school-related variables before and after students transfer to different schools.
9. Determination that whether in transferring to a different school students' self-concepts of academic ability are related to changes in school social climates.
10. Systematically determine whether racial membership and academic performance are related to the amount and kind of racial content in academic tasks.

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APPENDICES

APPENDIX A

BIOGRAPHICAL DATA

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BIOGRAPHICAL DATA BLANK

The School for Advanced Studies at Michigan State University is doing a study to find out what high school students think about themselves, their school work and their future plans. You can help us to better understand young people your age by answering the following questions as honestly as you can.

All of the questions are of the multiple-choice type with which you are familiar. Please read carefully the directions on each part of the questionnaire before you answer. If you have any questions, raise your hand and someone will help you.

The answers you give will not be shown to your teachers, and will in no way affect your grades. No one will see the answers you give except the research staff.

Your help in this study is greatly appreciated.

PLEASE FILL IN THE FOLLOWING INFORMATION

Name: _____
 (Last Name) (First Name) (Middle Name)

Birthplace: _____ _____ _____ Sex: M F
 (Month) (Day) (Year)

Name of Present School: _____

Name of Junior High School you attended: _____

Who is the main breadwinner in your family?

1. Father
2. Mother
3. Other

What does your father, or whoever supports your family, do for a living? Please tell us what he or she does, not just where he or she works: _____

DO NOT TURN THE PAGE UNTIL YOU ARE
TOLD TO DO SO

APPENDIX B

SELF-CONCEPT OF ABILITY SCALE

SELF-CONCEPT OF ABILITY - GENERAL

(FORM A)

Michigan State University
Bureau of Educational Research

Circle the letter in front of the statement which best answers each question.

1. How do you rate yourself in school ability compared with your close friends?
 - a. I am the best
 - b. I am above average
 - c. I am average
 - d. I am below average
 - e. I am the poorest
2. How do you rate yourself in school ability compared with those in your class at school?
 - a. I am the best
 - b. I am above average
 - c. I am average
 - d. I am below average
 - e. I am among the poorest
3. Where do you think you would rank in your class in high school?
 - a. Among the best
 - b. Above average
 - c. Average
 - d. Below average
 - e. Among the poorest
4. Do you think you have the ability to complete college?
 - a. Yes, definitely
 - b. Yes, probably
 - c. Not sure either way
 - d. Probably not
 - e. No

5. Where do you think you would rank in your class in college?
- a. Among the best
 - b. Above average
 - c. Average
 - d. Below average
 - e. Among the poorest
6. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think it is that you could complete such advanced work?
- a. Very likely
 - b. Somewhat likely
 - c. Not sure either way
 - d. Unlikely
 - e. Most unlikely
7. Forget for a moment how others grade your work. In your own opinion how good do you think your work is?
- a. My work is excellent
 - b. My work is good
 - c. My work is average
 - d. My work is below average
 - e. My work is much below average
8. What kind of grades do you think you are capable of getting?
- a. Mostly A's
 - b. Mostly B's
 - c. Mostly C's
 - d. Mostly D's
 - e. Mostly E's

APPENDIX C

ATTITUDES TOWARD EDUCATION

SCALE

ATTITUDES TOWARD EDUCATION

Strongly Agree Agree Undecided Disagree Strongly Disagree

1. A man can learn more by working four years than by going to high school.
2. The more education a person has the better he is able to enjoy life.
3. Education helps a person to use his leisure time to better advantage.
4. A good education is a great comfort to a man out of work.
5. Only subjects like reading, writing, and arithmetic should be taught at public expense.
6. Education is no help in getting a job today.
7. Most young people are getting too much education.
8. A high school education is worth all the time and effort it requires.
9. Our schools encourage an individual to think for himself.
10. There are too many fads and frills in modern education.
11. Education only makes a person discontented.
12. School training is of little help in meeting the problems of real life.
13. Education tends to make an individual less conceited.

14. Solution of the world's problems will come through education.
15. High school courses are too impractical.
16. A man is foolish to keep going to school if he can get a job.
17. Savings spent on education are wisely invested.
18. An educated man can advance more rapidly in business and industry.
19. Parents should not be compelled to send their children to school.
20. Education is more valuable than most people think.
21. A high school education makes a man a better citizen.
22. Public money spent on education during the past few years could have been used more wisely for other purposes.

From E. A. Rundquist and R. F. Sletto, Personality in the Depression.

Minneapolis: University of Minnesota Press, 1936.

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APPENDIX D

SELF-ESTEEM SCALE

SELF-ESTEEM SCALE

1. I feel that I'm a person of worth, at least on an equal plane with others.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
2. I feel that I have a number of good qualities.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
3. All in all, I am inclined to feel that I am a failure.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
4. I am able to do things as well as most other people.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
5. I feel I do not have much to be proud of.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
6. I take a positive attitude toward myself.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree

7. On the whole, I am satisfied with myself.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
8. I wish I could have more respect for myself.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
9. I certainly feel useless at times.
- a. Strongly Agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
10. At times I think I am no good at all.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree

From M. Rosenberg, Society and the Adolescent Self-Image.
Princeton: Princeton University Press, 1965
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APPENDIX E

INTERCORRELATION MATRICES OF
ALL VARIABLES

Intercorrelation Matrix of All Variables for White Students
in School A

	GPA	SES	SCA	ATE	SE
GPA	---	.02	.71	.02	.13
SES		---	-.06	.05	-.14
SCA			---	.06	.28
ATE				---	.14
SE					---

Intercorrelation Matrix of all Variables for Negro Students
in School A

	GPA	SES	SCA	ATE	SE
GPA	---	.03	.42	.02	.10
SES		---	-.07	-.08	.23
SCA			---	.14	.16
ATE				---	-.06
SE					---

Intercorrelation Matrix of All Variables for White Students
in School B

	GPA	SES	SCA	ATE	SE
GPA	---	.22	.69	.07	.01
SES		---	.31	.08	.04
SCA			---	.26	.20
ATE				---	.06
SE					---

Intercorrelation Matrix of all Variables for Negro Students
in School B

	GPA	SES	SCA	ATE	SE
GPA	---	.38	.66	.26	-.14
SES		---	.09	.12	-.02
SCA			---	.30	.26
ATE				---	.02
SE					---

Intercorrelation Matrix of All Variables for White Students
in School C

	GPA	SES	SCA	ATE	SE
GPA	---	.34	.63	.14	.20
SES		---	.25	.13	.09
SCA			---	.32	.26
ATE				---	.12
SE					---

Intercorrelation Matrix of All Variables for Negro Students
in School C

	GPA	SES	SCA	ATE	SE
GPA	---	-.04	.40	-.13	.01
SES		---	-.09	-.34	-.11
SCA			---	.02	.42
ATE				---	.30
SE					---

Intercorrelation Matrix of All Variables for White Students
in School D

	GPA	SES	SCA	ATE	SE
GPA	---	-.19	.17	-.18	.15
SES		---	.04	-.07	-.24
SCA			---	.46	.13
ATE				---	.04
SE					---

Intercorrelation Matrix of All Variables for Negro Students
in School D

	GPA	SES	SCA	ATE	SE
GPA	---	-.17	.51	.07	.23
SES		---	.24	-.09	.12
SCA			---	.16	.15
ATE				---	.02
SE					---

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